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JOURNAL OF BANGLADESH COLLEGE OF PHYSICIANS AND SURGEONS

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CONTENTS

EDITORIAL

Prioritizing Policy Approach and Actions to Address Epidemic of Non Communicable Diseases (NCDs)

In Bangladesh non communicable diseases (NCDs) historically have not received appropriate attention, although is facing a legacy of huge load of existing and emerging infectious diseases and a cumulative increasing burden of NCDs. NCDs have further burdened the already stretched health system and inflict great cost on the society particularly caused by premature death and disability. According to Bangladesh NCD risk factor survey 2010 there is hardly anyone without a risk factor. About 97% of population over 25 years of age have at least one risk factor, half the population have two risk factors and about 19% have 3 or more risk factors. High prevalence and clustering of risk factors in the population warrants urgent mitigation efforts to revert the impending holocaust in very near future.

NCDs as a barrier to development

The NCD epidemic is exerting an enormous toll in terms of human suffering and inflicts serious damage to human development in both the social and economic realms. The epidemic already extends far beyond the current capacity of country's threshold of resilience. The burden of NCDs is contributing significantly to poverty and has become a major barrier to development and achievement of the MDGs. MDGs that target health and social determinants such as education and poverty are being thwarted by the growing epidemic of NCDs and their risk factors. NCDs are mostly chronic diseases and can lead to continued expenditures that trap poor households in cycles of debt and illness, perpetuating health and economic inequalities, thus forming a vicious cycle whereby poverty exposes people to behavioral risk factors for NCDs. Vulnerable and socially disadvantaged people get sicker and die sooner as a result of NCDs than people of higher socio-economic class. There is strong evidence for the correlation between a host of social determinants, especially education, and prevalent levels of NCDs and risk factors. Treatment for diabetes, cancer, cardiovascular diseases and chronic respiratory diseases can be protracted and therefore extremely expensive. Such costs can force families into catastrophic spending and impoverishment. Household costs for the care of NCDs have a substantial macroeconomic effect. The loss of productivity reduces the society's effective labour force, resulting in reductions in overall economic output. For every 10% rise in mortality from NCDs, the yearly economic growth is estimated to be reduced by 0.5%[2]. On the basis of this evidence, the World Economic Forum now ranks NCDs as one of the top global threats to economic development.

Prioritizing interventions for NCDs

Evidence shows that NCDs are to a great extent preventable. Government has to make difficult choices on how best to allocate resources for health and health care. There is clear evidence that preventive interventions are effective and that improved access to health care can reduce the burden of morbidity, disability and premature mortality[3]. In constructing health policies for the prevention of well-known risks, choices need to be made between different strategies. For instance, preventing small risks in large populations avoid more adverse health outcomes than avoiding large risks in a smaller number of high-risk individuals, leaves ground for discussion. In general it is more effective to give priority to population-based interventions rather than those aimed at high-risk individuals, primary over secondary prevention and controlling distal rather than proximal risks to health. There is a "prevention paradox" which shows that interventions can achieve large overall health gains for the whole population but might offer only small advantages to each individual. This leads to a misperception of the benefits of preventive advice and services by people who are apparently in good health. Evidence shows that population-wide interventions have the greatest potential for prevention particularly in low resource setting like in Bangladesh. There is a huge

potential for major health gains through sustained multisectoral action involving other ministries and non health agencies concerned with development. Priority should be given to cost-effective interventions for primary rather than secondary prevention for countries like Bangladesh. There are opinions for giving priority to preventing environmental and distal risks to health, such as tackling poor sanitation or inadequate nutritional intakes, rather than the more obvious proximal risks in a causal chain.

Risk factors for NCDs are distributed throughout the society, and they often begin early in life and continue throughout adulthood. Reversing the NCD epidemic requires a comprehensive approach that targets the population as a whole and includes both prevention and treatment interventions. Although feasibility for adopting such interventions depends on factors like the political environment, resource availability, capacity of health-system, community participation and commercial interests of relevant industries.

Priority approaches for NCD prevention

Bangladesh has developed the National NCD control strategy which has been recently updated[4]. Implementation of major activities from the strategy is desirable. Prerequisite for delivery of immediate priority interventions include, sustained political leadership at the highest levels; support for strengthening the health systems, particularly in the primary health care; monitoring systems and accountability mechanisms for measurement and reporting of progress. UN High-Level Meeting on NCDs created environment for strong high-level political support for the commitments to tackle the NCD crisis among the political leaders, which is the key to success in the combat against NCDs. Champions and politicians will also need to take the role of steward. Civil society, private sectors and all stakeholders must be brought together. Whole government system works in a compartmentalized way, challenge is to bring them out of silos. Most non-health departments lack the understanding of their role in the prevention of NCDs and perceive this as strictly a health sector's domain, which shows lack of ownership for the issue. In this respect, policy-makers must follow successful approaches to engage non-health sectors based on international experience and lessons learnt. Measuring key areas of the NCD epidemic is crucial to reversing it. Specific measurable indicators must be adopted, like accurate and complete registration of deaths by cause through national registration systems would be the most sustainable mechanism to monitor progress in prevention of NCDs. NCD surveillance must be integrated into national health information systems. Research is needed, firstly, to compare risk perceptions; secondly, to gather data on the frequency of risk factors and their levels in populations; and thirdly, to evaluate the effectiveness and costs of different combinations of interventions.

Health System Response

Evidence from developed countries shows that launching NCD specific responses within health systems have contributed considerably in declining the NCD trends[5]. Such response is also urgently needed in Bangladesh to curb the steadily rising NCD epidemic. It is also part of the solution to strengthening equity and efficiency of health systems. Ensuring fair health opportunities for everyone is crucial if governments want to uphold the values of equal opportunity, social justice and solidarity. There are growing social inequalities in heart disease, stroke, diabetes, asthma and cancer. The reduction of these health inequities has also an ethical imperative.

Primary Health Care and NCDs

People with NCDs or at risk of developing NCDs require long-term care and assessments that is proactive, patient-centered, community based and sustainable. The sector wide approach in health care delivery has been adopted in Bangladesh for considerable period which promoted major spendings in primary care. Bangladesh needs to establish and further strengthen an efficient primary care as an integral component of the health systems. World Health Report 2008 provides guidance on the four sets of PHC reforms that are required for providing an effective response to health challenges. These reforms should address universal coverage, service delivery, leadership and governance and public policy.

As there are many competing priority conditions that government needs to address at the primary care level, it is unrealistic to expect government to integrate care for all NCDs into primary care at once. However, there should be hunch for solution for these constrains. As a starting point, a core set of interventions prioritized based on evidence (from home and abroad) can be

adopted to address the major NCDs, starting at the primary care level, followed by the secondary level and thereon.

Health-systems strengthening

Strengthening of health-care systems to address NCDs must be undertaken through reorienting existing organizational and financial arrangements and through conventional and innovative means of financing. Capacity should be developed to deliver services for all common diseases during the lifetime, with a patient-centred model of delivery. At first strengthening of primary health care as a part of one point service delivery point that provides the support needed to deliver these critical prevention and treatment services for NCDs is needed. Universal coverage of health care access should be ensured through removal of financial and other barriers to access, particularly for hindered section of the population. Efficient use of resources include subsidy to reduce the costs of accessing services, regulation of user fees in private sectors, health insurance would benefit all health-care users. Curative care based on financial and structural capacity should be considered. Currently health services are yet to be adequate in terms of governance arrangements and health planning processes.

Cost effective interventions

Preventive strategies focus on the key underlying risk factors for NCDs (tobacco, obesity, physical inactivity and unhealthy diet, and sequeale such as raised blood pressure, blood sugar and cholesterol). Tobacco use alone accounts for one in six of all deaths resulting from NCDs. Implementing four key elements of the WHO Framework Convention on Tobacco Control (tax increases, comprehensive legislation creating smoke-free indoor workplaces and public places, health information and warnings about the effects of tobacco, and bans on advertising, promotion and sponsorship) would be a major step. Promoting physical activity and healthy diet through the media and education program and modification of the built environment to promote physical activity can be done. Increase of the price of foods high in saturated fats through taxation, appropriate food labeling and marketing restrictions of unhealthy food products can be achieved through regulatory measures. In addition to tobacco control, reducing indoor air pollution represents the single most important strategy for preventing chronic lung disease, particularly in non-smoking women. Universal access to affordable and good-quality drugs for management of NCDs is an important issue as well.

Finally, incentives and mechanisms to encourage cross-sectoral action and coordination are central to sustained progress. Finance ministries need to budget sufficient funds; agriculture ministries to reduce subsidies for harmful crops; trade ministries to enable access to essential medicines; urban planning and transport ministries to create opportunities for greater physical activity; and education ministries to ensure that school environments provide healthy diets through banning the sale and distribution of harmful foods in schools, and promoting health education.

(J Bangladesh Coll Phys Surg 2012; 30: 62-64)

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Bacteriological Profile of Neonatal Sepsis in a Tertiary Hospital in Bangladesh

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Summary:

Objectives: To evaluate the common pathogens associated with neonatal sepsis in a tertiary care hospital in Bangladesh and their antibiotic susceptibility pattern.

Materials and Method: This prospective study was done at Special Care Baby Unit (SCABU) BIRDEM Hospital from January to December 2008. Neonates whose blood culture yielded growth of bacteria were included in this study.

Results: Sepsis was associated with Low Birth Weight and common organism isolated was Klebsiella and Enterobacter. Ampicillin, Genatamicin and third generation cephalosporin were almost resistance to all organisms.

Conclusion: Bacterial profile is not the same as western countries, Gram-negative bacteria and in particular* Klebsiella and enterobacter *species are the leading causes of neonatal sepsis and resistance to ampicillin, gentamicin and third generation cephalosporin.

(J Bangladesh Coll Phys Surg 2012; 30: 66-70)

Introduction:

Neonatal Sepsis is the commonest cause of neonatal mortality and it is responsible for 30-50% of the total neonatal deaths in developing countries[1, 2]. It is estimated that 20% of neonates develop sepsis and approximately 1% death related to sepsis[2]. Some of the factors responsible for sepsis in newborns are immaturity of the immune system, which include decreased phagocyte activity of white cells, decreased production of cytokines and weak cellular and humoral immunity. Moreover the natural skin barrier is very thin. Various other maternal, foetal and environmental factors also contribute towards sepsis in the newborns. Some of the maternal factors are premature rupture of membrane, maternal fever within 2 weeks prior to delivery, meconium stained amniotic fluid (MSAF), foul smelling liquor and instrumental delivery. The foetal factors include birth weight, gestational age and APGAR score[3,4]. Neonatal sepsis is a life threatening emergency and delay in diagnosis and treatment with appropriate antibiotics may have devastating consequences. Surveillance is needed to identify the common pathogens of the disease as well as the antibiotic susceptibility profile of the pathogens in a particular area. This study was designed to evaluate the common pathogens associated with neonatal septicemia in our hospital and their antibiotic susceptibility pattern over a one year period.

Methods:

This prospective study was done at Special Care Baby Unit (SCABU) in BIRDEM Hospital from January to December 2008. Neonates whose blood culture yielded growth of bacteria were included in this study. Neonates were categorized in two groups; group-1 included

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preterm and group-2 term neonate. Blood culture samples were aseptically collected by the doctors into the blood culture broth and were sent to the laboratory where they were handled according to the manufacturers specifications. The antibiotic sensitivity tests were carried out by disk diffusion method. All the records of the study population were carefully reviewed and data including sex, age, clinical features consistent with sepsis, results of cultures, antibiotic sensitivity and clinical outcome (death versus survival) of the patients were entered into a data collection sheet. Statistical analyses were calculated by Statistical Package for Social Sciences (SPSS version 12).

Results:

In this Study total 65 neonates were included whose blood culture were positive. Among them 40 (61.54%) babies were preterm (group-1) and 25(38.46%) were term (group-2), and 47(70%) were LBW. Male was 38 (65%) and female was 27 (35%), inborn was about 50% and majority was delivered by C/S (72.31%). Sepsis developed within 7 days (early onset) in 23 (35.4) babies (Table-I). Mean birth weight was 1513.02±423.61g in group-1and 2840 (±640.80) g in group-2.

Majority of neonate presented with feeding intolerance (50.77%), respiratory distress (40.28%), abdominal distension (33.85%), apnoea (24.62%) and bleeding manifestation (23.08%). Apnoea, less activity, hyperglycaemia and feeding intolerance were present equally in both group. Abdominal distension and bleeding manifestation were more in group-1 and respiratory distress and convulsion were more common clinical presentation in group-2 (Table-II).

Table-I

Distribution of neonate according to neonatal characteristics (n=65)

Neonatal characteristics		Total No (%) N=65	Group-1 No (%) n=40	Group-2 No (%) n=25	P value
Sex	Male	38 (65)	22(55)	16(64)	0.245
	Female	27(35)	18(45)	9(36)	
Place of delivery	Inborn	33 (50.77)	22(55)	11(44)	0.202
	Outborn	32 (49.23)	18(45)	14(56)	
Mode of delivery	C/S	47 (72.31)	28(70)	19(76)	0.471
	NVD	18 (27.69)	12(30)	6(24)	
Type of sepsis	Early onset	23 (35.39)	12(30)	11(44)	0.114
	Late onset	42 (64.61)	28(70)	14(56)	
Low birth weight	45(69.23)	39(97.5)	6(24)	0.146	

Table-II

Distribution of neonate according to clinical feature

Clinical feature	No (%)	Group-1 No (%)	Group-2 No (%)	P value
Apnoea	16(24.62)	09(22.5)	07(28)	0.313
Less active	21(32.31)	13(32.5)	08(32)	0.486
Feeding intolerance	33(50.77)	20(50)	13(52)	0.099
Hyperglycemia	03(4.62)	02(5)	01(4)	0.217
Respiratory distress	28(40.28)	18(45)	10(64)	0.073
Sclerema	06(9.23)	04(10)	02(8)	0.411
Bleeding	15(23.08)	11(27.5)	04(16)	0.153
Abdominal distension	22(33.85)	16(40)	06(24)	0.001
Convulsion	13(20.0)	10(25)	03(12)	00.001

In this study 52.3% neonatal sepsis was caused by Klebsiella species. Second most common cause was Enterobacter (20.0%). Other organism were Acinatobacter 10.8%), Pseudomonas (06.2%), Serratia (06.2%), Cytobacter (03.1%). Gram positive organism (Staphylococcus) was found in only one neonate. Sepsis with Klebsiella was found equally in both groups; Acinatobacter, Pseudomonas and Serratia were more common organism in group-2 and Enterobacter was more in group-1 (Table-III).

In this study, both groups were equally sensitive to all antibiotics except chloramphenicol (Table-IV). Ampicillin and Gentamicin were 100% resistance to Klebsiella, third generation cephalosporin was also resistance to klebsiella. Imipenem and meropenem were highly sensitive to all organisms and ceftazidime was also highly sensitive to pseudomonas and Serratia (75%). Amikacin and Netilmycin had good sensitivity against some organism than gentamicin (Table-V). Overall mortality due to sepsis was found 7 (10.8%) in this study and more in group-1(15%) than group-2 (4%) (Table-VI).

Table-III

Organism isolated from blood culture (n=65)

OrganismNo (%)N=65	Group-1 No (%) N=41	Group-2 No (%) N=24	P value
Klebsiella34 (52.3)	21(52.5)	13(52)	0.152
Acinatobacter 07 (10.8)	4(1.0)	3(12.0)	0.160
Pseudomonas 04 (6.20)	2(0.5)	2(8.0)	0.176
Serratia04 (6.20)	2(0.5)	2(8.0)	0.113
Cytobacter 02 (03.1)	2(0.5)	0(0)	0.449
Staphylococcus01 (01.5)	1(0.25)	0(0)	0.113
Enterobacter 13 (20.0)	9(22.5)	4(16.0)	0.400

Table-IV

Distribution of neonate according to sensitivity pattern (n=65)

AntibioticNo (%)	Group-1 No (%)	Group-2 No (%)	P value
Ampicillin	02(5.0)	2(8)	0.327
Gentamycin	5(6.5)	2(8)	0.306
Ceftazidime	6(15)	4(16)	0.453
Ciprifloxcin	9(22.5)	8(32)	0.207
Amikacin	10(25)	5(20)	
0.332			
Imipenem	34(85)	20(80)	0.307
Meropenem	34(85)	21(84)	0.453
Cotrimoxazole	6(15)	1(4)	0.096
Netilmycin	7(17.5)	4(16)	0.447
Chloranphenicol	1(2.5)	3(12)	0.087

Table-V

Pattern of antimicrobial sensitivity of microorga nism isolated from blood cultures of neonates with bacterial sepsis (n=65)

Antibiotics	Klebsie-lla (n=34) N(%)	Entero-bactor (n=13) N(%)	Acinatobactor (n=07) N(%)	Pseudomonas (n=04) N(%)	Serratia (n=04) N(%)	Cytobactor (n=02) N(%)	Staphylo-coccus (n=01) N(%)
Ampicillin	0	02(15.4)	0	02 (50.0)	0	0	0
Gentamicin	0	01(07.7)	04(57.1)	01(25.0)	01(25.0)	0	0
Amikacin	01(02.9)	0 6(42.9)	03(42.9)	01(25.0)	03(75.0)	02(100)	0
Imipenem	30(88.2)	11(84.6)	04(57.1)	03(75.0)	03(75.0)	02(100)	01(100)
Meropenem	31(91.2)	11(84.6)	04(57.1)	03(75.0)	03(75.0)	02(100)	01(100)
Netilmycin	01(02.9)	04(30.8)	04(57.1)	0	0	01(50)	01(100)
Ceftazidim	0	01(07.7)	03 (42.9)	03 (75.0)	03(75.0)	0	0
Cefotaxim	02(05.8)	01(07.7	04(57.1)	01(25.0)	0	0	0
Ciprofloxac	11(32.4)	03(23.1)	02(28.6)	01(25.0)	0	0	0

Table-VI

Distribution of neonate according to outcome (n=65)

Outcome	no(%)	Group-1no(%)	Group-2no(%)	P value
Survived	58 (89.23)	34((85.0)	24(96.0)	0.096
Died	7 (10.77)	6(15)	1(4)	

Discussion:

Sepsis is the commonest cause of neonatal morbidity and mortality. LBW is a strong risk factor contributing to sepsis. In this study birth weight is related to development of sepsis. Among 65 babies who develop neonatal sepsis during the study period 70% were LBW. This is in concordance with other studies where low birth was found to be important risk factor for sepsis [5,6]. LBW babies are mostly also premature and are predisposed to sepsis due to multiple reasons like immune incompetence at various levels of defense, more subjected to invasive interventions etc.

In the present study majority of neonates presented with feeding intolerance (50.77%), respiratory distress (40.28%), abdominal distension (33.85%), apnoea (24.62%) and convulsion (23.08%). In a study done in the tertiary care center in Bangladesh poor feeding, respiratory distress and fever was reported in 22.2%, 27.8% and 44.4% cases respectively [7]. In the same study they documented hypothermia in 11.1%, apnea in 16.7%, cyanosis in 11.1%, convulsions in 11.1% and jaundice in 50%.

In our study the most common etiologic agent was *Klebsiella*. This is in contrast to reports from other parts of the world. In western countries, group B *Streptococci* and *E.coli* were the most common Gram-positive and Gram-negative microorganism respectively [8,9]. In our study *52.3%* of neonatal sepses were caused by *Klebsiella.* All the isolated *Klebsiella* species were resistant to ampicillin and gentamicic. In a study performed on 124 blood culture-positive neonates with sepsis at neonatal ward of Ali Asghar's Children Hospital; the most common pathogens were *Enterobacte* (27%), *Staphyloccocus aureus* (23%) and *Klebsiella* (24%), respectively [10]. In that study almost all Gram negative bacteria were resistant to ampicillin. In another study in Iran on 242 neonates, *Staphylococus aureus* was the leading cause of neonatal sepsis and *Klebsiella*

was found to be the third most common etiologic agent[11]. Missallati et al reviewed 36 cases of blood-culture-proven neonatal septicemia. They found *Klebsiella* as the most common microorganism[12]. In their study, similar to ours, the bacterial isolates were resistant to ampicillin. However, they reported sensitivity of the isolates to cefotaxim but in this study only 4% klebsiella was sensitive to cefotaxim and all were resistant to ceftazidim. *Enterobacter* infections are emerging as significant pathogens among cases of neonatal sepsis. In this study 2nd most common organism responsible for neonatal sepsis was *Enterobacter.* Bhutta in his study found 10% neonate developed sepsis with *Enterobacter*. Approximately half (47%) of *Enterobacter* infections presented within 72 hour of birth and the associated mortality was 21%. Increasing resistance to commonly used first- and second-line antibiotics over the last five years was noted [13].

Acinetobacter can be a cause for concern in neonatal units. It may be associated with severe complications like bleeding diathesis, NEC, meningitis and hyperbilirubinemia with consequent high mortality [14]. In that study 10.8% neonatal sepsis are due to acinatobacter. Misra A found acinatobacter was responsible for neonatal sepsis in 31.0% baby. This high number in their study was due to increase outbreak of Acinatobacter sepsis in that period.

In summary our bacterial profile was not the same as western countries, Gram-negative bacteria and in particular *Klebsiella and enterobacter* species were the leading causes of neonatal sepsis. However the prevalence of resistant *klebsiella* spp. was significant and deserves more consideration. We reviewed the prevalence of various etiologic agents in a one year period. We showed that our bacterial profile was not the same as western countries, Gram-negative bacteria and in particular *Klebsiella and enterobacter* species were the leading causes of neonatal sepsis and almost all were resistance to ampicillin, gentamicin and third generation cephalosporin.

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The Ten-Step Vaginal Hysterectomy – A Newer and Better Approach

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Summary:

Aims and Objectives: *This study was undertaken to compare with the traditional Heaney's method of vaginal hysterectomy and the newer Ten-Step Vaginal Hysterectomy and to emphasize that this is a safe procedure with lesser blood loss, shorter operation time and shorter requirements of analgesia.*

Study Design: *110 Patients with non descent, first, second and third degree prolapsed uterus from 45 to 72 years of age were subjected to this study in Khalishpur Clinic. Those women were randomly selected. Among them 54 women had the traditional Heany's Methods of Vaginal Hysterectomy and 56 women had the Ten-Step Vaginal Hysterectomy (TSVH). The blood loss was measured by hemoglobin assessment before and 3 days after operation.*

Material and Methods: *In Ten-Step Vaginal Hysterectomy the vaginal wall was incised by drop-like incision starting under the urethra, continuing laterally and down, encircling the cervix from behind and returning back to the starting point from the other side, then separation was done laterally to the side to the uterus. Bladder is detached from the uterus, and the posterior peritoneum is opened. The sacro-uterine ligaments and the paracervical ligaments are clamped together, cut and ligated in both sides. Next the uterine arteries are clamped, cut and ligated. Uterus is pulled down and two fingers are introduced behind the fundus to lift anterior peritoneum and opened under supervision. The round and ovarian ligaments and blood vessels are clamped together and ligated in both side. The peritoneum is left open, then reconstruction of the pelvic floor is done and the vaginal wall is closed continuously.*

Results: *It was found that in comparison of traditional methods with the ten steps vaginal hysterectomy, there are lesser blood loss (400ml vs 80ml; P<0.05) with lower complications, shorter operation time (52.5min vs 30.3min; P<0.05), lesser pain and lesser requirements of analgesia (5.8 vs 3.9 days; P<0.05) and shorter period of convalescence. Hospital stay remains same for both groups.*

Conclusion: *The Ten-Step Vaginal Hysterectomy is a better operation than traditional method of vaginal hysterectomy, Abdominal Hysterectomy and LAVH. At the same time this method is logical and easy to learn, to perform and to teach.*

(J Bangladesh Coll Phys Surg 2012; 30: 71-77)

Introduction:

Vaginal hysterectomy was done for many centuries before abdominal hysterectomy. First vaginal hysterectomy was done in the 5th century BC, in the time of Hippocrates[1]. Next it was done in the 2nd century AD by Soronus. Then earliest hysterectomies were done for prolapsed uterus. Though vaginal hysterectomy was done sporadically through the 17th and 18th centuries, the first successful vaginal hysterectomy was done in 1813 by Langenbeck,[1,2] a German surgeon. After that successful abdominal hysterectomy was done by John Bellinger[1] of South Carolina in1846. Since then abdominal hysterectomy had gain its popularity for the last century. Surprisingly, in the last three decades with the introduction of Laparoscopically Assisted Vaginal Hysterectomy (LAVH), vaginal hysterectomy has regained its popularity.

Now a days, when hysterectomy is indicated, vaginal route should always be considered because of quick recovery, lack of abdominal scar and shorter hospital stay. It seems that LAVH should not replace the vaginal but the abdominal hysterectomy except some relative contraindications for vaginal hysterectomy. There are less and less contraindications for vaginal hysterectomy

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and the operation can be performed in nulliparity and women with enlarged uterus. Michael Stark from Germany has introduced "Ten-Step Vaginal Hysterectomy"[3] which is logical, easy to learn, perform and teach. He has optimized this method by reevaluating the six methods used today: the Porges[4], Falk[5], von Theobald[6], Heaney[7], Joel-cohen and the Chicago[8] methods. All common steps in these methods were defined and analyzed, the unnecessary steps were excluded, and the way of their performance was revised.

Materials and Methods:

110 Patients with non descent, first, second and third degree prolapsed uterus from 45 to 72 years of age were subjected to this study in Khalishpur Clinic during the period of December-2006 to December-2010. It was a prospective study and those women were randomly selected. Among them 54 women had the traditional Heaney's Method of vaginal hysterectomy and 56 women had the Ten-Step Vaginal Hysterectomy.

Inclusion criteria: Women with uterine pathology like prolapsed uterus, Leiomyoma less than 12 weeks size, Adenomyosis, DUB were included in the study.

Exclusion criteria: Women with Uterine Leiomyoma more than 12 weeks size, severe Endometrosis, severe Pelvic Inflammatory Disease, Carcinoma Cervix, Endometrial Carcinoma and any Ovarian tumor (benign or malignant) were excluded from the study.

The Blood loss was measured by two parameters:

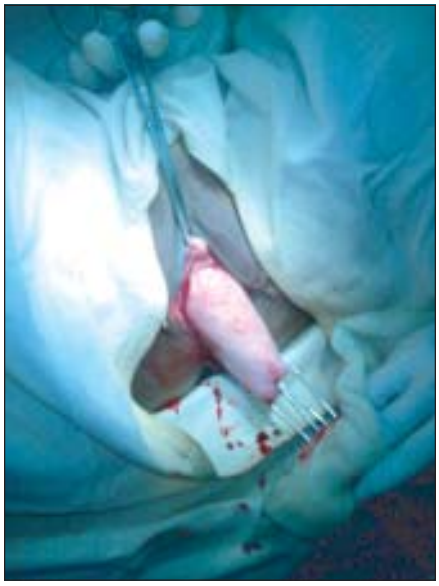
a) Hemoglobin assessment before and 3 days after operation.

b) Measurement by weighting the Mops, Sheets and lost blood in the tray: The Mops and operating sheets and tray were measured before and after operation and deducted. Thus the amount of blood loss was measured.

Analgesic requirements: Diclofenac sodium injectable, suppository or oral tablet form were used routinely and accordingly in both groups. Sometimes Inj Pethidine was needed. At the same time, the types, doses, amounts of analgesics were noted.

Method description: The revised operation steps are as follows:

1. Incision of the vaginal wall: In traditional method, where prolapse exists, an inverted T incision is given with circumcision around the cervix, extension towards the orificium urethrae externum and separation of the vaginal wall laterally, away from the bladder are done. The cervix is grasped with two single-toothed tenaculi. In our case, in prolapsed uterus, the incision will be drop-like starting under the urethra, continuing laterally and down, encircling the uterine cervix behind and returning back to the starting point from the other side (Fig: 1 & 2). If the depth of the initial incision is correct and the right cleavage is reached, the vaginal wall will be easily separated laterally to the side of the uterus



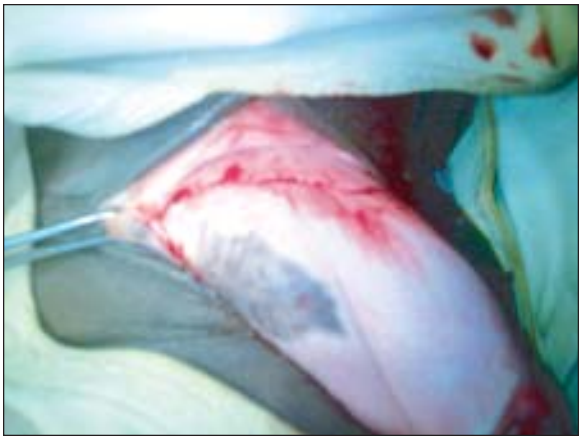


Fig.-1 & Fig.-2: *A Drop like incision around the cervix (Step1)*

and downwards below the cervix by a gentle use of surgical forceps. This should be nearly bloodless and easier than separating the vaginal wall in the described traditional way. Doing so, the vaginal wall is already ready for the anterior wall colporrhaphy. After this, the tip of the "drop" still covering the bladder is pulled down, separating the vaginal wall from the bladder. Being in the right cleavage will prevent unnecessary bleeding. This procedure, besides being logical, is performed in three main movements compared to six in all other methods.

In a patient without prolapsed:
The cervix is grasped with two single-toothed tenaculi. A circular incision is given around the cervix about 5mm above the external os, and then, being in the right cleavage, the vaginal wall should be separated from the cervix using surgical forceps or simply by gauze. More vaginal retractors are sometimes needed in order to allow the surgeon to perform this manipulation under good vision.

This approach is easy and logical both in prolapsed and non-prolapsed uteri.

2. Detaching bladder from the uterus: After identification of the border between the anterior wall of the uterus and the bladder, it is cut. Sometimes curved scissors are needed. The bladder is pushed up close to the uterus and separate from the uterus until the anterior peritoneum is exposed. The anterior peritoneum is not recommended to open because it will disturb the dynamics of the operation and interrupts its continuity, and also might cause for damage to the bladder whenever the intra-anatomical relations between it and peritoneum is not clear and now Previous Caesarean Sections are not considered a contraindication for vaginal hysterectomy.

3) Opening posterior peritoneum: The tenaculi holding the uterus should be pulled up and the peritoneum should be grasped with surgical forceps and opened with scissors. The scissors are then introduced into the Douglas cavity, and holding each blade with one hand, pulled out open, so that the back sides of the blades expose the insertions of the sacrouterine ligaments Fig: 3.

4) Dissection of the lower part of the uterus: The sacro-uterine ligaments and the paracervical tissue are clamped together (Fig-4). This is done by a designed manoeuvre: one blade of an open clamp is placed under the insertion of the sacro-uterine ligament, the instrument rotates towards the uterus while the uterus is being contra-rotated. Both anatomical structures are included between the blades of the instrument while it is being closed. Both structures, the relatively bloodless sacro-uterine ligaments and the paracervical tissues, are cut and ligated leaving the suture material in its full length. This is

Fig.-3: *Opening the post peritoneum (Step-3)*

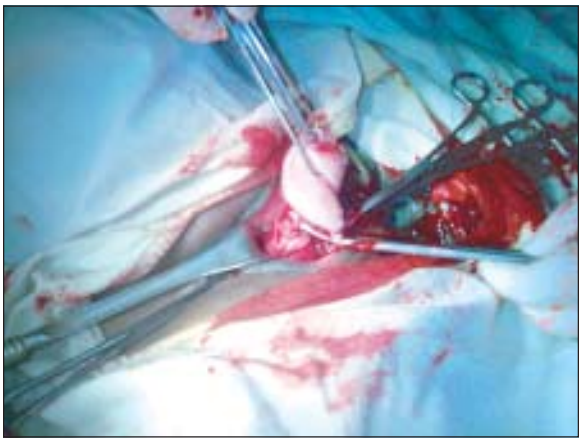


Fig.-4: *Grasping the sacro-uterine lig. and Paracevical tissue (Step-4)*

repeated on the contralateral side. In patients without prolapsed uterus, this manoeuvre will instantly produce a significant descensus.

5) Cutting and ligating the uterine arteries: Both uterine arteries are clamped, cut and ligated.

6) Opening the anterior peritoneum: After cutting and ligating both uterine arteries, the uterus is pulled down and two fingers are introduced behind the fundus to lift the anterior peritoneum and opened under good vision with scissors. The access to the fundus in a myomatous uterus is sometimes difficult. In such a case, the surgeon should hold both tenaculi with his left hands while continuously and slowly pull them down with rotating movements. Morcellation of the uterus may be performed when needed [9].

7) Dissection of the upper part of the uterus (and appendages): The round and ovarian ligaments and the blood vessels are clamped together and ligated. The ligature should be placed as lateral as possible away from the clamp, leaving the ovarian ligaments as long as possible. The uterus is cut away with scissors medial to the instrument. A transfiction suture is placed between the clamp and the ligature keeping the full length of the suture material. The ligature, which is placed before and lateral to the transfiction, will prevent bleeding, should this transfiction suture slip away or tear by traction. The same procedure is to be done on the contra lateral side.

8) The "non stage" leaving the peritoneum open: In 1980, Harold Ellis showed that closing the peritoneum at the end of abdominal surgery is not necessary [10,11,12]. The British Royal College of Obstetrics and Gynecology recommended in its guideline No.15 from July 2002 to leave peritoneum open [13].

If an enterocele has to be prevented or repaired, it should be done at this stage[14].

9) Reconstruction of the pelvic floor: The left and right sacrouterine ligaments with the paracervical tissues as well as the ovaries ligaments are ligated to each other respectively.

10) Closing the vaginal wall: The vaginal wall is sutured continuously. In sexual active women I'ves done an inverted T suture (Fig-5).

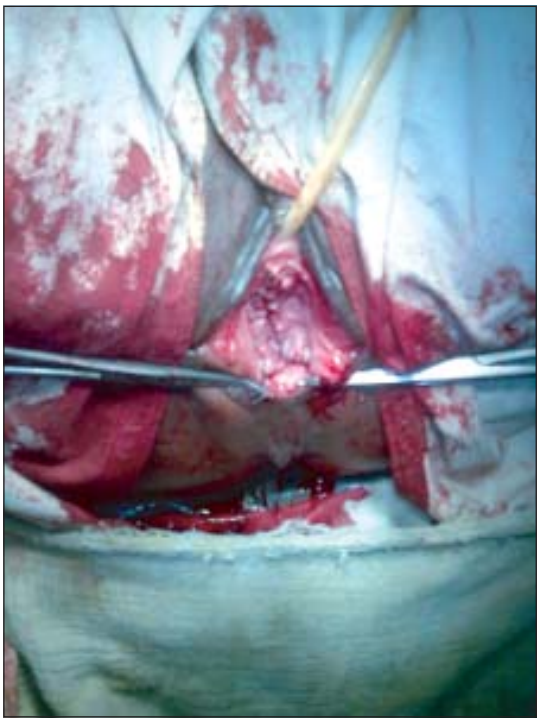


Fig.-5: *Closing the vaginal wall*

The data were stored in a database. The Evaluation was done using SPSS for Windows-7. Frequencies and standard differences were calculated as mean variations. Chi square analysis was done where needed.

Instruments: Speculum two single-toothed tenaculi, scalpel, surgical forceps.

Swabs, Allis clamp, scissors, Wertheim or Heaney clamp, Needle holder.

Result:

This study was done in Khalishpur Clinic from December 2006 to December 2010, where 110 women with non-prolapse I, II, or III underwent vaginal hysterectomy were recruited, among them 54 patient had vaginal hysterectomy with the Heaney methods and 56 patient had Ten-Step Vaginal Hysterectomy.

The characteristics of both groups were shown in Table – 1. The table shows the differences between the groups with regard to patient's demographics characteristics like age, parity, Non-prolapsed and prolapsed cases.

Table-I

Demographics of the patients

Characteristics	Heaney's Method(n =54)	Ten Step Vag. Hyst.(n =56)
Age	55.6 (45 -70.4)	56.1 (46 – 71.6)
Parity	5.25 (4.0 – 8.0)	5.5 (5.0 – 9.0)
Non Prolapse	2 (3.7%)	2 (3.5%)
Prolapse – I	5 (9.2%)	4 (7%)
Prolapse – II	46 (85%)	47 (84%)
Prolapse – III	1 (1.9%)	1 (1.8%)

Data in parameters of percentage (%)
P – Value not significant

Table-II

Comparison of the heaney methods and ten-step vaginal hysterectomy

Characteristics	Heaney methodsN = 54	Ten-Step Vag. Hyst. N = 56	P – Value(P<0.05)
Age (years)	55.6 (45-70.4)	56.1 (46 -71.6)	P>0.05(NS)
Operation time (min)	52.5(30.2-90)	30.2(23.5-45.0)*	P>0.05(NS)P<0.05
Average Blood loss (ml)	400 (200-600)	80- (30-200)*	P<0.05
Uterine weight (gm)	210 (180-300)	215 (175-320)	P>0.05(NS)
Pain Killers needed (days)	5.8 (4.0-8.3)	3.9 (3.0-6.5)*	P<0.05
Average hospital stay (range)	5.9 (4-8)	5.9 (4.-8))	P>0.05(NS)

* Statistically significant (P<0.05)

In our study of 110 women with non-prolapsed, prolapse I, II or III underwent vaginal hysterectomy. There was no significant difference in both groups regarding age, parity, uterine weight, and average hospital stay. The women undergoing the Ten-Step Vaginal Hysterectomy had a significantly minimum blood loss five times less (400ml vs 80ml; P<0.05) with lower complications, shorter operation time; almost half (52.5min vs 30.3min; P<0.05) and lesser requirements of analgesia also half (5.8 vs 3.9 days; P<0.05), lesser pain, and shorter period of convalescence. Hospital stay remains same for both groups (Table-II). Uterine weights are also same for both groups. Interestingly, the women with Ten-Step Vaginal Hysterectomy had also speeder return to normal activities and Blood transfusion was not needed for those patients.

Discussion:

In true sense, it is told that the fashion of the surgery is changing more rapidly and faster than the fashion of the dresses. Though some surgeons like to stay close with the traditional methods of operation, but it is wise to develop the new thinking and reevaluation of the surgical developments. So for the best patient outcome in any surgical procedure, each steps with its combinations and sequences should be evaluated, the necessity of these steps and way of performances should be critically assessed and compared to the alternatives. At the same time, the complications and outcomes both early (febrile morbidity, analgesics needed, infections, mobility) and late (chronic pains, organ dysfunctions, post operative adhesions and return to normal activities e.g. life quality, costs) should be taken into account to assess which one is best surgical procedures.

In general, based on the medical evidence vaginal hysterectomy is associated with better outcomes and fewer complications than either laparoscopic or abdominal hysterectomy. There were many studies comparing the outcome of vaginal hysterectomy to laparoscopic or abdominal hysterectomy. According to new Committee Opinion released by The American

College of Obstetrician and gynecologists (ACOG) and published in the November issue of Obstetrics & Gynecology, Vaginal Hysterectomy is the safest and most cost-effective method to remove the uterus for noncancerous reasons[15].

Campbell et al.[16] compared the three methods in 33,792 operations, analyzing the duration of the hospital stay and the involved costs and concluded that " vaginal hysterectomy provides the best patient outcomes with the shortest hospital stays and lowest complication rates at the lowest cost". Drahonovsky et al had studied that vaginal hysterectomy had the shortest operating time and least drop in hemoglobin. So this is suitable method of operation for women who are not fit for the longer duration of surgery and anesthesia as well.[17]

Recent findings: Recent research like Candiani M et al had established that "Vaginal hysterectomy seems to be the gold standard in case of benign pathologies and should be performed in preference to abdominal hysterectomy wherever possible. Laparoscopic hysterectomy is to be preferred to abdominal hysterectomy, when vaginal hysterectomy is not technically possible. Vaginal and laparoscopic hysterectomies have been clearly associated with decreased blood loss, shorter hospital stay, speedier return to normal activities, and fewer abdominal wall infections when compared with abdominal hysterectomy. In this review, the authors outline the ten steps to a successful laparoscopic hysterectomy.[18] ACOG also mentioned that LAVH is considered an alternative to abdominal hysterectomy, not vaginal.[19]

In another study, Meikle SF et al showed that though shorter hospital stay and lesser need for analgesia was reported in LAVH but there are no other advantages of laparoscopic hysterectomy could be found over vaginal hysterectomy. In addition, laparoscopic hysterectomy is associated with a higher rate of complications, especially, bladder and ureteral injuries.[20] Wolfgang Z et al had done a newer method of vaginal hysterectomy by using bicoagulation forceps without sutures for routine vaginal hysterectomy. He mentioned that it is a technically feasible and safe alternative to the traditional approach. Complication rates and patient satisfaction are similar. There is lesser blood loss and need for pain killer and shorter stay of hospital in the coagulation group. [21] So this method may be another alternative to Hysterectomy. Unfortunately, the special instruments (bicoagulation forceps) are costly and not available in Bangladesh.

In one study by Balfour RP was stated that the vaginal route should always be considered when hysterectomy is indicated, because of quicker recovery, avoiding abdominal scar, leading to a reduced length of hospitalization. He also mentioned that there is no justification for LAVH in significant uterine prolapsed.[22]

Conclusion:

In conclusion, I would like to thank Mr. Michel Stark for his invention of the Ten-Step Vaginal Hysterectomy which results from his analyses of surgical steps used in different methods depending on anatomical considerations and physiological principles. Then the operation becomes simple, easy and rational by avoiding unnecessary movements and following rules of aesthetics and functional minimalism. The study also showed that this operation reduces the operation time, blood losses and the use of pain killers. Here only ten instruments and ten sutures are needed. In fact, to evaluate the late outcome of this method more rational, randomized and prospective studies will be needed.

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Clinico-epidemiological Profile of Onychomycosis Attending in a Tertiary Care Hospital

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Summary:

A cross sectional study, conducted in the department of Dermatology and Venereology, Bangabandhu Sheikh Mujib Medical University (BSMMU) for duration of January 2009 to December 2010. Hundred twenty patients with onychomycosis were selected by purposive type of non-probability sampling technique. Majority of the patients 61(150.8%) were in the age group of 21-30 years old. Mean age of the patients were 32.8±14 years and most of the patients were house wives 36(30.0%). Disfigurement 117(97.5%) and discomfort 89(74.2%) were more common chief complaints of the patients. The mean duration of disease was 20.4±15.4 months and nail fold changes were associated with 37(30.8%) patients and more than a half 63(52.5%) of the patients had history of wet works. Regarding the history of past illness, it was observed that previous onychmycosis found 26(21.7%), nail trauma 26(21.7%) and immune suppression 6(5.0%). In endocrinopathies, hypothyroidism was observed in 1(0.8%), Diabetes Mellitus 6(5.0%) etc. Regarding the pattern of nail changes, thickening of nail plate 88(73.3%), onycholysis 67(55.8%), subungunal hyperkeratosis 61(50.8%) were more common changes. Paronychia was observed in 34 (28.3%) cases. In concomitant fungal infection, it was observed that T. manuum in 6(5.0%), T. pedis 3(2.5%), Interdigital intertrigo 2(1.7%) and T. cruris 1(0.8%). This was a study on a limited number of cases. Future studies must include economical support, then large sample size could be ensured and study finding would be more reliable. There is a great need of epidemiological studies also, with sufficient follow-up, systematic reviews and meta-analyses on this issue.

Key words: Onychomycosis, clinical profile, epidemiological profile.

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Introduction:

Onychomycosis comprises all fungal infections affecting the nail apparatus, i.e., nail plate, nail bed, nail matrix, nail folds, cuticle and hyponychium.[1] It accounts for upto 50% of all nail disorders and 30% of all superficial fungal infections of skin.[2,3] The dermatophytes cause the great majority of onychomycosis. Trichophyton rubrum is responsible for approximately 71 percent of all cases and Trichophyton mentagrophytes add another 20 percent. Yeasts are the source of approximately 5 percent of onychomycosis, the majority of which is caused by candida albicans. The nondermatophyte moulds Acremonium, Aspergillus, Fusarium, Onychocola canadensis, Scopulariopsis brevicalis and Scytalidium dimidiatum account for approximately 4 percent of onychomycosis.[1]

Onychomycosis expresses itself in various forms and clinically the disease was classified as distal and lateral subungual onychomycosis(DLSO), superficial white onychomycosis(SWO), proximal subungual onychomycosis(PSO), and candidial onychomycosis.[4] Patient may have combination of these various forms. Total dystrophic onychomycosis refers to most advanced form of any of the above.[3,5] Nail changes in onychomycosis can occur in various forms, such as destruction of nail plate, roughening of nailplate,

onycholysis, subungual hyperkeratosis, thickening and discoloration of nail plate (yellowish, brownish-yellow, whitish, blackish).[6] Onychomycosis is common in Bangladesh, but no significant data was available in this country. Here an endeavor had been made to find out the clinico-epidemiological profile od onychomycosis.

Materials and Methods:

It was a cross sectional study, conducted in the department of Dermatology and Venereology, BSMMU for a duration of January 2009 to December 2010. Hundred twenty patients with onychomycosis, attending in outpatient department, were selected by purposive type of non-probability sampling technique, considering inclusion and exclusion criteria of patient selection.

Inclusion criteria:

i) Clinically diagnosed cases of onychomycosis having destruction of nail plate, onycholysis, subungual hyperkeratosis, discoloration & thickening of nail plate alone or in combination.

ii) Patients of both sexes & all ages.

iii) Patients who were given informed consent.

Exclusion criteria:

i) Not willing to participate.

ii) Patients who had received treatment either with topical and / or systemic antifungal agents for present nail condition within the last one month.

iii) Diagnosed cases of other dermatological diseases having nail changes eg. Psoriasis,

Lichen Planus, Eczema, PRP, Darier's disease.

Ethical consideration:

i) All information of benefits and hazards was delivered to the patient.

ii) Patient was informed about the methodology, objective and purposes of the study.

iii) Patient's consent was taken without any influence.

iv) Information obtained from the patient was kept confidential.

All patients with onychomycosis attending in department of Dermatology and Venereology, BSMMU were examined. Then patients for this study were selected on the basis of history, clinical examination, inclusion and exclusion criteria.

Clinical Assessment

According to structured questionnaire, their particulars and history was taken. Demographic data, mainly age, sex, occupation and economic status were obtained from each patient. Patient complaints and duration of nail involvement were recorded. Specific data related to risk factors for onychomycosis (use of occlusive footwear, involvement of wet work, family history), predisposing factor such as previous onychomycosis, nail trauma, diabetes mellitus, concomitant fungal infections were noted.

After collection, data was checked for inadequacy, irrelevancy, and inconsistency. Irrelevant data was discarded. Analysis of data were performed by using SPSS (statistical package of social science) software.

Results:

This was a cross sectional study conducted in the department of Dermatology and Venereology, BSMMU, Dhaka. The main objective of the study was to find out the clinic-epidemiological profile of onychomycosis. A total of 120 patients of both men and women were enrolled in this study. Majority of the patients 61(150.8%) were in the age group of 21-30 years old. Mean age of the patients were 32.8±14 years. Male patients 64(53.3%) were more than female 56 (45.8%) in the study. Most of the patients were house wives 36 (30.0%), followed by students (27.5%), service holder (20.8%) etc. More than a half (52.5%) of the patients had involved in wet works, e.g. kitchen work, washing of cloths. Family history of any onychomycosis and sharing of common facilities present in 18.8% & 15.0% of patient respectively. Hyperhydrosis is also the frequent cause, associated with (5.0%) patients. Disfigurement 117(97.5%) and discomfort 89 (74.2%) were more common chief complaints of the patients. The mean duration of disease was 20.4±15.4 months with ranged from 2 to 72 months. Majority of the patients 63(52%) had duration of 1-12 months. Nail fold changes are associated with 37(30.8%) patients. More than a half 63(52.5%) of the patients had wet works, family history of onychomycosis (19.2%), others personal history varied from 5 to 20.0% showed in the table.

Regarding the history of past illness and comorbidity it was observed that previous onychmycosis found 26(21.7%), nail trauma 26(21.7%) and immune suppression 6(5.0%). In endocrinopathies, hypothyroidism was observed in 1(0.8%), DM 6(5.0%) and others 26(21.7%). Regarding the pattern of nail change thickening of nail plate 88(73.3%), onycholysis

67(55.8%), subungunal hyperkeratosis 61(50.8%), roughening of nail plate 42 (35%), yellowish discoloration 38(31.75) and brownish-yellow discoloration 29(24.2%) were more common changes. Paronychia was observed in 34 (28.3%)cases. In concomitant fungal infection, it was observed that T. manum in 6(5.0%), T. pedis 3(2.5%), Interdigital intertrigo 2(1.7%) and T. cruris 1(0.8%). Site of nail involvement it was observed that right hand 27(22.5%), left hand 18(15.0%) and both hand 30 (25.0%). Most 35(29.2%) of the patients had single finger nails involvement. In case of toe nails it was observed that right foot was 22(18.3%), left foot 15(12.5%) and both foot 42 (35.0%). Majority (22.5%) of the patients had single toe nails 27(22.5%) involvement.

Table-I

Distribution of the study patients according to particulars of the patients (n=120)

Particulars of the patients	Number of patients	Percentage
Age		
<18	6	5.0
21 – 30	61	50.8
31 – 40	21	17.5
41 – 50	18	15.0
51 – 60	10	8.3
> 60	4	3.3
Mean±SD	32.8	±14.0
Sex		
Male	64	53.3
Female	56	45.8
Occupation		
Service	25	20.8
Business	14	11.7
Student	33	27.5
Housewife	36	30.0
Farmer	2	1.7
Miscellaneous	10	8.3
Economic Status		
Low income	11	9.2
Low-middle class group	72	60.0
Upper-middle class group	37	30.8
Mean±SD	14241	±9642

National children policy of Bangladesh(Bangladesh Gezette,2002) as well as UNICEF defined child as any person under 18 years of age
Low income: <5,000 per month; High income >60,000
Low-middle class group: 5,000-<20,000;Upper-middle class group: 20,000-<60,000

Table-II

Distribution of the study patients according to chief complaints (n=120)

Chief complaints	Number of patients	Percentage
Disfigurement	117	97.5
Discomfort	89	74.2
Pain	29	24.2
Associated changes in nail folds	37	30.8
Duration of the disease		
1 -12 months	63	52.5
13 – 24 months	25	20.8
>24 months	32	26.7
Personal history		
Wet works	63	52.5
Family history of onychomycosis	23	19.2
Wearing closed footwear for long time	19	15.8
Sharing of common facilities	18	15.0
Animal handling	16	13.3
Hyperhydrosis	6	5.0

Table-III

Distribution of the study patients according to history of past illness and comorbidity (n=120)

History of past illness & comorbidity	Number of patients	Percentage
Previous onychmycosis	26	21.7
Nail trauma	26	21.7
Febrile illness	0	0.0
Endocrinopathies		
Hypothyroidism	1	0.8
Diabetes Mellitus	6	5.0
Addison's disease	0	0.0
Hyperthyroidism	0	0.0
Hypoparathyroidism	0	0.0
Chronic mucocutaneous candidiasis	0	0.0
Cushing's syndrome	0	0.0
Others		
Immune suppression	6	5.0
Peripheral vascular disease	0	0.0
HIV disease	0	0.0
Drug history	0	0.0

Table-IV

Distribution of the study patients according to clinical examination (n=120)

Clinical examination	Number of patients	Percentage
Pattern of nail change		
Thickening of nail plate	88	73.3
Onycholysis	67	55.8
Subungunal hyperkeratosis	61	50.8
Roughening of nail plate	42	35.0
Yellowish discoloration	38	31.7
Brownish-yellow discoloration	29	24.2
Blackish discoloration	10	8.3
Whitish discoloration	9	7.5
Destruction of nail plate	7	5.8
Chalky white spot	2	1.7
Pitting	2	1.7
Paronychia	34	28.3
Concomitant fungal infection		
T. manuum	6	5.0
T. pedis	3	2.5
Chronic paronychia	0	0.0
Interdigital intertrigo	2	1.7
T. corporis	0	0.0
T. capitis	0	0.0
T. cruris	1	0.8

Table-V

Distribution of the study patients according to site of nail involvement (n=120)

Site of nail involvement	Number of patients	Percentage
Finger nails		
Right hand	27	22.5
Left hand	18	15.0
Both hand	30	25.0
No	45	37.5
Number of finger nails		
1	35	29.2
2	7	5.8
3-8	32	26.7
9-10	0	0.0
Toe nails		
Right foot	22	18.3
Left foot	15	12.5
Both foot	42	35.0
No	41	34.2
Number of toe nails		
1	27	22.5
2	26	21.7
3-8	24	20.0
9-10	1	0.8

Discussion:

In a study by Grag et al. comprised 90 patients with onychomycosis showed that the male: female ratio was 3:1 and the mean age was 29.40 ± 13.61 years. Office workers and students constituted the majority(63.3%) of patients. 35.5% of the patients who presented with disease of less than 6 months and 70.8% of the patients who had presented with the disease duration of more than 6 months, had multiple nail involvement. Disease was associated with history of trauma in 14.14% of patients. Fingernails were involved in 60%, toenails in 13.34%. The most common clinical features was discoloration, which was observed in 100% of the patients(brown-black in 40%, yellow-brown in32%, grayish-black in 20% and white or grayish-white in 8%).Other signs included subungual hyperkeratosis(48%), onycholysis(37%) and paronychia(12%).[6]

In one study was by Das et al. with 85 cases, 44 cases showed the presence of fungus (either by KOH preparation and / or fungal culture) amounting to 51.76% positivity. Among the 44cases, the mean age was 41.41 14.64 years (range: 15-65years) with a male to female ratio was 1.1. The patient mostly belonged to upper middle class (59%) background followed by lower middle class (36.36%) and poor (4%) section of population. Occupation (especially wet work) was not found to have a significant association with their study population. Among those 44 cases, the infecting fungal agents were predominantly dermatophytes 22(50%) cases and the rest were due to yeast 12(27.27%) cases and moulds 10(22.72%) cases.[7]

Gupta et al. showed that among 130 patients, male: female was 98:32 and they were between 8-76 years of age. (mean 41.35 ± 14.98 years). The prevalence of onychomycosis was higher among farmers and office

workers (20% each). Finger or toe nails were exclusively involved in 56.9 and 32.3% respectively while there were involved concurrently in the rest of the 10.8% patients. Ten(7.69%) patients had associated peripheral vascular disease,18(13.8%) patients had history of trauma. Animal handling in 79(60.78%) and family history of onychomycosis were reported by 34(26.15%) patient. The predominant nail changes observed were discoloration in 120 patients(92.3%), subungual hyperkeratosis in 89(68.5%), onycholysis in 35(26.9%), dystrophy in 49(37.7%), leukonychia in 19(14.6%) and paronychia in 14(10.7%) patients respectively. Pitting, beau's lines and melanonychia were some of the other nail changes observed.[3]

In one study by Sayed et al. among 772 patients (520 women, 252 men; mean age 40.3 years) direct microscopy was positive in 256 cases (33.2%). Of this 230 were correlated with positive cultures and 26 with negative culture. However, cultures were positive in 419 patients% (54.3%; 260 women and 159 men). Among male patient, cultures was positive in 63.1% of cases, where half of the female patients who presented for consultation had a positive result ($p<0.05$). Three children were suspected to have onychomycosis, but in all of them cultures were negative. The ratio of fingernail / toenail onychomycosis was 1.9. Fingernail involvement was predominant in females(76.2) whereas toenail involvement was predominant in males(53.6%).[8]

In an observational study by Bokhari et al. of 100 patients seventy two women (mean age, 32.6 ± 14.8 years) and twenty eight men (mean age 40.6 ± 15.8 years) were studied. Females outnumbered males (2.6:1, $p<0.001$). Of the 72 female patients, the number of housewives or housemaids was statistically significant($p<0.001$). Fingernails were involved in 50 patients, toenails in 23 and both fingernails and toe nails in 27 patients. The number of nails involved ranged from 1 to 20. Six patients showed involvement of all 20 nails. The most common clinical feature was discoloration seen in 100% of patients. (brown-black in 40%, yellow-brown in 32%, grayish-white in 8%). Other signs included onycholysis,(37%), paronychia(34%), subungual hyperkeratosis (23%), broken nails(18%), pitting(15%),ridging(9%), leukonychia(8%), beau's lines(7%) and onychogryphosis(3%). Onychomycosis is more common in women of 20-40 years of age. Distolateral subungual onychomycosis and candidal onychomycosis are the most common clinical presentation.[9]

In one study, by Kaur et al. onychomycosis was seen affect all ages ranging from 5 years to 67 years, the mean age being 31.72 years and the majority of the cases were males. As many as 51 (85%) patients were living in urban areas, while only 9 (15%) came from rural areas. One patient (1.67%) was in professional group and others were more or less equally distributed in other groups (i.e., housewife, agriculture, laborer, industrial worker, electrical, students and others). Most patients were involved in domestic activities (33.33%), the most common being cooking followed by stitching and tailoring. Among clinical features, there was history of trauma preceding nail involvement in 3 (5%) patients. One patient (1.67%) gave history of onychophagia. Family history of fungal infection of nails could be elicited in 4 (6.67%) of 60 patients. History of contact with the cattle and pets was presents in 11 (18.67%) patients. It was observed that patients who were in habits of wearing chappals had much less incidence of toenail involvement (2/29) as compared to patients used to wearing shoes and socks (14/20), shoes only 4/5) or bare foot (4/6). Onychomycosis was limited to only one nail in 10/60 (16.67%) cases, while 50 patients (83.33%) showed involvement of two or more nails. The most common findings seen on examination of nails were subungual hyperkeratosis, Presence of coexisting fungal infection in other parts of the body was noted in 27(45%) patients, the most being Tinea manuum. Other skin / systemic disorders were present in 23 (38.33%) patients, hyperhydrosis being the most frequent. Rate of fungus was higher in nail samples collected by drilling (83.33%) than scraping (66.67%).[10]

Adhikari et al. conflicted a cross sectional study, which involve thirty four clinically suspected cases of onychomycosis. Among them there were 18 males (52.94%) and 16 females (47.06%), the male to female ratio being 1.125:1. Young adult in age group of 21-30 years were mainly affected. Fingernails were involved in 14 cases (41.18%) and toe nails were involved in 20 cases (58.82%). Both finger and toenail involvements were not noticed in the same patient. Big toe nail involvement was the most common toe nail involved and it was seen in 11 cases (55%).[11]

A study was undertaken in 488 patients suspected of onychomycosis by Chadeganipour et al. The study population comprised 310 (635%) females and 178 (36.5%) males, ranging in age from 1 to 80 years (mean age 42 year). Onychomycosis was found to be the commonest in housewives, followed by laborers working in petroleum industries and office workers. Prolonged moisture was the major predisposing factor, followed by occlusive footwear. Finger nail onychomycosis is recognized in 141 (72.7%) and toenail onychomycosis in 53 (27.3%) cases. Simultaneous involvement of both finger and toenails were not seen. The prevalent clinical form of onychomycosis in adults was distal followed by proximal subungual hyperkeratosis and in children under 7 years of age, candidal paronychia was the commonest clinical pattern.[12]

The majority of the patients in our study were between the ages of 21 to 30 years (44.2%). This attributed to the fact that onychomycosis may be considered a cosmetic problem rather than disease process in this region and so it was younger patient, who are more conscious of their appearance, who came forward for therapy. There were only six children highlighting the fact that this disease is less common in this age group. The low prevalence in children may be attributed to a difference in nail plate structure, a lack of cumulative trauma and increased growth rate of nails with subsequent elimination of the fungus.

Various studies had showed no sex difference. In our study males are affected slightly more than the female (1.1:1). The increased prevalence of onychomycosis in men has been suggested to be the result of more trauma to nails and the more common use of occlusive footwear. Most of the patients were house wife (30.0%), followed by students (27.5%), service holder (20.8%). Household wet works appears to be an important predisposing factor in housewives.

Range of duration of the disease was between 2 to 72 months. Majority of them had the disease of less than 12 months more than a half (52.5%) of the patients had involved in wet works, e.g. kitchen work, washing of cloths. Family history of any onychomycosis sharing of common facilities present in 18.8% & 15.0% of patient respectively. Hyperhydrosis is also the frequent cause, associated with (5.0%) patients. Association of hyperhydrosis was also found in other study.[10] Occlusion, warmth and moisture provided by occlusive footwear predispose to onychomycosis was reported (15.8%). In this study history of previous onychomycosis (21.7%) and nail trauma (21.7%) were found in significant number of patient. Onychomycosis that occur in farmer (1.7%) could be explained by their occupational predisposition to trauma, 5.0% patient were diabetic. Clinical diagnosis of onychomycosis is based on the basis of various changes, in the affected nails. In this study, among the pattern of nail changes thickening of nail plate, onycholysis, subungual hyperkeratosis, roughening of nail plate and yellowish discoloration were common.

Presence of coexisting fungal infection in other parts of the body was noted in 120 patients. Among them T. manuum was common followed by T. pedis, interdigital intertrigo and T. cruris. Fingernails were more commonly involved than toenails. Most of the patient had single fingernail (29.2%) and single toenail (29.2%) involvement. Another study had shown more toenails involvement than fingernails.[13]

Conclusion:

This was a study on a limited number of cases. Future studies must include economical support, then large sample size could be ensured and study finding would be more reliable. There is a great need of epidemiological studies also, with sufficient follow-up, systematic reviews and meta-analyses on this issue.

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Prevalence of Metabolic Syndrome in Diabetic Patient

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Summary:

Background: Factors associated for the development of metabolic syndrome vary from region to region and race to race. Objectives: The present study aimed to assess the prevalence of metabolic syndrome and phenotype of newly diagnosed IGT and DM subjects. Methods: In this cross sectional study 100 DM and 44 IGT subjects recruited from OPD BIRDEM hospital. BMI, Neck, and waist circumference, WHR and blood pressure were collected by skilled trainer using modern equipments. Serum glucose was measured by glucose-oxidase method and lipid profile was measured by enzymatic-colorimetric method. Results: Glycemic status was higher in diabetic subjects (12±5; ABF 18±6) than IGT subjects (FPG 6±0.84; ABF 9±2). About 39.6% subjects had metabolic syndrome according to the definition of EGIR and 21.9 % were hypertensive in DM subjects. Neck circumference was positively correlated with BMI (r=0.4, p=0.02) and waist circumference (r=0.25.p=0.003). Conclusions: Glycemic status affects at the BMI 24 and neck circumference 33cm with age 40 years. About 39.6 % MS present following EGIR but poor % MS have found following ATP III and WHO criteria.

Key words: Metabolic syndrome, BMI, Neck circumference, ATP III

(J Bangladesh Coll Phys Surg 2012; 30: 85-90)

Introduction:

Metabolic syndrome is a combination of medical disorders that increase the risk of developing cardiovascular diseases and diabetes [1,2]. Now it has become a major public health issue globally. It affects a great number of people and prevalence increases with age. Approximately 34% of adults meet the criteria for metabolic syndrome in USA.[3]

The bulk of problem is constantly increasing in developing countries like Bangladesh. According to World Health Organization (WHO), Non Communicable Diseases (NCDs) are important cause of disease burden, morbidity and mortality in our country. Mortality, morbidity, and disability attributable to the major non-communicable diseases account for about 60% of all deaths and 47% of the global burden of disease; these rates are expected to rise in South Asia. Diabetes is one of the major NCDs and in Bangladesh, the prevalence of diabetes increases dramatically with a ratio in urban areas is double than in rural areas (8% *vs* 4%) and rises with affluence. The etiology of the metabolic syndrome has not yet been fully established. For most patients, the root causes of the non communicable diseases are thought to be poor nutrition, inadequate physical activity, subsequent increases in body weight, tobacco used, betel leaf chewing and smoking, excess alcohol consumption and low consumption of fruits and vegetables. Factors associated for the development of non-communicable diseases in one country is not applicable for another country. Factors associated for the development of non-communicable diseases vary from region to region and race to race. Risk factors should be targeted on individual, family and community, regional and national level.

Different organization had suggested different definition of metabolic syndrome. The more relevant definition for Asian is National Cholesterol Education Program

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(NCEP) Adult Treatment Panel III (ATP III). Metabolic syndrome define by ATPIII includes any of three or more of the following criteria:[4, 5, 6] elevated waist circumference for men equal to or greater than 40 inches (102 cm); women equal to or greater than 35 inches (88 cm); elevated triglycerides: equal to or greater than 150 mg/dL; reduced HDL ("good") cholesterol for men less than 40 mg/dL; women less than 50 mg/dL. Elevated blood pressure: equal to or greater than 130/ 85 mm Hg or use of medication for hypertension, elevated fasting glucose: equal to or greater than 100 mg/dl (5.6 mmol/l) or use of medication for hyperglycemia [6].

The World Health Organization criteria (1999) for the metabolic syndrome requires presence of diabetes mellitus, impaired glucose tolerance, impaired fasting glucose or insulin resistance, and two of the following: [4] blood pressure: e" 140/90 mmHg; dyslipidaemia: triglycerides (TG): e" 1.695 mmol/L and high-density lipoprotein cholesterol (HDL-C) d" 0.9 mmol/L (male), d" 1.0 mmol/L (female); central obesity: waist:hip ratio > 0.90 (male); > 0.85 (female), and/or body mass index > 30 kg/m^2; microalbuminuria: urinary albumin excretion ratio e" 20 mg/min or albumin:creatinine ratio e" 30 mg/g.

According to The European Group for the Study of Insulin Resistance (1999) requires insulin resistance defined as the top 25% of the fasting insulin values among non-diabetic individuals and two or more of the following: central obesity: waist circumference e" 94 cm (male), e" 80 cm (female); dyslipidaemia: TG e" 2.0 mmol/l and/or HDL-C < 1.0 mmol/l or treated for dyslipidaemia; hypertension: blood pressure e" 140/90 mmHg or antihypertensive medication; fasting plasma glucose e" 6.1 mmol/L(110mg/dl)[7].

In comparison with the European subjects, the South Asian subjects had a higher prevalence of diabetes (19% vs. 4%)[8], higher blood pressures, higher fasting and post-glucose serum insulin concentrations, higher plasma triglyceride, and lower HDL-C concentrations. Mean waist–hip ratios were higher in the South Asian group than in the European group. Within each ethnic group, waist–hip ratio was correlated with glucose intolerance, insulin, blood pressure, and triglycerides. For the same waist–hip ratio, the Asian patients had a much higher risk of developing insulin resistance, hyperinsulinemia and diabetes.

The obesity epidemic is considered to be one of the main drivers of the rising prevalence of the metabolic syndrome. But the mechanisms underlying the association between abdominal obesity (particularly visceral obesity) and the metabolic syndrome are not fully understood. Insulin resistance is widely believed to be at the heart of the metabolic syndrome even though there is, as yet, little clinical evidence that a reduction in insulin resistance will prevent cardiovascular events in people with metabolic syndrome. The mechanistic link between insulin resistance and most of the components of the metabolic syndrome remains unclear. Non-diabetic patients with metabolic syndrome are at a very high risk for the development of diabetes. Risk is particularly high when glucose dysregulation is present. Framingham Heart data found that the relative risk for diabetes was five-fold higher in patients with the syndrome.

In industrialized societies the prevalence of obesity and degenerative diseases such as diabetes, obesity, and cardiovascular diseases (CVD) is rapidly increasing especially in young individuals. For rapid urbanization and industrialization adult population are prone to fast food on the other hand parallely decreasing physical movement. Racial variation also enhances to develop the metabolic syndrome in adults because it is also established that Asian have higher fat mass than European even with similar BMI.

Neck circumference (NC) contributes to metabolic syndrome (MetS) likelihood beyond waist circumference and the MetS components[9]. BMI does not accurately define central body fatness," whereas neck circumference is an inexpensive way to determine the body's fat composition. The correlation between regional adiposity and a high neck circumference is strong. It has been shown that men with NC <37 cm and women with NC <34 cm probably have a low body mass index (BMI). Patients above these levels require a more comprehensive evaluation of their overweight and obesity status[10].

A high correlation between NC and cardiovascular risk factors has been reported in obese patients[11]. The neck and thigh circumferences were used as indices of upper- and lower-body subcutaneous tissue distribution, respectively, in a three-compartment body composition model. This model of interpretable anthropometry

consisted of the visceral and subcutaneous adipose tissue masses as well as the lean body mass. Even after adjusting for these body compartments, NC, an index of upper-body subcutaneous adipose tissue distribution, was positively related to most cardiovascular risk factors. At the same time, thigh circumference was negatively related to the risk factors[11].

Aging is known to be associated with increasing insulin resistance and declining glucose tolerance. G.Boden found that insulin sensitivity in men until around 60-70 yr of age appears to be determined more by body fat than by age.[12]

According to World Health Organization (WHO) non communicable diseases (NCDs) are important cause of disease burden, morbidity and mortality. At least 25% of the deaths in primary and secondary government health facilities are caused by this diseases.[13] The present study has been taken to explore the risk factors associated with newly diagnosed prediabetic and type 2 diabetic subjects.

Subjects and Methods

In this cross-sectional study one hundred forty-four subjects were randomly selected from the Diet and Nutrition Department, OPD (Out Patient Department), BIRDEM hospital where 44 impaired glucose tolerance (IGT) and 100 type2 diabetes mellitus (DM) subjects. This study was done during the period of September 2007 - September 2008. Social status was collected using a pre-designed questionnaire. Metabolic syndromes are considered by definition of National Cholesterol Education Program (NCEP) Adult Treatment Panel III (ATP III). Anthropometric indices [height (cm), weight (kg), Mid Upper Arm Circumference (MUAC) (mm), waist circumference (cm), hip-circumference (cm) and neck-circumference (cm)] were measured using standard techniques with modern equipments. Body mass index (BMI) of the subjects was calculated using standard formula. BMI = Weight (kg)/[Height (m)]^2. Waist Hip Ratio (WHR) measured by waist(cm)/hip(cm). Serum glucose was measured by using glucose-oxidase method, lipid profile by enzymatic-colorimetric methods. Results were expressed as mean ±SD and median (range) as appropriate student'*t*' test and regression analysis were done as a test of significance.

Results:

In this study 44 IGT and 100 type 2 diabetes were studied where age (IGT, 40±7 and DM, 40±8); and BMI (IGT, 24±4 and DM 24±4) were matched. No significant difference (p>0.05) were found of Neck- circumference (IGT 34±4, DM 34±3); MUAC (IGT 279±28, DM 277±30); Waist-circumference (IGT 84±12, DM 84±11); Hip-circumference (IGT 94±9, DM 95±15) and WHR (IGT 0.91± 076, DM 0.89±0.01) among the study subjects. Median (range) Serum-TG cholesterol, HDL cholesterol, LDL cholesterol and Serum Cholesterol among the study subjects were not different between two groups.

No significant difference (p>0.05) was found between male and female of age (Male: 42±7, Female: 40±8) and BMI (Male: 24±4, Female: 24±4) in this study subjects. M±SD neck-circumference (Male: 38±2, Female: 33±3) was significantly higher (p<0.05) in males than females. MUAC, Waist- circumference, Hip- circumference and

Table-I

Anthropometric status (M±SD) among the newly diagnosed pre diabetic and diabetic subjects

Group	Age (yrs)	BMI (kg/m²)	MUAC (mm)	Neck-circum (cm)	Waist-circum (cm)	Hip_ circum (cm)	WHR	Systolic mmHg	Diastolic (mmHg)
DM n=100	40±8	24±4	277±30	34±3	84±11	95±15	0.89±0.01	122±13	79±10
IGT n=44	40±7	24±4	279±28	34±4	84±12	94±9	0.91±.076	120±13	76±15
t/p value	-0.26/0.79	0.15/0.88	0.47/0.64	-0.21/0.84	-0.24/0.81	0.44/0.66	-1.17/0.24	0.72/0.48	1.44/1.15

Results were expressed as Mean ±SD. Student *t* test were analyzed as a test of significance. p<0.05 were considered as level of significance.

Table-II

Biochemical status (M±SD) and median (Range) among the newly diagnosed prediabetic and diabetic subjects

Group	FPG (mmol/dl)	ABF (mmol/dl)	S.TG (mg/dl)	HDLC (mg/dl)	LDLC (mg/dl)	S.Chol (mg/dl)	S.Creatinin (mg/dl)
DM n=100	12±5	18±6	140 (57-670)	30 (17-42)	135 (61-269)	178 (86-310)	1.09±0.12
IGT n=44	6±0.84	9±2	160 (68-764)	30 (18-54)	146 (77-216)	193 (117-239)	1.11±0.14
t/p value	6.78/0.00	5.72/0.00	1.37/0.20	1708/ 0.86	2758/0.243	0.80/0.43	-0.35/0.73

Results were expressed as Mean ±SD. Student *t* test were analyzed as a test of significance. p<0.05 were considered as level of significance.

Table-III

Distribution of BMI according to WHO cut point among the DM and IGT subjects

Group	Group1 (BMI ≥30) No (%)	Group2 (BMI ≤30) No (%)
DMn=100	16(16)	84(84)
IGTn=44	3(6)	41(94)
P-value	0.09	

χ^2 was performed as a test of significance. P<0.05 was considered as a test of significance

Table-IV

Distribution of Blood pressure among the DM and IGT subjects

Group	ATP criteria		EGIR criteria		WHO criteria	
	Group1	Group 2	Group 1	Group 2	Yes	No
	(≥130/85)	(<130/85)	(≥140/90)	(<140/90)	(≥140/90)	<140/90
	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
DMn=100	18(18)	82(82)	5(5)	95(95)	5(5)	95(95)
IGTn=44	5(12)	39(88)	00(00)	44(100)	00(00)	44(100)

ATP criteria (Group 1≥130/85; Group 2<130/85), EGIR criteria (Group 1≥140/90; Group 2 <140/90), WHO criteria (Group 1≥140/90; Group 2 <140/90)

Table-V

Distribution of waist circumference among the DM and IGT subjects

Group	ATP criteria		EGIR criteria	
	Group1 (Male ≥102cm; Female ≥ 88cm) No (%)	Group 2 (Male <102cm; Female < 88cm) No (%)	Group 1 (Male ≥94 cm; Female≥80cm) No (%)	Group 2 (Male <94 cm; Female<80cm) No (%)
DMn=100	75(75)	25(25)	50(50)	50(50)
IGTn=44	34(78)	10(22)	22(50)	22(50)

WHR among the study subjects were not different between male and females. In this study metabolic syndrome were present using the definition of ATP III, WHO and EGIR 4.9%, 6.3% and 39.6% respectively (fig 1). According to ATP III, 10.8% of the IGT and 20.9% of the DM subjects were hypertensive. Neck circumference was positively correlated with fasting blood glucose (r=0.19, p=0.02) (fig. 1). Neck circumference was positively correlated with waist hip ratio (r=0.25, p=0.003) (fig. 3) and BMI(r=0.4, p=0.02) (fig. 4).

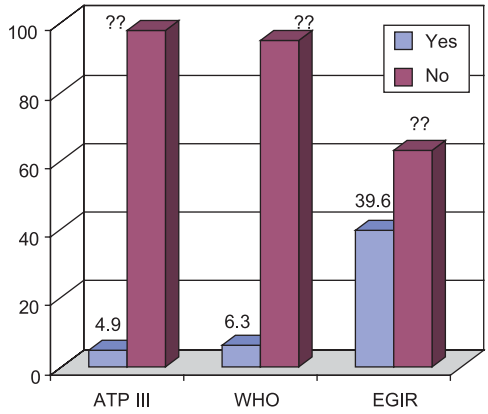

Fig.-1: *Metabolic syndrome (%) in the study subjects according to different definition*

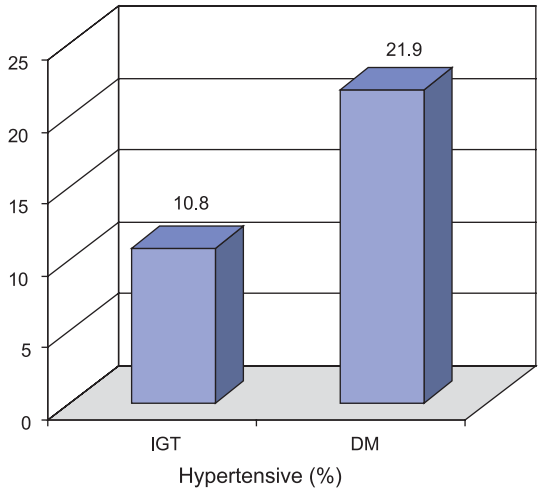

Fig 2: *Hypertensive (%) among the study subjects*

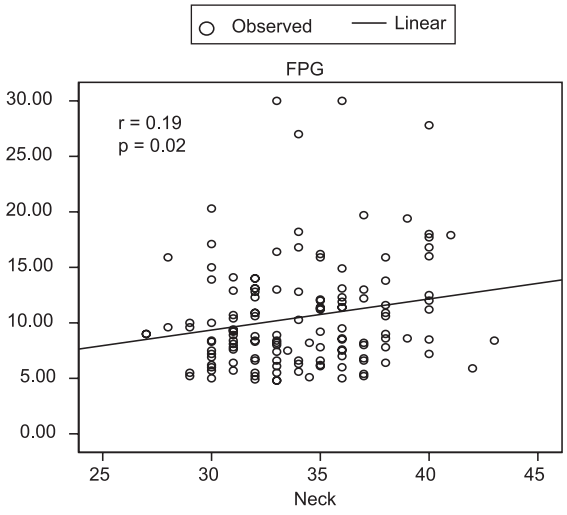

Fig.-3: *Relationship between Neck circumference and fasting blood sugar among the study subjects*

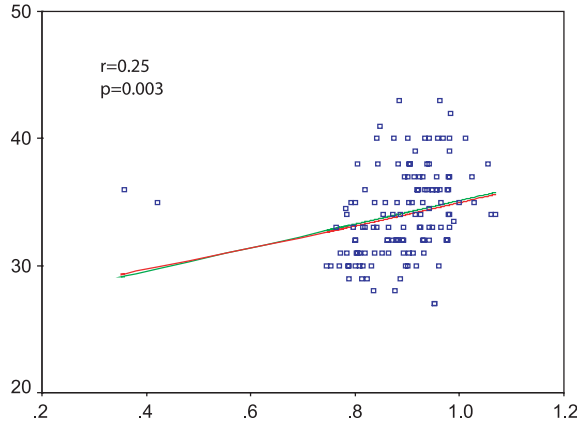

Fig.-4: *Relationship between waist hip ratio and neck circumference among the study subjects*

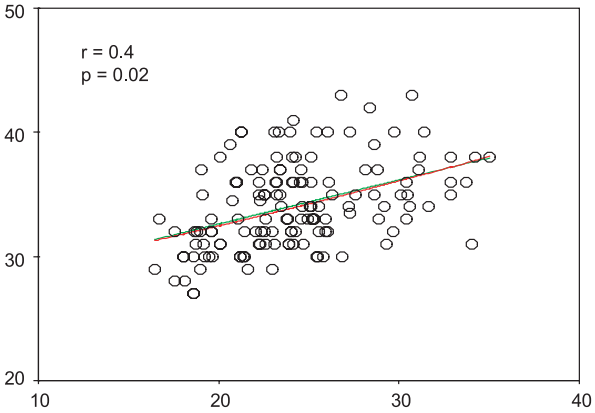

Fig.-5: *Relationship between BMI and neck circumference among the study IGT and diabetic subjects*

Discussion

Metabolic syndrome is characterized by a group of metabolic risk factors that include abdominal obesity, atherogenic dyslipidemia, elevated blood pressure and glucose intolerance or insulin resistance. The present study has been undertaken to assess the metabolic syndrome among the newly diagnosed diabetic and IGT subjects. In this study we have found that the risk age for both the prediabetic and diabetic subjects are 40 years of age. Similar result was found in a previous study conducted among Qatari males and females within aged 25-50 Years.[14]

Both prediabetic and diabetic subjects have BMI 24. Although WHO suggested normal BMI between 18.5 and 25 but recent studies suggest that BMI 23 should be the upper cut point for Asian because Asian peoples

have higher fat mass than Europeans. Neck circumference (NC), as an upper body obesity index, is a simple screening measure for identifying overweight and obese patients. Although obesity results in metabolic abnormalities, upper-body obesity is more strongly associated with glucose intolerance, hyperinsulinemia, diabetes, hypertriglyceridemia, gout and uric and calculous disease than lower-body obesity [9;15;]. In our previous study, neck circumference [9] as an index of upper-body obesity was found to be a simple and time-saving screening measure that can be used to identify overweight and obese individuals[10]. It has been shown that men with NC <37 cm and women with NC <34 cm probably have a low body mass index (BMI). In this study we have found that male have <37 cm and female have 33 cm. A high correlation between NC with glycemic status, BMI and waist circumference has been reported in obese patients [11]. Waist hip ratio also determines the central obesity. In this study we have found that both prediabetic and diabetic subjects have higher waist hip ratio than normal range which is support with previous study. Prevalence of Metabolic syndrome in India was 8% for men and 18% for women whose average age is grater than 20years of age whereas highest prevalence were found in USA which is near 45% and 55% according to male and female with age range 45 to49 years age using ATP criteria. The present study showed about 39.6% MS were present in this study using EGIR criteria.

Conclusion:

From the above result it may concluded that

Forty years of age seems to be the alarming time for the development of prediabetic (IGT) and diabetes mellitus. Only glycemic status seems to be changed between the newly diagnosed prediabetic and diabetic subjects. Glycemic status affects at the BMI 24 and neck circumference 33cm. In this study 39.6% metabolic syndrome have present and 21.9% hyertensive may have in DM subjects. Waist hip ratio seems to be higher both in prediabetic and diabetic subjects. Neck circumference seems to be positively associated with glycemic status, waist hip ratio and BMI. About 39.6 % MS seems to have present following EGIR but poor percentage MS have found following ATP III and WHO criteria.

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REVIEW ARTICLE

Morning Report: A Tool for Improving Medical Education

MM MOWLA

Summary:

Morning report (MR) is an important daily activity in the department of internal medicine and it is the most important educational activity in the residency training program. Same is true for any hospital that tends to promote their service through continuous medical education(CME). There is increasing demand to practice medicine which is evidence-based and medical education is no exception. Evidence-based, self-directed, learner-centered education proven to be more effective method of learning than the traditional method for the medical residents and thereby more and more emphasis placed on such curricula in postgraduate medical education. The current standing on this issue reviewed to increase our awareness and improvement of MR in the era of Evidence-Based Medicine(EBM).

Keywords: Morning report (MR), Evidence-Base Medicine(EBM), Facilitator, Continuous medical education (CME).

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Introduction:

Morning report constitutes an important part of the daily routine in the department of internal medicine[1]. The term "morning report" is used to describe case-based conferences where residents, attending physicians, and others meet to present and discuss clinical cases[2]. Other terms used includes resident's reports, morning sessions, morning conferences, morning handover meeting.

Evolution of MR as an essential educational activity was not smooth. MR was criticized for presentation of cases done in the morning usually by the most junior member of the team, half sleepy and everybody discussing the case without actually seeing it and at the end getting nothing. But now MR is well accepted and a proven tool for resident's education universally.

Aim of Morning Report:

Aim varied in different institutions but main objective remains the same, education. It varies to satisfy a wide variety of audience. Various purposes of MR are – Education, Evaluation of residents, Evaluation of quality of the services offered by the institution, Detection of adverse events, Other issues (like ethics, cost effectiveness, administrative matters), Social interaction.

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Clear goals need to be established, after discussion with all concerns at various levels, what is to be accomplished at morning report. Having decision on specific goals, a mechanism to achieve those goals through execution and continuous evaluation, getting feedback and further refinement of goals, are necessary.

1) Education :

In a classical MR, the medical team-on-call during the night presents all the admissions with one case in details, followed by a general discussion on that case and related topics. The main educational goals are to teach the residents about the case-based learning, develop presentation skills, intellectual curiosity and draw conclusion from the clinical findings , review and planning patient management, promoting decision-making skills and finally develop a self-directed learning approach.

2) Evaluation of Residents :

Many residency programs use MR as a useful tool to evaluate resident's presentation skills, clinical skills, attitudes, punctuality, quality of care and ultimately the progress in clinical medicine. Though overall progress of the residents are assessed in the MR, yet there is no specific structured parameters for objective assessment of the individual residents.

3) Evaluation of the quality of service :

In MR, during discussion of the cases and their management, there is an automatic reflection of the quality of the service offered to the patients. Any pitfalls

in the management will come to light and discussion made by experts to clarify the issue and thereby to avoid recurrence of any such difficiences in future.

4) Detection of adverse events :

During the discussion of the management issue the adverse effects of drugs, other adverse iatrogenic events that happens during patient care surfaces. Carefully addressing those issues increase the physician's awareness and reduction of occurrence of such adverse events. Study demonstrates that physicians self-reporting of adverse events adds to the usual hospital surveillance adverse event reporting, and finds that such reporting can be easily accomplished within the context of a daily teaching activity. The information provided about adverse events by housestaff at morning report is additive to that obtained by usual surveillance methods. The use of such a strategy provides information in a timely fashion.[3]

5) Other issues :

Issues like medical ethics, cost-effectiveness, administrative matters also discussed occasionally in MR. Though these are not core issues, their discussion gives MR a different dimension and flavor.

6) Social interaction :

MR provides an unique opportunity for residents and faculty members to socialize. In the survey of MR most of the attendee pointed that MR is an important daily social events for them. Serving food and drinks is also popular. In Schiffman's study two third of the programs served food and drinks during MR[4].

Structure of Morning Report

The following organization are commonly observed in the MR.

1) Frequency, time and duration :

Usually done on a daily basis on each working day, 5 days per week. In most institutions MR lasts for 1 hour, starting from 8AM. Rarely "morning report " done in the afternoon to suit the work schedule of that particular institute. In most institute in Saudi Arabia, MR done early as the first activity of the day but there are suggestions that conducting MR after ward- rounds may be more useful as attending physicians can contribute significantly if they have 'real time'idea about the patients beforehand.

2) Attendence :

Participants varies across different programs and institutions. Attendance of residents and junior staffs are considered as mandatory, while some of the senior staffs, consultants and professors can be quietly absent. Chief of the Medicine or Director of the Program is present most of the time as is the Chief resident. Sometimes Pharmacist and Emergency room physicians also attend. Widespread participation of other staffs e.g pharmacist and medical students sometimes help to broaden the scope of knowledge and experience of the residents. But it may also considered by some as inhibition and disturbance of the fluency of case presentation and discussion. Atlas MC et al. described the evolution of the librarians' involvement in morning report, examples of kind of contributions librarians have made in this setting and changes made in morning report sessions to facilitate this activity (5).

3) Facilitator/Co-ordinator and Direction :

Facilitator(F) is usually a faculty member or consultant but occasionally a chief resident. It is chosen in different ways. It could be a consultant by rotation weekly, monthly or even daily or consultant-on-call. Some prefer consultant-on-call as most suitable for the coordination as he is aware about most of the cases and events of that day. It is important to remember that facilitator's main role is to facilitate, not to take over the whole MR. The leadership and coordination of the F is expected to lead direction where whole MR environment becomes self-directed, learner-centered, evidence-based teaching. A critical but non-hostile environment is vital. In no way MR should be a "Morning Distort" where on-call team defending the mishaps by denials, washing off hands and distancing.

The role of the facilitator is pivotal. His proper guidance & direction can make a real difference and change the whole environment of MR enjoyable and learner friendly. Here are the few tips for the facilitator (6) :

- Insist on complete, accurate case presentations and discourage casual, brief presentations. A complete,uninterrupted presentations takes only 5 minutes.
- Focus discussion on management of the patient in question.
- Give positive feedback in public, saving any negative feedback to be discussed privately after the meeting.

This avoids public humiliation, embarrassment or intimidation.

- Start the meeting on time and finish early wherever.
- Education should be a by-product of case discussions and not the primary focus.

4) Sitting Arrangement :

This is a very important but often neglected issue in MR setting. There is severe impedence of communication where people sit in rows one behind the other. Huge improvement of learning and communication environment can be done by modifying sitting arrangement by putting chairs in semi-circular way so that one can see each other easily when they communicate. Experience in our institute shows tremendous improvement in learning atmosphere since we start using semi-circular sitting arrangement.This is the single most important factor for instantaneous improvement in the learning environment of MR.

5) Case selection and Presentation :

It varies greatly. It could be a) elaborate presentation of one long case and brief presentation of all other cases or b) brief presentation of all the cases with discussion on important points in each case or c) detailed presentation of one or two interesting cases only. Time allocation varies accordingly. In our institution, currently we take 30 minutes for a long case, 15 minutes for short presentation of all other admissions and 15 minutes for answer to the previous day's searchable clinical questions as a part of practice of EBM format of MR. Case selection done by the on-call-team, initiated by the resident and agreed by the registrar.

Case mixes were made in a way that it covers all the important clinical conditions of the different systems over a period of time with special emphasis on the management aspect of the acute emergencies. Ramratnam B et al. concluded that residents presented cases at morning report that they felt were unique or rare in presentation or incidence for the purpose of discussing management issues. Complete resident freedom in choosing MR cases may narrow the scope of MR and exclude common diagnoses and other issues of importance such as medical ethics or economics (7).

More residents perceived that sleep loss and fatigue had major impact on their personal life during residency, leaving many personal and social activities and meaningful personal pleasures differed or proponed. Sleep loss and fatigue also had major impact on residents' abilities to perform their work (8). These factors should be taken in consideration when in developing new training guidelines and educational interventions for the residents.

6) Record Keeping :

Record keeping done for different purposes. For educational purposes, such as to keep the track record of the covered contents and to review any particular content of interest if needed in future. For patient's follow up-to compare the admission diagnosis and discharge diagnosis. For research – to use the data of the morning report as a source for future research. The use of computer is important to utilize the data for various purposes.

7) Follow up of patient :

A system of reporting patient's follow up in the morning report is important to maximize the education. Final diagnosis is not possible in many cases presented in MR. It needs follow up either at discharge or at OPD to get the final diagnosis. This does not only improve patient care but also improve resident's education.

At a university hospital, 58% of the cases were undiagnosed before presentation at the morning report. Of those cases, 23% of cases assigned a diagnosis at morning report that differed from the final diagnosis. It was concluded that the provision of follow-up at morning report is important for maximizing resident education[9]. Another study showed that most patients discharged without a firm diagnosis have one established by 6 months later—often with surprising results. Post-discharge follow-up information could enhance the educational value of inpatient cases[10]. In our institute we are planning to devote a portion of time of MR to allocate for the presentation of the follow up cases once per week.

8) Role Modeling :

The concept of role modeling is very important in MR setting. The juniors tend to learn from seniors. It is not uncommon to observe that seniors quarrel or argue in MR, in a manner which damage the whole learning environment and inter-personal relationship. All the senior members attending and participating in the MR must play their role in a way that it gives a positive note to the residents, both from academic and behavior point of view. This positive role modeling have long term positive impact on the residents.

Format of Morning Report

Format varies from institute to institute but some features are common. Most frequently used format is 'case-based presentation', followed by discussion on the various aspect of that case. But it was argued that the standard format of case presentation may be less than optimal[11]. Over the years, different methods were tried to improve the case-base presentation such as presentation of prepared topics, use of overhead projector to show ECGs and photographic materials, learner-centered learning approaches. In learner-centered approach, the learner (usually resident) would take the prime initiative to formulate the goals of the session after presentation of the case and suggest questions based on these goals.

In 1997, Reilly and Lemon propose a Four-phased format of MR to improve learning from the MR[12]. First Phase to discuss the assigned questions from the previous day. In Second Phase, residents briefly present all the admitted cases and chief resident used didactic methods to emphasize important teaching issues. Third Phase discuss the details of one particular case chosen for its educational value. In the final Fourth Phase which lasts 5 minutes, used to formulate the questions and assign them to the residents to present next day.

We, in our institution have adopted a modified format : first 30 minutes for a long case, next 15 minutes for all the short cases in brief and final 15 minutes for answer to previous days searchable questions.

Robert G Fassett and Steven J Bollipo describe experiment with 3 different formats of MR with their evaluation[6]. In the initial format—one or two selected cases, based on their educational value, were presented along with their investigations. Discussion centered on issues highlighted by the case. After the meeting, other patients admitted overnight were briefly handed over to the day doctors. But findings from quality improvement questionnaire suggested that reports on all patients admitted overnight should be presented, as participants expressed a dislike of lengthy theoretical discussions centered on one or two cases that sees to have little relevance to patient management. The 2nd format modified by the feedback includes formal teaching during the 2nd half-hour of the meeting in the form of presentations. The 3rd format is similar to initial format but with a stronger focus on punctuality, leadership, physician presence and patient-focused discussions. The Director of medicine coordinates the meetings and attendance by on-call physicians and representatives from all units is compulsory. An attendance sheet was maintained. Complete un-interrupted presentation of each case including investigations, takes about 5 minutes. This final format becomes most popular. Other format utilizes brief case presentations by on-call residents , followed by an in-depth discussion of key points among representative subspecialty staff.

Elliott SP et al.[13] demonstrates the inherent difficulties in changing an "institution" such as morning report. Thus examination of MR goals and satisfaction by individual training program should be conducted within the confines of the conferences' pre existing structure, without attempt to apply literature-driven expectations[13].

Pre-conference preparation to delineate major teaching points, timely follow up of previously discussed cases, and generation of a pertinent bibliography are significant features of a format for morning report that provides a conference for exposing house staffs to a wide variety of internal medicine problems[14].

Ambulatory morning report/Outpatient morning report is a relatively new idea. Increasingly, medical educators are looking for ways to train residents and medical students in outpatient medicine. One novel idea, outpatient morning report, draws upon the concept of inpatient morning report and applies a similar conference format to the outpatient setting[15].

Wenderoth S et al. showed that a general medicine clinic is capable of exposing house staff to the wide breadth of internal medicine topics previously thought to be unique to subspecialty clinics[16]. Another study in USA at 2000 showed that a 24% prevalence of outpatient morning report in internal medicine program. The cohort of residents at a large teaching hospital reported that the conference contributed much to their education by meeting specific learning needs and covering topics not covered elsewhere in their residency training[17].

Evaluation of Morning Report

Periodic evaluation of MR is the cornerstone to improve it. The following are some important tips for the evaluation of MR as suggested by Robert G Fassett et al[6] :

- Conduct periodic format evaluation by questionnaire-based surveys.
- Obtain informal feedback by involving the group in discussions about improvement of the handover process.

- Implement changes in response to feedback to complete the quality improvement cycle.

Impact of Evidence-Based Morning Report

The impact of new format of Morning Report on the improvement of education and the quality of the service is encouraging. Improvement of the residents results in increase in their knowledge, presentation and management skills, ordering less investigations, fewer requests for consults and thereby overall improvement of the service of the institution.There is also long term benefit of positive change in attitude of residents through practice of medicine in an evidence-based manner.

One study involving survey of residents attitude showed that residents believed that morning report was a valuable educational experience. They preferred clinically based, open-ended interactive discussions led by attending physicians with a broad knowledge base (18). Another study found that residents expressed a desire for about 50% of the guest attending physicians to be generalists. In addition, they preferred a style in which challenging cases were presented in a stepwise manner (19). Internal medicine residents practicing self-directed learning by answering patient-specific questions reported improvement in knowledge and changes in patient care decisions (20).

Conclusion:

Morning Report is a time honored tradition, not just a ritual of early morning social gathering. It is a valued time for residents, an uninterrupted flow of priceless minutes set aside from the hectic morning schedule for learning and an opportunity for the residents to improve their knowledge, leadership, presentation, and problem-solving skills (2). In view of existence of varied format of morning report in different institutions, there should a national guideline to adopt a uniform format of MR to benefit our residents and patients by ensuring better service. Continuous vigilance and feedback is needed to further improve the MR.

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Epidermal Inclusion Cyst of Male Breast Following Traumatic Implantation

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Summary:

Epidermal Inclusion cyst of male breast is a rare condition as reported in the literatures.

We had a young male patient who presented with a recurrent breast lump. This case had a number of conflicting diagnostic movements before being confirmed by histopathological examination of the excised lump to be Epidermal Inclusion cyst. The patient was found to be healthy at follow up after three months.

(J Bangladesh Coll Phys Surg 2012; 30: 96-97)

Introduction:

Epidermal inclusion cysts (EIC) with their consequences are uncommon in the breast [1]

Epidermal inclusion cyst refers to those cysts that are the result of the implantation of epidermal elements in the dermis. However, many cysts originate from the infundibular portion of the hair follicle. They commonly occur in the face, neck, trunk and extremeties [2]. However epidermal inclusion cyst of male breast is not that common. We have a case of epidermal inclusion cyst of male breast with definite history of epidermal implantation.

Case Report:

A 30-year-old male patient was admitted into the surgery unit III of Rajshahi Medical college Hospital on 3rd May 2009 with a lump in the left breast for two years and occasional discharge of a cheesy material through nipple one year back. Initially the lump was small and painless. It gradually increased in size. Six months back the patient had been treated by a local doctor and the lump was drained as an abscess. The nipple discharge ceased after the operation and the lump started to increase in size again. The patient had a history of trauma to the anterior chest wall by accidental falling over a heavy rough wooden board with a definite injury on the left breast areola three years back.

On examination, the non tender lump over the left breast was 4.0 x 3.5 cm in size, firm in consistency, mobile in nature, with a regular margin (Fig: 1). There was a faint scar of previous operation Underlying structures and overlying skin were free. Fluctuation was negative. No significant changes were elicited in the axillary lymph nodes. The liver was not palpable. The testes were normal. Systemic examination yielded no significant information. Provisional diagnosis was Chronic granulomatous mastitis (left breast). Differential diagnoses were sebaceous cyst of left breast and carcinoma of left breast. FNAC from the breast lump yielded plenty of neutrophils, fair number of macrophages, occasional giant cells. No malignant cell was found. Cytological diagnosis was chronic mastitis with an advice to exclude tuberculosis.

Total count of WBC was 7.4 x 10^9 /L with 56% neutrophils, 38% lymphocytes, 4% eosinophils and

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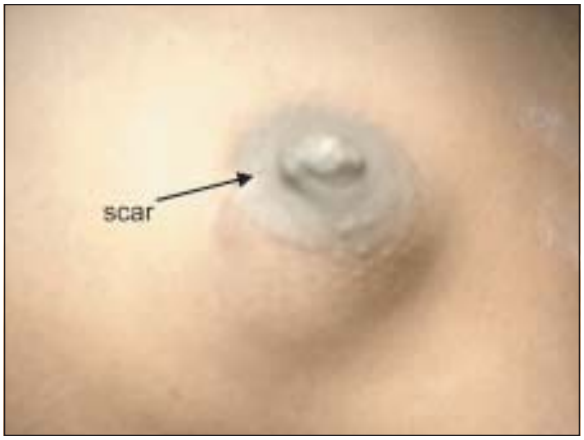

Fig. 1. *Photograph of left male breast with epidermal inclusion cyst*

2% monocytes. Haemoglobin (Hb) was 108gm /L, ESR 05 mm, RBS: 5.5 mmol/L and S. Creatinine 72.6µmol/L. Plain radiograph of chest and USG scanning of abdominal organs were normal. The patient had been subjected to elective surgical intervention. on 14.05.2009. The lump was removed by submammary periareolar incision under GA. The lump was cystic in nature with cheesy material inside (?Granuloma), per operative diagnosis being tuberculosis of breast. Per operative diagnosis was definitely influenced by the cytological findings on FNAC. Histopathological examination of submitted specimen showed breast tissue associated with a cyst wall lined by stratified squamous epithellium filled with keratin materials (Fig.2). Histological diagnosis was Epidermal inclusion cyst of the breast.

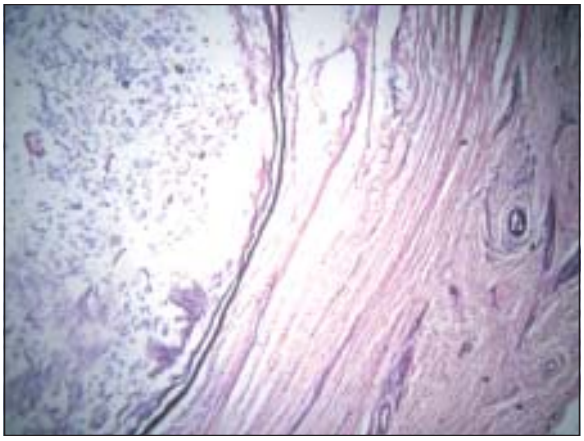

Fig 2. *Photomicrograph of histological section of the epidermal inclusion cyst of male breast*

Discussion:

Epidermal inclusion cysts in many cases result from implantation of epidermal elements into the dermis. Rare cases of male breast lump include some secondary carcinoma, some haematological malignancies including lymphoma, Hodgkin's disease, plasmacytoma and some benign conditions like myofibroblastoma, papillary hyperplasia, lupus mastitis, haemangioma, hamartoma and granulomatous mastitis[3]. Epidermal inclusion cyst of the male breast is a rare benign inflammatory lesion with only three cases being reported till 1996 [2]. In another series five cases of epidermal inclusion cyst of male breast was reported in a study over a period of 22 years[4]. The diagnosis in all these five cases was based on FNAC only and tissue for histopathological support was not available in any of these cases. True epidermal inclusion cysts result from the implantation of epithelial elements into the dermis frequently associated with injuries. Even apparently minor procedures, such as FNAC of the breast, have been reported to induce epidermal cysts[5]. Our patient had a history of trauma to the chest wall with an inflicting injury to the left breast areola and that might be an inducing factor. Mammographic and sonographic features for epidermal inclusion cyst are not conclusive and leads to confusion[3] Interesting to note that FNAC from breast lump of our patient was not supportive of epidermal inclusion cyst and only histopathology could confirm the diagnosis. So an epidermal inclusion cyst may occur even in the male breast and confirmation of diagnosis is difficult without histopathological support.

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Wegener's Granulomatosis Mimicking Pulmonary Tuberculosis

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Summary:

Wegener's Granulomatosis(WG) is a rare type of multi-system small to medium vessel vasculitis with necrotizing granulomatous inflammation involving the upper airway, lungs and the kidneys. In generalized WG, patient invariably dies within few months if left untreated. The key to better prognosis is early treatment once the diagnosis is made.

Our patient is a 21yr young lady who was initially diagnosed as nasal septal abscess and later as pulmonary tuberculosis. She was treated accordingly but did not improve.

When presented to us, she had asymmetric polyarthritis, cough with mucoid expectoration, intermittent mild haemoptysis as well as fever with bilateral nasal obstruction and epistaxis of about 2 months duration. She was found to have saddle nose deformity with blocked nasal passage and easily bleeding nasal crusts. Bilateral episcleritis and oral aphthous ulceration were also present. Chest X-Ray showed bilateral consolidations and infiltrates. Her hemoglobion was 6.42 gm% with high ESR and CRP. Microscopic haematuria with high serum creatinine and strongly positive C-ANCA were also found. MRI showed rt maxillary sinusitis and right mastoiditis.

Finally she was diagnosed as diffuse Wegener's Granulomatosis according to ACR criteria. She was put on oral cyclophosphamide and prednisolone with satisfactory response on follow up.

(J Bangladesh Coll Phys Surg 2012; 30: 98-104)

Introduction :

Wegener's Granulomatosis (WG) is a rare multi systemic autoimmune disease characterized by necrotizing granulomatous inflammation of the upper and lower respiratory tracts and the kidneys[1]. It causes classically disseminated small to medium vessel necrotizing vasculitis. It is associated with C-ANCA (Cytoplasmic antineutrophil cytoplasmic antibody) in almost all (90%) during active disease[2,3]. It has a spectrum of clinical presentations and may be divided broadly into limited and diffuse variety. The limited variety of WG may be the early feature of severe diffuse disease or runs in relapse & remission course that causes more damage to the organs involved threating patient's life. This limited variety is more common in woman involving only upper or lower respiratory tract or kidney without systemic vasculitis and so may remain undiagnosed[2,3,4] . Both cellular and humoral immunity are thought to be involved in the pathogenesis of wegener's granulomatosis. The initial pathologic lesion is granuloma believed to be caused by cellular immune processes. The strong association of C-ANCA with this disease suggests the role of humoral immunity[5].

WG is a worldwide disease. In USA, the prevalence of the disease is estimated to be 3 cases whereas in Europe 5 cases per 100000 population.Internationally the incidence is estimated to be 10.2 cases per million population. WG affects a wide age range (8-99 years) but typically affects at age 30-50 years with almost equal sex ratio (M:F= 1.5:1).

In 1931, Klinger first classified WG as a variant of polyarteritis nodosa. In 1936, the German pathologist Friedrich Wegener first described the disease as a distinct entity with specific clinical and histopathological

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criteria. In 1954, Goodman and Churg more fully delineated the clinical and pathological features of the disease and established the three main clinical criteria of WG (systemic necrotizing vasculitis, necrotizing granulomatous inflammation of the respiratory tract, and necrotizing glomerulonephritis).This disease also involves skin, eyes, nervous system and joints at some stage of the disease course[6].

With current treatment, mortality has improved and morbidity remains considerable. Untreated diffuse WG is associated with high mortality > 90% within 2 years because of respiratory or renal failure (most dies within 5 months). According to a meta-analysis, the 5- years survival rate ranges from 74% - 79%[7] with current treatment. The following table1 shows ACR classification criteria of wegener's granulomatosis [8].

Table-I

The American College of Rheumatology 1990 classification criteria of Wegener's Granulomatosis – diagnosis requires 2 or more of

- painful or painless oral ulcer ± a purulent/bloody nasal discharge,
- the chest radiograph may show nodules, cavities or infiltrate,
- microscopic haematuria or red cell casts may be found in urine sediment
- histological changes of granulomatous inflammation within arterial walls is seen on biopsy of the involved tissue.

The presence of 2 or more of this criteria has a sensitivity of 88% and a specificity of 99%.

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Case Report:

This 21 years old Bangladeshi housewife & mother of one child from Chittagong was admitted to Square Hospital with the complaints of pain in multiple joints of both upper and lower limbs, cough with scanty expectoration occasionally blood stained and nasal obstruction with intermittent epistaxis for 2 months.

Her joint pain started insidiously from the right knee that became swollen with restriction of movement and later on, the pain progressed to the left knee, left elbow, left wrist, small joints of both hands and feet without significant morning stiffness. About 10 days prior to admission, she developed painful swelling of both ankle joints which was severe enough to make her walking difficult. She complained of low grade fever with evening rise and the highest recorded temperature was 101^{o}F. There was no chill or rigor but marked malaise and generalized weakness. She also had paroxysmal shortness of breath and coughing out of scanty whitish sputum with occasional blood stain. Her food intake was low because of anorexia for 3 weeks which worsened as she developed painful tongue ulcers and vomiting. She complained of nasal bleed for 2 months. She also had painless red eyes with watering for the same duration.

There was no antecedent history of diarrhea, urinary symptoms, tuberculosis or contact with active tuberculosis patient. She did not have any other concomitant general illness or any symptoms referable to any other system or connective tissue disease. No family history of a similar or related illness was reported. Her menstrual history was normal.

Prior to admission in Square hospital, she was assessed by an ENT Surgeon in a local hospital of Chittagong for nasal septal abscess. After incision and drainage it revealed sterile pus. She continued to have nasal obstruction with occasional epistaxis. She was also diagnosed as having pulmonary tuberculosis on the basis of prolonged fever, cough with hemoptysis, radiologically pulmonary consolidation and infiltrates in right mid-zone and left apical area respectively, although negative consecutive three sputum samples for acid-fast bacilli and negative Montoux test. She was started on Category-1 anti tubercular therapy 2 weeks prior to admission here. Her clinical status did not improve on anti-tubercular drugs rather her vomiting and anorexia worsened. Pre-admission investigations revealed normocytic moderate anemia (Hb 7.2gm%), Leucocytosis (11.2k/µL) and very high ESR (125mm/hr), normal liver function test and negative blood culture. MRI scan of the Brain on T2 weighted & Flair images

showed hyper-intensities in right mastoid, right middle ear and right maxillary sinus but on T1 weighted image the same areas showed iso-intensity to brain grey matter suggestive of inflammatory changes. MRI of the brain findings are shown in the figure 1.

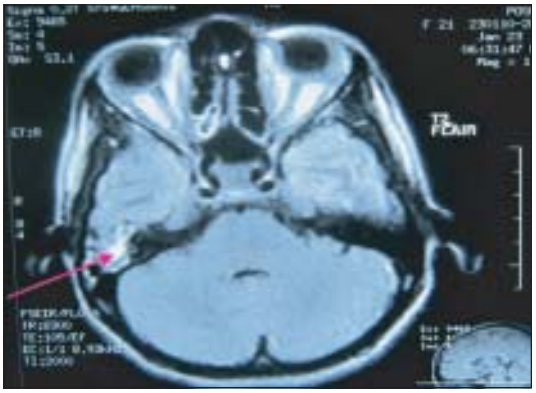

Fig.-1: *MRI T2FLAIR image showing Right Mastoiditis as showed in arrow head area.*

On examination, she was ill looking and markedly pallor with depressed nasal bridge as shown in figure 2, thin emaciated with 40 Kg weight.

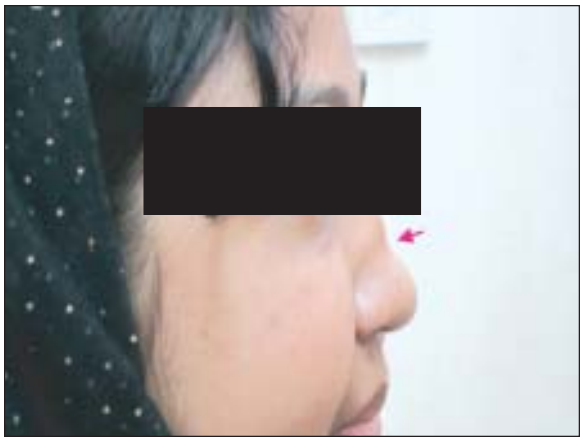

Fig.-2: *Photograph showing depressed nasal bridge as showed in arrow head area*

She had painless red eyes without jaundice. Thyroid gland examination was normal and there was no lymphadenopathy. There was a large painful ulcer with white base and red margin on the left border of the tongue. Nasal mucosa was full of crusts with recent evidence of bleeding and the air entry was very poor through both nasal cavities that made her to breathe through mouth. Subsequent nasal examination by ENT consultant revealed nasal septal perforation .There was no tenderness over mastoid process and no neck rigidity. Her ankle joints were swollen with grade 2 tenderness and marked restriction of the movements. Both knee joints were also swollen other tender with mild effusion in the left. Small joints of her hands & feet were tender but didn't show any swelling or deformity. Other systemic examinations revealed no significant abnormality.

Laboratory Investigations after admission to Square Hospital revealed normocytic normochromic anemia with Hb of 6.42 gm/dl and increase in rouleaux on smear, ESR > 140 mm in 1st hour, CRP 79.8 mg/L, Serum Creatinine 3.9 mg/dl, Uric acid 9.7 mg/dl, plenty RBC/HPF in urine microscopy but no cast or crystals, UTP (in 24 hours urine) 0.6 gm/L. Serum ANA, anti-DS DNA, anti-phospholipid antibody and direct Coomb's test were all negative. Serum C3 and C4 level were normal. Her liver function test was also normal. C-ANCA was 39.8 U/ml(normal < 2) but normal titre of P-ANCA. X-Ray PNS showed opacified right maxillary sinus as shown in figure 6.

Chest X ray P/A view showed pulmonary consolidation and infiltrates in right mid-zone at the peripheral part and in the left apical area respectively as shown in figure 3.

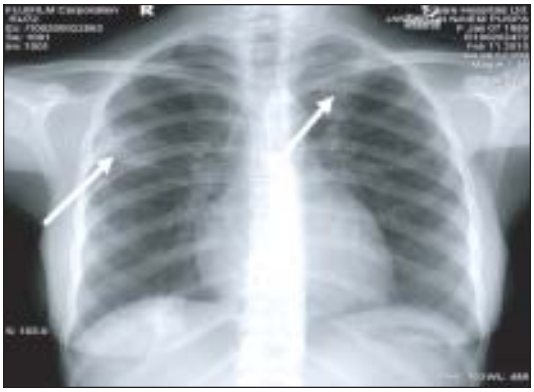

Fig.-3: *X-Ray Chest PA view showing Consolidation and infiltrates as showed in arrow head area*

Ultrasonogram of the abdomen showed normal size and shape of the kidneys with increased cortical echogenicity and loss of cortico-medullary demarcation suggestive of chronic renal parenchymal disease as shown in figure 4.

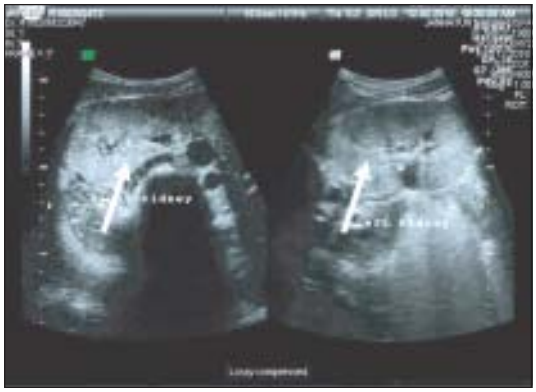

Fig.-4: *Ultra sonogram abdomen showing hyperechoic renal parenchyma with loss of cortico-medullary demarcations in both kidneys.*

Patient refused to undergo planned renal and nasal biopsy. She was diagnosed as diffuse Wegener's Granulomatosis on the basis of clinical, serological and radiological findings.

she was put on daily oral Cyclophosphamide 2 mg/kg/d and oral Prednisolone 1mg/kg/day. She was also transfused with 3 (three) units of packed RBC and also used topical steroid for eyes and tongue lesions. Before starting immunosuppressive therapy, patient and her spouse were counseled about the disease course, mode, benefit and side effects of treatment including the need for avoidance of pregnancy. After a week of hospitalization, she was discharged home in a relatively better state with advice to continue Cyclophosphamide and Prednisolone in same dose along with other ancillary drugs.

Discussion:

Our patient was diagnosed as Wegener's Granulomatosis (WG) on the basis of following findings: 1) bilateral nasal obstruction with saddle nose deformity and epistaxis, painful large aphthous ulceration in the tongue, 2) cough with mild hemoptysis and radiologically pulmonary consolidations and infiltrates. 3) microscopic hematuria with renal failure (serum creatinine 3.9mg%). So, 3 out of 4 recommended criteria were present in this case. Patient refused nasal and renal biopsy so the 4th criteria could not be evaluated. she also had acute non-deforming asymmetric polyarthritis, bilateral episcleritis which are the supporting features of WG.

Serum C-ANCA was strongly positive in our patient indicating active WG but serum P-ANCA was negative as expected. C-ANCA has a high degree of association with WG and it is positive in >90% patient with active disease. The presence of C-ANCA is not required for diagnosis of WG by either ACR or Chaper Hill Consensus Conference (CHCC) definitions. Rarely elevated C-ANCA may be found in association with other autoimmune diseases e.g. microscopic polyangitis (MPA), Churg-Strauss syndrome (CSS), SLE, polyarteritis nodosa (PAN) and Takayasu disease[1,9]. But these diseases can usually be differentiated from WG on the basis of clinical, serological and imaging findings.

Our patient's blood picture showed normocytic normochromic moderate anemia with Hb of 6.42 gm%, and total count 7.08 K/µL, platelet count 321 K/µL. She also had very high ESR > 140 mm in 1st hour and CRP 79.8 mg/L indicating very active inflammation.

Prior to admission in Square Hospitals, she had incision & drainage of nasal septal abscess and subsequently started on empiric anti-tubercular therapy. Clinically and radiologically Wegener's Granulomatosis may mimic pulmonary tuberculosis and may also present like pyogenic nasal septal abscess in localized variety. Study of this case emphasizes that WG must be considered when assessing patients presenting with common respiratory symptoms with x-ray abnormalities in lungs in the form of nodules or infiltrates. High degree of suspicion is required to avoid misdiagnosis specifically in tuberculosis endemic areas otherwise diagnosis can be delayed as happened in our patient.

Ear, nose and throat involvement characteristically occurs up to 90% cases of WG and usually precedes generalized involvement for a long period of time[10]. Our patient developed saddle nose deformity due to granulomatous septal cartilage loss, which was misdiagnosed initially and treated as pyogenic septal abscess. There was also a big oral aphthous ulcer which may occur up to 6%-50% case of WG. MRI Brain showed right maxillary sinusitis and right mastoiditis. Pulmonary involvement occurs as much as in 80% patients of WG in the form of cough (34%), hemoptysis (18%), chest discomfort (8%) and dyspnea (7%). Diffuse alveolar hemorrhage due to alveolar capillaritis was reported in 5-45% of cases[10,11]. Radiological common findings are – pulmonary infiltrates (67%), multiple nodules (58%) with or without cavitations and rarely migrating shadows[12]. Our patient had almost

all these radiological features in addition to common symptoms of cough, mild haemoptysis and pleuritic left sided pain.

Renal disease is present in 17% cases at initial diagnosis[1]. It manifests as crescentic necrotizing GN characterized by urinary sediment with more than 5 RBC/hpf or RBC cast[10]. Our patient had high serum creatinine (3.9 mg%) and microscopic hematuria. She also had bilateral asymmetrical non-deforming polyarthritis of the ankle, knee, elbow, wrist and small joints of hands & feet. She also had bilateral episcleritis. Occular manifestations are reported to occur in 28% - 58% of patients with WG[2]. Other forms of ocular involvement includes scleritis, keratitis, uveitis and conjumctivits. Rarely proptosis due to retrobulbar granuloma was also reported[2].

This patient did not develop any dermatological or neurological manifestations. But skin vasculitis manifestation may occur up to 45% case which are palpable purpura, livedo reticularis and pyoderma gangrenosum[10]. Nervous system is affected by WG in 22% of patients manifested by mononeuritis multiplex, sensory-motor polyneuropathy, seizures, stroke, cerebritis, multiple cranial nerves palsy, diabetes insipidus and aseptic meningitis[10]. A almost similar case was reported in teachers association journal (TAJ) of Rajshahi Medical College by Islam Q Tarikul, Ahasan HAM Nazmul et al. in 1993.[13]

Treatment of WG is carried out in two phase: induction of remission and maintenance. The national institute of Health recommends low dose oral cyclophosphamide (2 mg/kg/day) and prednisolone (1 mg/kg/day) which dramatically improves survival. Steroid reduces mortality but less effective alone in inducing remission and so steroid is kept at lowest possible dose[14,15]. Both oral and intravenous therapy of cyclophosphamide have similar efficacy in terms of inducing remission. Intravenous therapy is associated with less side effects but with a high rate of relapse. Patient with pulmonary hemorrhage is to be treated with aggressive immunosuppressive therapy (monthly intravenous cyclophosphamide plus oral prednisolone along with plasmapheresis)[16-18].

Our patient responded to combination oral immunosuppressive therapy with marked improvement in symptoms and signs along with gradual reduction of serum creatinine and progressive decrease in RBC counts in urine as found in post-discharge follow up. Remission can be achieved in up to 90% cases within a year of combination immunosuppressive treatment. subsequently cyclophosphamide can be substituted with methotrexate or azathioprine to maintain remission[19-23].

Newer treatments include intravenous immunoglobulin (IVIG), mycofenolate mofetil, TNF blockers, rituximab, 15-desoxyspergualin, antithymocyte globulin, alemtuzumab and stem cell transplantation[24-38]. Intravenous immunoglobulin (IVIG) may be effective by interfering with ANCAs and thus inhibits ANCA-mediated neutrophil activation[24,25]. Mycophenolate mofetil in combination with prednisolone has been used in small series of refractory WG cases, for both induction and maintenance, with variable responses[26,27]. The initial pilot study showed good response when etanercept was added to standard therapy but the response to infliximab is variable and its use is not recommended yet[28,29]. Clinical improvement or remission with rituximab has been described in the literature. It appears to be more effective in the vasculitic rather than the granulomatous phase[33-36]. 15-desoxyspergualin is a synthetic derivative of spergualin, a protein from Bacillus laterosporus that is capable of preventing T- and B-cell maturation and has been used with some success in refractory cases[37,38]. Data about stem cell transplant is very limited[31].

Conclusion:

Wegener's Granulomatosis is a rare and invariably fatal form of systemic vasculitis but early diagnosis and management have significant positive impact on future outcome and prognosis.

High degree of suspicion is needed in tuberculosis endemic areas as mode of presentation of either disease may considerably overlap at some stage of the disease course.

Study of this case emphasizes the need for careful consideration and systematic analysis of patient's presenting respiratory symptoms and signs suggestive of pulmonary TB, so that the diagnosis of systemic vasculitis like WG will not be missed or delayed.

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Retroperitoneal Giant Schwannoma: Difficulties in Diagnosis and Subsequent Surgical Management

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Summary:

Management and excision of left hypochondriac mass of a 55 year old lady have been presented in the paper. The ultrasound of whole abdomen showed two big lumps in the left hypochondriac and lumbar region which after excision turned out to be a retroperitoneal schwannoma. The mass was removed by sacrificing the left kidney. Though it is a highly specialized operation and should be performed in a specialized center, sometimes general surgeons are unable to avoid the operation due to low economic condition of the patient. The case was performed at the Central Medical College Hospital, Comilla utilizing the existing facilities. Fortunately the patient is doing well and leading a normal life after one and half years of operation.

(J Bangladesh Coll Phys Surg 2012; 30: 105-107)

Introduction:

The term retroperitoneal tumour is usually confined to lesions arising from tissues-muscles, fat, fibrous tissue, lymph nodes, nerves (24%) and developmental remnants (75% mesodermal) of this compartment but excluding origin from retroperitoneal organs (pancreas, kidneys, ureters and adrenal glands)[1]. The incidence of primary retroperitoneal tumours is 0.3 to 03%[2]. Retroperitoneal swellings may be cystic or solid, benign or malignant[1]. Schwannoma are rare tumour arising from schwan cells of peripheral nerve sheath[3]. Women (54%) are more affected than men (46%)[4]. Most of the retroperitoneal schwannomas are benign[4], locally aggressive and rarely metastasize[2]. It rarely form cysts, cystic changes are noted in 63% of benign and 73% malignant schwannomas resulting from alterations in vascular wall[3]. The main symptoms are abdominal pain (85% of all cases) and distention[1]. It has no imaging characteristics and very difficult to diagnose preoperatively. Diagnosis is possible by means of immunohistochemistry stain for S-100 protein which distinguish schwannomas from spindle cell tumours[3]. As the tumour is resistant to chemo-radiotherapy [2], surgical approach should focus on complete excision of the mass[5]. This is a unique case of giant retroperitoneal schwannoma mimicking an adrenal tumour, encroaching upon renal hilum and posing threat to kidney. Application of all existing technological support and ground-breaking techniques of resection has evolved aiming to reduce blood loss and save the kidney.

Case presentation and management

Patient's History: A 55 years old lady presented with pain in the left side of upper abdomen and lump in the left hypochondriac and lumbar region for eleven months. Bladder and bowel habit of the patient was normal. The patient was mildly anaemic having below average nutritional status. Hemoglobin level was 9gm/dl and other biochemical parameters were normal.

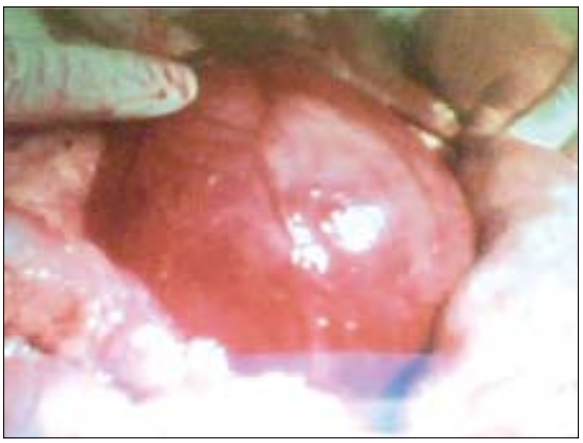

Fig.-1: *Bigger lump with angry looking vessels on the surface of the lump*

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Ultrasonography of whole abdomen revealed two big mixed echoic lump in left subcostal and lumbar region, the bigger one was compressing left renal hilum without any hydronephrosis. USG guided FNAC was inconclusive. Other site of abdomen was normal. CT scan was not possible due to poor financial condition of the patient. Anaesthetic fitness of the patient was within the normal limit. Five units of blood were arranged and two units were transfused preoperatively.

Surgical procedure: Under GA, the abdomen was explored through long midline incision, after packing of the small intestine into right side of the abdomen the bigger lump was exposed. Prominent blood vessels were observed on the surface of the lump (Fig. 1). Entrance into the retroperitoneal space was made after stripping off the peritoneum. Finger dissection was used to separate the large vessels from the lump and divided, ligated between the artery forceps. During separation of the lump from the posterior aspect, it was found tightly adherent to the left renal hilum.

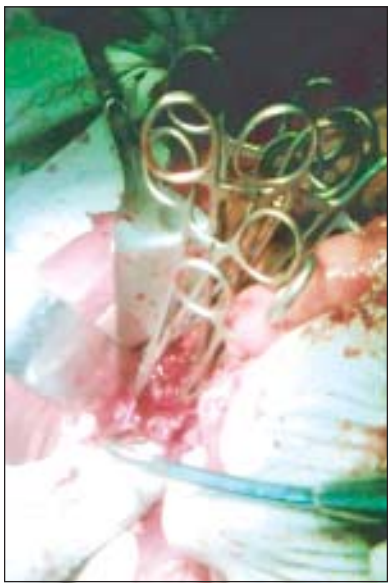

Fig. 2 Application of series of artery forceps

The renal pedicle was badly teared which the bigger lump (11/10 cm) was separated (Fig. 4). The wound rapidly filled with enormous amount of blood.

Suction and multiple hot mops were used to stop the bleeding. After removal of pack, there was serious bleeding. A series of artery forceps were used to stop the bleeding (Fig. 2).

After clearing of the operative field, the renal pedicle was ligated (Fig. 3). Due to avulsion of the kidney, it was removed (Fig. 4). Another small lump (7/6 cm) was removed successfully from the left subcostal region without further damage (Fig. 4). Wound was closed in layers with a drain kept in situ after securing every bleeding points. Total duration of operation was about two hours. Two units of blood were transfused peroperatively and one unit postoperatively. Condition of the patient remained stable during operation. In post operative period the patient remail well and recovered uneventfully. Histopathological section of two tumours revealed benign schwannoma.

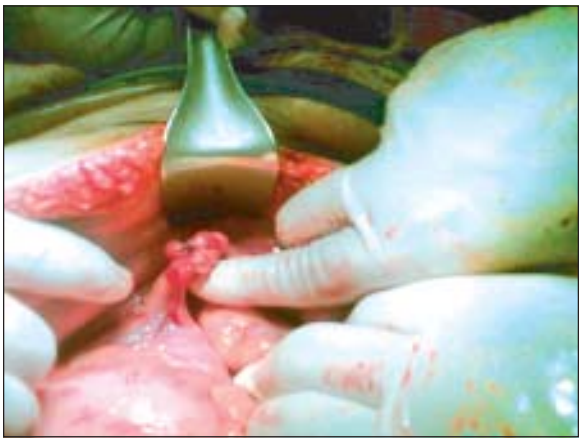

Fig.-3: *Ligation of renal pedicle*

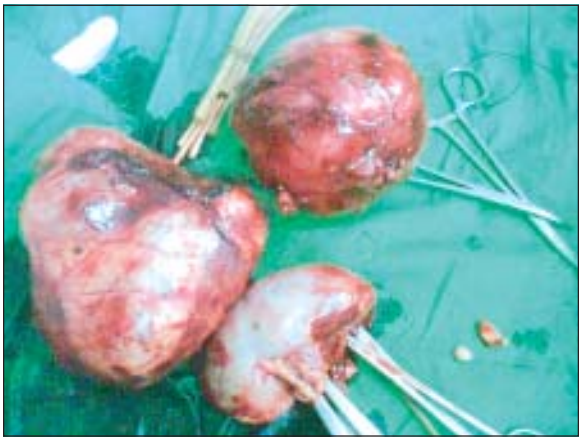

Fig.-4: *Two removed lump with left kidney*

Discussion:

Retroperitoneal schwannoma is a very rare tumour[2,3]. Preoperative diagnosis is very difficult despite modern equipped facilities[6]. Retroperitoneal tumours usually

present without gastrointestinal or urological manifestations. Ultrasonography provided good clue to detect the origin of tumours and condition of the ipsilateral kidney. Fine-needle aspiration cytology was not helpful. CT scan was not done due to financial constrains. Accurate diagnosis is absolutely based on immunohistochemistry[3].

Complete excision of the tumour is the only hope of cure[5]. Adequate preoperative evaluation is mandatory to reduce operative morbidity. Long midline incision offers adequate exposure to almost every region of the abdominal cavity and retroperitoneum[7]. It is unsurpassed when speed is of the essence[7].

Laparoscopic resection is an alternative choice[8], but supervised training and support should be ensured. In our case, standard resection of the tumours were completed. Preservation of the left kidney was not possible. Facilities of vascular anastomotic technique might have save the kidney[9].

Survival rate depends upon whether tumour is benign or malignant. Complete excision can cure benign case, survival rate of malignant schwannoma is 85% of 11years ($\pm$5)[10]. Recurrence is common in partial excision[4].

Conclusion:

Retroperitoneal schwannoma is a locally aggressive tumour. Preoperative diagnosis is difficult with CT scan or FNAB. Surgical approach should focus on complete excision of the mass. Patient undergoing complete resection tend to do well without evidence of early recurrence.

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Genital Tuberculosis – An Uncommon Presentation

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Summary:

A married women of 30 years, mother of one child, housewife was referred to out patient department of Khulna Medical College Hospital with history of blood stained vaginal discharge, secondary amenorrhoea for 3 years and evening rise of temperature and anorexia for 3 months. On speculum examination, cervix was oedematous, bright red in colour with papillary growth which bleeds on touch. She also had bilateral excavated lesion at the lowest part of the vagina close to the introitus which was red in colour with undermined edge. Visual inspection aided by acetic acid (VIA) was positive. Colposcopy guided biopsy was taken from unhealthy areas. There was extensive mottling on chest X-ary. She had high ESR, AFB+ve on sputum culture. The patient was diagnosed as a case of active pulmonary TB. Histopathological report of cervical tissue showed granulomatous lesion. Patient was given a regimen of standard anti TB drugs. After 2 weeks, during her first follow up, patient had few symptoms with regression of cervical growth and disappearance of vaginal ulcer. Patient herself stated about her wellbeing after the start of anti-TB drugs.

Though cervical TB is not uncommon among genital TB (5-24%), vaginal tubercular lesion is very uncommon and concurrent pulmonary, endometrial, cervical and vaginal tuberculosis is a rare event. Careful evaluation is needed to diagnose tubercular infection in genital organs specially in GOPDs and colposcopy clinics.

(J Bangladesh Coll Phys Surg 2012; 30: 108-111)

Introduction:

Female genital TB is not uncommon in countries where pulmonary TB is wide spread. But tuberculosis of vulva and vagina is very rare and it is seen only in 1-2% of genital tract TB. Tuberculosis of cervix accounts for 0.1 to 0.65% of all cases of TB and 5-24% of genital tract TB [1,2,3,4,5,6,7,8]. In 92% of cases, genital TB is secondary to focus in the lungs, lymph nodes urinary tract, bones and joints. Genital organs most frequently affected include fallopian tubes (95-100%), endometrium (50-60%), and ovaries (20-30%). Mostly genital tuberculosis is diagnosed during evaluation for infertility. Major presenting symptoms of genital TB are infertility (45-55%) pelvic pain (50%), poor general health (25%) and menstrual disturbance (20%). Female genital tuberculosis is treated with the same combined drug therapy used in pulmonary and extrapulmonary tuberculosis but the diagnosis is critical. This paper briefly describes the concurrent occurrence of pulmonary endometrial, cervical and vaginal tuberculosis.

Case History:

A 30 years old lady, married for 5 years, Para-1, ALC-3 yrs, housewife was referred to out patient department of Khulna Medical College Hospital (KMCH) by a general practitioner. The patient gave history of excessive blood stained, pervaginal discharge, chronic pelvic pain and amenorrhoea for 3 years since her last childbirth. She was not taking any contraceptive. She complained of evening rise of temperature and anorexia for 3 months. The patient was admitted in gynae ward for thorough evaluation. Patient gave no family history of pulmonary TB. On examination, patient was found ill looking and anxious. Her Temperature was 99^0F and she was normotensive. Pervaginal examination revealed normal sized uterus, bilateral excavated lesion size 2cm $\times$ 2cm with irregular outline and undermined edge present in the lowest part of vagina close to the introitus (Fig-III & IV). Cervix was oedematous with papillary growth almost entirely covering the ectocervix which bled on touch (Fig-I).

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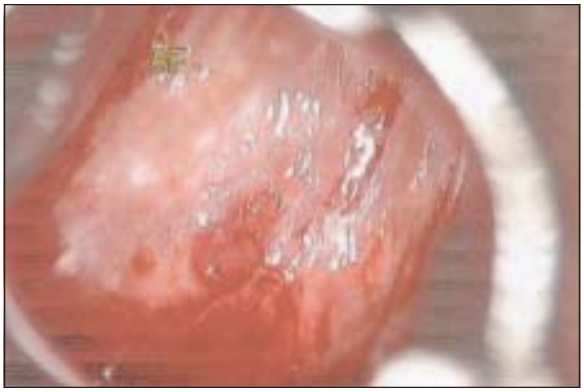

Fig.-1: *Colposcopic feature of cervix- Oedematous soft cervix with papillary growth covering* the ectocervix – bleeds on touch.

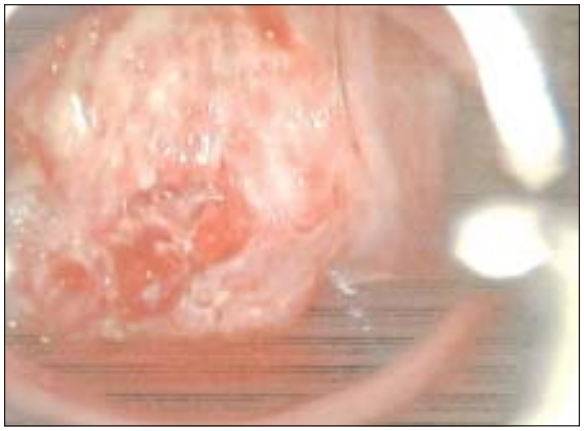

Fig.-2: *Cervical colposcopic features after 2 weeks of anti TB treatment showing much regression of growth with small congested area.*

VDRL, TPHA, HIV Elisa test & HVS with gram staining and culture was done to exclude syphilis, gonococcal, trichomonal and HIV infection. The patient had high ESR (125mm/hrs) polymorphonuclear leukocytosis with lymphopenia, milliary mottling on chest X-ray, sinus tachycardia on ECG and AFB+ve on sputum culture. Paps cytology reveled inflammatory cells with mild dyskaryosis. Urine samples were negative for AFB. Ultrasonogram of whole abdomen showed no abnormality. Endometrial aspiration cytology and Mantonx test were not done due to presence of active tuberculr lesion. Cervical biopsy report revealed granulomatous lesion with plenty of mononuclear cells and caseation. The patient was referred to the department of medicine of KMCH seeking opinion. The case was diagnosed as bilateral extensive pulmonary TB with concomitant endometrial, cervical and vaginal TB. The patient was treated with anti TB drugs (INH+ Rifampicin+Ethambutol+ Pyrazinamide). After One week of initiation of treatment, Ethambutol was omitted as the patient complained of visual disturbance. After 2 weeks of onset of treatment during follow up, the patient had better look with no P/V discharge and no ulcerative lesion in cervix (Fig-II) and vaginal ulcer was totally disappeared (Fig-V). Patient is still on antitubercular drugs and on regular follow up.

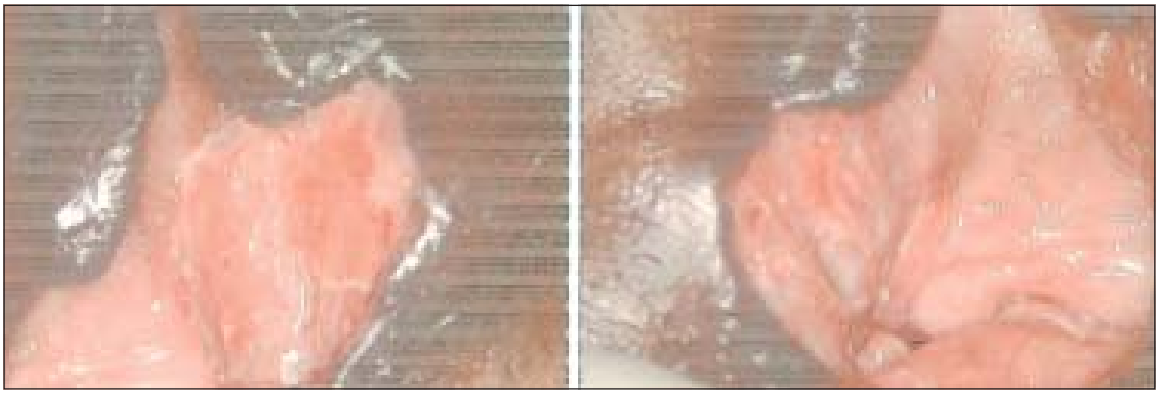

Fig.-3&4: *Colposcopic feature of vagina- Bilateral vaginal ulcer with undermined edge.*

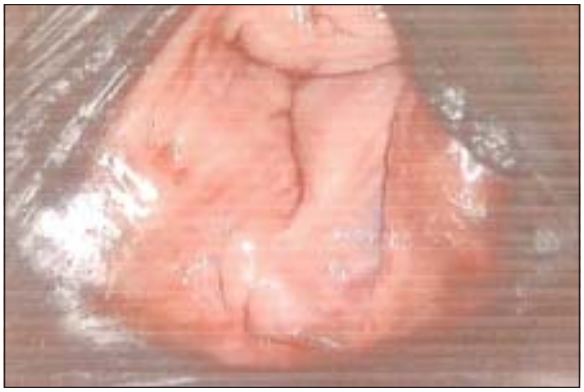

Fig.-5: *Colposcopic feature of lower part of vagina showing no ulceration after 2 weeks of anti TB treatment.*

Discussion:

Tuberculosis is one of the oldest disease known to affect human[15]. Female genital TB is a rare disease in some developed countries but it is a frequent cause of chronic pelvic inflammatory disease (PID) and infertility in other parts of the world[16]. Symptomatic genital tract TB usually present with abnormal vaginal bleeding, menstrual irregularities, amenorrhoea, abdominal pain & constitutional symptoms[5,6,9,10,11].

Pelvic organs are infected from a primary focus, usually the chest, by haematogenous spread [2, 4,5, 10,12]. The cervix is infected as a part of this process, by lymphatic spread or by direct extension. The vagina and vulva are rarely involved. The primary lesion is often healed by the time of presentation [5,6,7,8,9,10,11,12,13]. Some authors suggest the existence of primary genital tuberculosis which may spread by venereal transmission. These lesions are extremely rare and usually present as isolated chronic ulcerative lesions of the external genitalia in absence of TB of the upper urogenital system[17]. The presence of extra genital foci of TB, as a rule is rare when genital lesion is discovered. The extent of genital lesion may be minimal or advanced. Minimal genital TB is usually asymptomatic except for sterility. Examination of pelvis may reveal no abnormality. In rare cases, cervical TB may be a primary infection[2,4,5,10,13] introduced by a partner with tuberculous epididymitis or other genitourinary disease. It is uncommon for tuberculosis to involve the vulva and vagina. The gross appearance may be ulcerative with multiple sinuses, it may be hypertrophic with elephantiasis, or it may be similar to that of carcinoma. There may be hormone dependence of infection [2,5] given that 80% of cases occur in the reproductive age.

The macroscopic finding of cervical and vaginal TB were illustrated by this case. There may be papillary or vegetative growth, a milliary appearance or ulceration present thus simulating invasive cervical cancer.

Microscopically, there are caseating granulomata in cervical lesion. The differential diagnosis of granulomatous disease of cervix include amoebiasis, schistosomiasis, brucellosis, sarcoidosis and foreign body reaction. The diagnosis of the cervical and vulvovaginal TB is usually made by histological examination[3,9,12] of cervical and vulvovaginal biopsy. Specimen staining of AFB is not found to be very useful in making the diagnosis of genital TB[14]. Cervical cytology showed inflammatory cells with mild dyskaryosis therefore, the presence of typical granuloma is sufficient for diagnosis if other causes of cervicitis are excluded or primary focus identified. In this case the primary focus in thought to be lung which is identified and other causes of the ulcerative cervical lesion e.g. syphilis, malignancy is excluded. Molecular probe may be more sensitive than culture but also have reduced specificity.

Khilani and colleagues reported that when the cervical cytologic smear reveals the presence of clusters of epitheloid cells, it may be suggestive of tuberculous lesion of cervix, but it would be diagnosed histologically and /or bacteriologically.

Once the diagnosis of genital TB is confirmed, it is important to rule out TB in other parts of the body. A chest radiograph and three early morning sputum or gastric aspirate samples or early morning urine samples for AFB stain and culture and IVU are recommended[19].

Daly and Monif reported that 10% of females with genital TB also show evidence of renal TB. Here in this case, endometrial, cervical and vaginal infection exists concurrently with the active pulmonary infection which is theoretically primary. Endometrial sampling and biopsy of endometrium and vaginal lesion was posponded because of presence of active pulmonary lesion evidenced by AFB in sputum, extensive pulmonary mottling in chest X-ray and high ESR. After completion of TB treatment endometrial and vaginal sampling should be done for biopsy irrespective of resumption of menstruation. But there is strong

possibility of endometrial involvement as the patient suffered from amenorrhoea for last three years though biopsy could not have been done.

Before the advent of effective chemotherapy, surgery was the mainstay of treatment of genital tract TB and post operative complication such as bowel fistula (14%) and mortality from primary disease (2.2%) were high . Experts suggests that extrapulmonary TB may be even easier to treat than pulmonary TB owing to the decreased concentration of organisms in these lesions and increased accessibility of the sites . If surgical intervention is needed ,chemotherapy makes it safer, easier and more effective if the regimen contain multiple drugs and taken regularly for a sufficient period of time. In the index case, though standard anittubercular regimen was initiated, Ethambutol was withdrawn due to visual problem of the patient as optic neuritis is a recognized side effect of Ethambutol in some cases [20]. The major determinant of the outcome of treatment is the patient adherence to the drug regimen.

A lesion on the genital tract provides a marker to assess response to therapy. Here in this case, only after two weeks , vaginal ulcer completely disappeared and as such biopsy could not be done. Cervical growth also disappeared except a small area of congestion. The lesion should respond to six months standard antitubercular therapy but in the index case the response was dramatic.

Histological examination of serial biopsy can confirm therapeutic response Complete hemogram should be done with sputum culture for AFB after six weeks. Radiological follow up should be done by USG and MRI in presence of amenorrhoea. MRI is better to visualise endometrium, myometrium and junctional zone and any appearance consistent with Asherman's syndrome and lymphadenopathy. Fertility is very poor even after treatment owing to endometrial and tubal involvement at presentation and subsequent healing by fibrosis[10,11.12]. The incidence of TB has increased recently and is partly attributable to HIV pandemic. There should be high index of suspicion of genital tuberculosis in women with abnormal appearance of cervix, vulva and vagina in area where HIV and TB is prevalent.

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Pneumopericardium

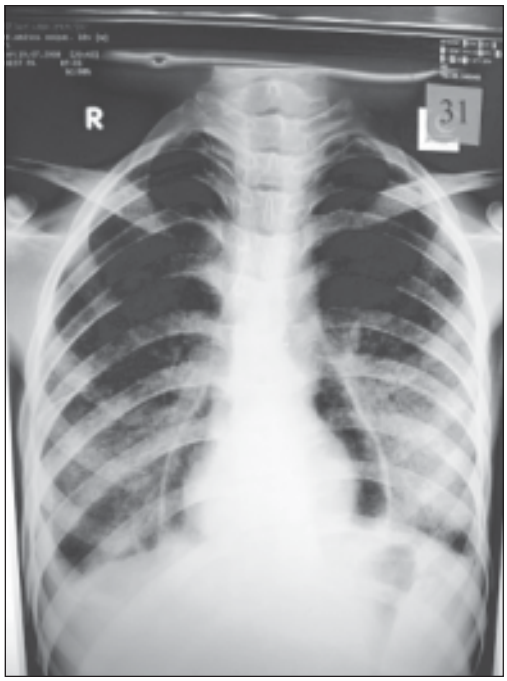
A DAS[a], MT MIAH[b], MA ISLAM[c], MB ALAM[d]

(J Bangladesh Coll Phys Surg 2012; 30: 112-113)

Imagings play an important role in diagnosing disease. In spite of sophisticated radiological investigations importance of chest X-ray is unlimited till now. Varity of radiological findings in chest x-ray has been observed in tuberculosis patient worldwide. Bangladesh is one of the most prevalent country of tuberculosis. This x-ray shows the findings of disease itself as well as complication of treatment.

A 25- year-old man presented with milliary tuberculosis and massive pericardial effusion. After pericardiocentesis patient developed respiratory distress. X-ray chest posterioanterior (P/A) view shows milliary mottlings, left sided mild pleural effusion and a radiolucent shadow surrounding the cardiac border outlined by a fine line representing the pericardial sac. Radiological observation is pneumopericardium after therapeutic pericardiocentesis. It is a rare complication of pericardiocentesis and this type of X-ray chest P/A is found rarely.

Pneumopericardium is defined as the presence of air in the pericardial sac and has been reported to result from a spontaneous or iatrogenic cause of underlying disease.[1,2] There are multiple causes include surgery , penetrating trauma ,blunt trauma (rare) ,infectious peticarditis with gas-producing organisms and fistula formation between the pericardium and an adjacent air-containing organ (i.e. stomach or esophagus). Pneumopericardium has a well-recognized clinical and radiologic entity. Hamman's sign (rarely, Hammond's sign or Hammond's crunch**)** is a crunching, rasping sound, synchronous with the heartbeat, heard over the precordium in pneumopericardium and spontaneous pneumomediastinum, produced by the heart beating against air-filled tissues. It is named after Johns Hopkins clinician Louis Hamman. This sound is heard best over the left lateral position. It has been described as a series of precordial crackles that correlate with the heart beat and not with the respirations. It is also heard together with spontaneous small pneumothorax on the left side. Sounds like bubbles hitting inside of the chest can be felt or seen.[3,4] In chest radiographs, a continuous thin radiolucent rim of air follows the cardiac silhouette and is outlined by a fine line representing the pericardial sac.[5 ,6] The diagnosis of pneumopericardium can be made by conventional chest radiographs only [7]. Pneumopericardium can usually be distinguished from pneumomediastinum, since air in the pericardial sac should not rise above the anatomic limits of the



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pericardial reflection on the proximal great vascular pedicle. In our x-ray air shadow doesn't cross the anatomical limit of pericardial reflection. If radiograph is obtained with the patient in the decubitus position, air in the pericardial sac will shift immediately, while air in the mediastinum will not shift in a short interval between films. Occasionally, it may not be possible to distinguish pneumopenicardium from pneumomediastinum on plain film, then echocardiography and CT scan of the chest may be needed . This clinical measurement and process is variable, depending on the hemodynamic status of the patient. If the hemodynamic condition is stable, the underlying condition should be treated and the patient should be monitored closely.[1,5] In tension pneumopericardium, rapid fluid resuscitation and emergent echo-guided pericardiocentesis, followed by pericardial drainage, should be performed.[7,8]

The development of a cardiac tamponade is a serious complication, necessitating prompt recognition and treatment. Although severe complications occur in some patients, the iatrogenic pneumopericardium is self-limiting and requires no specific therapy.[5]

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LETTER TO THE EDITOR

(J Bangladesh Coll Phys Surg 2012; 30: 114-115)

To the Editor- in- Chief

Journal of Bangladesh College of Physician and Surgeon

Sir, We had gone though the case report of your prestigious journal of Bangladesh College of Physicias and Surgeons (Vol. 30. no.1, January 2012) entitle with 'Moyamoya Disease: A Rare Entity Report Of One Case' by Dr. Asifur Rahman with real interest and have a few observations.

Moyamoya disease- a puffs of cigerate smoke,[1] a rare disease of the cerebral vessels at the base of the brain , a wonderful case report with nice contents and illustrations . But in history associated risk factors, disease associations were not mentioned clearly. Ophthalmic findings like 'morning glory disc' , enlargement of optic disc with concomitant renovascular abnormalities [2]were not clearly illuatrated in this case report. In our country some rare cases like moyamoya disease often overlooked due to lack of orientation and available investigations facilities. The gold standard diagnostic tools for moyamoya disease are MRI of brain and MR angiogram which findings were nicely given here. Some chromosomal analysis still helpful for diagnosis. In this case, no such diagnostic tool was searched. No known treatment will reverse the primary disease process. But current treatments are designed to prevent strokes by improving blood flow to the affected cerebral hemisphere. Improvement in cerebral blood flow may provide protection against future strokes, effect a concurrent reduction in moyamoya-associated collaterals, and reduce the frequency of symptoms.[3]

Apart from surgical revascularization procedures, medical therapeutic measures such as antiplatelet agents and even anticoagulation have been used for stroke prevention. In completed stroke, as confirmed by means of diffusion-weighted magnetic resonance imaging, antiplatelet agents should be administered to reduce the formation of microthrombi at the site of the stenosis.[4,5,6] If proposed surgical intervention was to be done in this case, a good outcome might come and it might be really a mile stone of surgical intervention in our country regarding treatment of "moyamoya disease" .

Though it is more prevalent in Japan , now a days, a few cases of moyamoya disease is detected in Dhaka Medical College. We give special thank to the author who successfully diagnosed the case and shared his experience with us. Above all we like to thanks to the Editor –in –Chief of this journal for publishing this rare case. This will encourage new generation of specialists to dedicate more effort in new case identification.

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Author's Reply

To

The Editor-in-Chief

Journal of Bangladesh College of Physicians and Surgeons

Sir,

We thank Dr. Gobinda Banik and Professor Anup Kumar Saha for their interest in our case report. We are trying to answer the queries raised by them below.

The girl had neither any history of associated risk factor nor any association of diseases like NF 1, Sickle cell disease or Down's syndrome, related to her ailment. Her fundoscopic findings were also normal. Chromosomal abnormalities in suggested locations at 3,6,8 or 17 as well as specific HLA haplotypes could not be sought as there was no such facility in our university at the time of detection of the case. We do agree that it could be a milestone if we could intervene to prevent stroke in future. Accordingly we planned and offered different options of surgery to the parents of the patient, but they refused as we have mentioned. So, we had to keep the patient on follow up. Role of antiplatelets is controversial and so is also the role of anticoagulants. We opted to observe the patient only with prophylactic anticonvulsant as she had seizure.

We thank Dr. Banik and Dr. Saha for their positive comments and encouragement and we must thank the editor-in -chief for his kind consideration to publish this case report.

Sincerely yours

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Bangabandhu Sheikh Mujib Medical University
Shahbag, Dhaka

COLLEGE NEWS

(J Bangladesh Coll Phys Surg 2012; 30:116-120)

Examinations news:

Results of FCPS Part-I, Part-II and MCPS examination held in January 2012 are given bellow:

3592 candidates appeared in FCPS Part-I examination held in January, 2012 of which 266 candidates came out successful. Subject wise results are as follows:

Sl No.	Subject	Appeared	Passed	% of Pass
1.	Medicine	1103	212	19.22
2.	Surgery	559	0	0.0
3.	Paediatrics	419	22	5.25
4.	Obst. And Gynae	716	14	1.96
5.	Otolaryngology	112	0	0.0
6.	Ophthalmology	80	2	2.50
7.	Psychiatry	15	0	0.0
8.	Anaesthesiology	97	1	0.0
9	Radiology	67	5	7.46
10	Radiotherapy	27	4	14.81
11	Dermatology and Venereology	84	0	0.0
12	Physical Medicine & Rehabilitation	22	0	0.0
13	Dentistry	239	3	1.26
14	Family Medicine	1	0	0.00
15	Haematology	19	1	5.26
16	Microbiology	13	1	7.69
17	Histopathology	12	0	0.0
18	Transfusion Medicine	4	0	0.0
19	Biochemistry	3	1	33.33
Grand Total		**3592**	**266**	**7.41**

The following candidates satisfied the Board of Examiners and were declared to have passed the FCPS examination held in January, 2012 subject to confirmation by the council of Bangladesh College of Physicians and Surgeons.

Roll No.	Name	From where graduated	Subject
019-8701	Dr. Mohammad Abdul Malek	Dhaka Medical College, Dhaka	Cardiology
019-8703	Dr. Fatema Salam	Mymenisngh Medical College	Nenotology
019-8705	Dr. AKM Mijanur Rahman	Sir Salimulla Medical College, Dhaka	Nephrology
019-8707	Dr. Mohammad Nazrul Hossain	Sir Salimulla Medical College, Dhaka	Neuro-Surgery‘
019-8709	Dr. Sharif Ahmed Jonayed	Sir Salimulla Medical College, Dhaka	Orthopaedic Surgery
019-8710	Dr. Maruf-ul-Quader	Jahurul Islam Medical College, Bajitpur	Paediatric Nephrology
019-8711	Dr. Farzana Bilquis Ibrahim	Bangladesh Medical College, Dhaka	Plastic and Reconstructive Surgery
019-8712	Dr. Mirza Mohammad Tyebul Islam	Faridpur Medical College, Faridpurq	Plastic and Reconstructive Surgery
019-8713	Dr. Iftekhar Ibne Mannan	Mymensingh Medical College, Mymensingh	Plastic and Reconstructive Surgery
019-8715	Dr. Sayed Imran Hossain	Dhaka Medical College , Dhaka	Plastic and Reconstructive Surgery
019-8717	Dr. S.M Lutfor Rahman	Sher-E-Bangla Medical College, Barisal	Pulmonology
080-7020	Dr. Kamrul Islam	Mymensingh Medical College, Mymensingh	Dermatology &Venereology
080-7023	Dr. Monira Yeasmin	Dhaka Medical College, Dhaka	Dermatology & Venereology
080-7024	Dr. Mohammad Rahmat Ullah	Sher-E-Bangla Medical College , Barisal	Dermatology & Venereology
080-7026	Dr. Md. Sayeed Hasan	Sir Salimullah Medical College, Dhaka	Dermatology & Venereology
080-7031	Dr. Afsana Nahid	Dhaka Medical College , Dhaka	Dermatology & Venereology
080-7032	Dr. Rebeka Sultana	Sher-E-Bangla Medical College , Barisal	Dermatology & Venereology

Roll No.	Name	From where graduated	Subject
080-7033	Dr. Wahida Khan Chowdhury	MAG Osmani Medical College , Sylhet	Dermatology & Venereology
080-7039	Dr. Md. Hafizul Islam	MAG Osmani Medical College , Sylhet	Haematology
080-7040	Dr. Md. Adnan Hasan Masud	MAG Osmani Medical College , Sylhet	Haematology
080-7041	Dr. Md. Habibur Rahman	Mymensingh Medical College, Mymensingh	Haematology
080-7003	Dr. Bidhan Paul	Rangpur Medical College	Anaesthesiology
080-7004	Dr. Istaque Ahmed Milton	Community Based Medical College, Mymensingh	Anaesthesiology
080-7006	Dr. Md. Mahbub Ul Alam	Rajshahi Medical College , Rajshahi	Anaesthesiology
080-7007	Dr. Md. Zafor Iqbal	Rajshahi Medical College , Rajshahi	Anaesthesiology
080-7008	Dr. Muslema Begum	Mymensingh Medical College, Mymensingh	Anaesthesiology
080-7010	Dr. Mushfiqur Rahman	Rangpur Medical College, Ranpur	Anaesthesiology
080-7011	Dr. Sadat Bin Siraj	MAG Osmani Medical College, Sylhet	Anaesthesiology
080-7012	Dr. Subrata Kumar Mondal	Chittagong Medical College, Chittagong	Anaesthesiology
080-7013	Dr. Shahnaz Sultana Beauty	Dhaka Dental College, Dhaka	Conservative Dentistry and Endodontics
080-7014	Dr. Md. Farid Uddin	Rajshahi Medical College , Rajshahi	Conservative Dentistry and Endodontics
080-7016	Dr. Nurun Nahar	Dhaka Dental College, Dhaka	Conservative Dentistry and Endodontics
080-7210	Dr. Mohammad Ziaur Rahman	Chittagong Medical College, Chittagong	Medicine
080-7218	Dr. Mohammad Saifuddin	Dhaka Medical College , Dhaka	Medicine
080-7234	Dr. Mohammad Kamal Uddin	Dhaka Medical College, Dhaka	Medicine
080-7238	Dr. Mohammad Faiz Ahmead Khondaker	Dhaka Medical College, Dhaka	Medicine
080-7247	Dr. Mohammad Abdus Sattar Sarker	Sir Salimullah Medical College, Dhaka	Medicine
080-7256	Dr. Md. Shameem Haidar	MAG Osmani Medical College , Sylhet	Medicine
080-7264	Dr. Md. Mamnur Rashid	Faridpur Medical College, Faridpur	Medicine
080-7265	Dr. Md. Mahmudur Rahman	Armed Forces Medical College, Dhaka	Medicine
080-7277	Dr. Md. Daharul Islam	Chittagong Medical College , Chittagong	Medicine
080-7281	Dr. Md. Nahiduzzamane Shazzad	Mymensingh Medical College, Mymensingh	Medicine
080-7288	Dr. Muhammad Shah Alam	Chittagong Medical College, Chittagong	Medicine
080-7068	Dr. Md. Habibur Rahman	Mymensingh Medical College,. Mymensingh	Medicine
080-7114	Dr. Abu Saleh Mohommed Sirajum Munir	Armed Forces Medical College, Dhaka	Medicine
080-7150	Dr. Mamunur Rashid	Dhaka Medical College, Dhaka	Medicine
080-7153	Dr. M.M. Bodiuzzamanm	MAG Osmani Medical College, Sylhet	Medicine
080-7159	Dr. Kazi Abdullah-Al-Mamun	Dhaka Medical College, Dhaka	Medicine
080-7172	Dr. Gourab Dewan	Rangpur Medical College, Rangpur	Medicine
080-7174	Dr. Ghulam Kawnayn	Sir Salimullah Medical College, Dhaka	Medicine
080-7184	Dr. D. M. Shajjad Hossain	Chittagong Medical College, Chittagong	Medicine
080-7192	Dr. Rafia Afrose	Mymensingh Medical College	Medicine
080-7194	Dr. Rabiul Alam Md. Erfan Uddin	Dhaka Medical College, Dhaka	Medicine
080-7208	Dr. Nihar Ranjan Mazumder	MAG Osmani Medical College, Sylhet	Medicine
080-7291	Dr. Muhammad Oliur Rahman	Dhaka Medical College Dhaka	Medicine
080-7297	Dr. Muhammad Ashif Mashud Chowdhury	Chittagong Medical College, Chittagong	Medicine
080-7312	Dr. Mohammed Jahedul Islam	Chittagong Medical College, Chittagong	Medicine
080-7336	Dr. Syed Mahbub Morshed	Rangpur Medical College, Rangpur	Medicine
080-7365	Dr. Bidith Ranjan Deb	MAG Osmani Medical College, Sylhet	Medicine
080-7369	Dr. Abul Bashar Mohammad Rezaul Karim Mir	Dhaka Medical College, Dhaka	Medicine
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080-7405	Dr. Syed Md. Jabed	Chittagong Medical College, Chittagong	Medicine
080-7411	Dr. Sukumar Majumder	Rangpur Medical College, Rangpur	Medicine
080-7412	Dr. Sufia Jannat	Chittagong Medical College, Chittagong	Medicine
080-7436	Dr. Farzana Hoque Parna	Mymensing Medical College, Mymensing	Obst. and Gynae
080-7437	Dr. Farzana Fahmin Chowdhury	Chittagong Medical College, Chittagong	Obst. and Gynae
080-7439	Dr. Farjana Begum	Mymensing Medical College, Mymensing	Obst. and Gynae
080-7466	Dr. Chalontika Rani	Rajshahi Medical College, Rajshahi	Obst. and Gynae
080-7466	Dr. Barnali Sinha	MAG Osmani Medical College, Sylhet	Obst. and Gynae

Roll No.	Name	From where graduated	Subject
080-7517	Dr. Khairun Nessa	Rajshahi Medical College, Rajshahi	Obst. and Gynae
080-7524	Dr. Kaniz Nasima Akhter	Chittagong Medical College, Chittagong	Obst. and Gynae
080-7527	Dr. Kaniz Farhana	Dhaka Medical College, Dhaka	Obst. and Gynae
080-7528	Dr. Kanika Roy	Mymensingh Medical College, Mymensing	Obst. and Gynae
080-7556	Dr. Homayra Fahmida	MAG Osmani Medical College, Sylhet	Obst. and Gynae
080-7565	Dr. Faouzia Akhter	Mymensingh Medical College, Mymensing	Obst. and Gynae
080-7572	Dr. Fatema Haque	Comilla Medical College , Comilla	Obst. and Gynae
080-7575	Dr. Farzana Siddiqui	Chittagong Medical College, Chittagong	Obst. and Gynae
080-7577	Dr. Farzana Sharmin	Sher-E-Bangla Medical College, Barisal	Obst. and Gynae
080-7581	Dr. Mushfiqua Mohsin	Rangpur Medical College, Rangpur	Obst. and Gynae
080-7594	Dr. Mst. Zinat Rehena Shilpi	Sher-E-Bangla Medical College, Barisal	Obst. and Gynae
080-7595	Dr. Mst. Manjuman Ara Sarker	Rangpur Medical College, Rangpur	Obst. and Gynae
080-7611	Dr. Most. Nur-A-Sharmin	Dhaka Medical College, Dhaka	Obst. and Gynae
080-7613	Dr. Most. Zakia Sultana	Shahid Ziaur Rahman Medical College, Bogra	Obst. and Gynae
080-7614	Dr. Most. Nasima Khatun	Rangpur Medical College, Rangpur	Obst. and Gynae
080-7636	Dr. Mahmuda Iffat Sharmin	Sir Salimullah Medical College, Dhaka	Obst. and Gynae
080-7645	Dr. Mahabuba Ahmed	Chittagong Medical College, Chittagong	Obst. and Gynae
080-7648	Dr. Lutfa Begum Lipi	Sir Salimullah Medical College, Dhaka	Obst. and Gynae
080-7649	Dr. Shamsun Nahar	Mymensingh Medical College, Mymensing	Obst. and Gynae
080-7659	Dr. Salma Akter Munmun	Comilla Medical College, Comilla	Obst. and Gynae
080-7660	Dr. Rowson Ara	Rajshahi Medical College, Rajshahi	Obst. and Gynae
080-7674	Dr. Rahat Afza Chowhdury	Sir Salimullah Medical College, Dhaka	Obst. and Gynae
080-7676	Dr. Rabeya Sultana Jolly	Sir Salimullah Medical College, Dhaka	Obst. and Gynae
080-7677	Dr. Rabeya Parvin	Rangpur Medical College, Rangpur	Obst. and Gynae
080-7692	Dr. Noor-E-Fatema	Sir Salimullah Medical College, Dhaka	Obst. and Gynae
080-7699	Dr. Nibedita Roy	Mymensingh Medical College, Mymensing	Obst. and Gynae
080-7704	Dr. Nazneen Ara Begum	Institute of Applied Health Science, under USTC, Chittagong	Obst. and Gynae
080-7705	Dr. Nazneen Ahmed	Khulna Medical College, Khulna	Obst. and Gynae
080-7707	Dr. Nazmun Ara	Dhaka Medical College, Dhaka	Obst. and Gynae
080-7712	Dr. Nayema Afroje	Shahid Ziaur Rahman Medical College, Bogra	Obst. and Gynae
080-7728	Dr. Nadira Rahman	Sir Salimullah Medical College, Dhaka	Obst. and Gynae
080-7740	Dr. Naila Nazneen Khan	Chittagong Medical College, Chittagong	Obst. and Gynae
080-7767	Dr. Romena Akter	Shere-E-Bangla Medical College, Barisal	Obst. and Gynae
080-7773	Dr. Sabiha Sultana	Chittagong Medical College, Chittagong	Obst. and Gynae
080-7777	Dr. Sabera Sharmin	Sir Salimullah Medical College, Dhaka	Obst. and Gynae
080-7780	Dr. Sanchita Bhowmik	Chittagong Medical College, Chittagong	Obst. and Gynae
080-7782	Dr. Salma Akter	Dhaka Medical College, Dhaka	Obst. and Gynae
080-7810	Dr. Srabani Barua	Chittagong Medical College, Chittagong	Obst. and Gynae
080-7827	Dr. Sharmin Sultana	MAG Osmani Medical College, Sylhet	Obst. and Gynae
080-7845	Dr. Shahna Parveen Joba	Sir Salimullah Medical College, Dhaka	Obst. and Gynae
080-7857	Dr. Sadia Rahman	Dhaka Medical College, Dhaka	Obst. and Gynae
080-7864	Dr. Runa Laila	MAG Osmani Medical College, Sylhet	Obst. and Gynae
080-7869	Dr. Rebeka Tarannum	Dhaka Medical College, Dhaka	Obst. and Gynae
080-7880	Umma Kashmira Jahan	Mymensing Medical College, Mymensing	Obst. and Gynae
080-7885	Dr. Tasnim Sarwar	Sir Salimulla Medical College, Dhaka	Obst. and Gynae
080-7896	Dr. Tahira Khatun	Sher-e-Bangla Medical Colelge, Barisal	Obst. and Gynae
080-7899	Dr. Sayeeda Sultana	Sher-e-Bangla Medical Colelge, Barisal	Obst. and Gynae
080-7907	Dr. S M Shafiul Bari Rashel	Dhaka Medical College, Dhaka	Obst. and Gynae
080-7908	Dr. Tasnim Khanom	Dhaka Medical College, Dhaka	Ophthalmology
080-7911	Dr. Tanzina Islam	Rajshahi Medical College, Rahshahi	Ophthalmology
080-7916	Dr. Amina Akhter	Army Medical College, Quaidi Azam University , Pakistan	Ophthalmology
080-7936	Dr. Md. Abdul Muntakim Shahid	MAG Osmani Medical College, Sylhet	Ophthalmology
080-7939	Dr. Md. Asaduzzaman	Sher-e-Bangla Medical Colelge, Barisal	Ophthalmology

Roll No.	Name	From where graduated	Subject
080-7945	Dr. Ranjan Karmakar	Chittagong Medical College, Chittagong	Ophthalmology
080-7948	Dr. Mohammad Ahtashamul Haque	Dhaka Dental College, Dhaka	Oral & Maxillofacial Surgery
080-7952	Dr. Md. Mostafijur Rahman	Rajshai Medical College, Rajshahi	Oral & Maxillofacial Surgery
080-7953	Dr. Md. Shamsur Rahman	Rajshai Medical College, Rajshahi	Oral & Maxillofacial Surgery
080-7955	Dr. Farzana Sultana	Dhaka Medical College, Dhaka	Oral & Maxillofacial Surgery
080-7956	Dr. Sojeeeb Dhar	Pioneer Dental College	Oral & Maxillofacial Surgery
080-7958	Dr. Ranjit Ghosh	Chittagong Medical College, Chitagong	Orthodontics and Dentofacial Orthopaedics
080-7959	Dr. Rashed Md. Golam Rabbani	Rajshai Medical College, Rajshahi	Orthodontics and Dentofacial Orthopaedics
080-7960	Dr. Ashis Kumar Biswas	Chittagong Medical College, Chitagong	Orthodontics and Dentofacial Orthopaedics
080-7961	Dr. Nasreen Akhter	Chittagong Medical College, Chitagong	Orthodontics and Dentofacial Orthopaedics
080-7962	Dr. Mohammad Shamima Al Mamun	Chittagong Medical College, Chitagong	Orthodontics and Dentofacial Orthopaedics
080-7963	Dr. Masud Rana	Armed Forces Medical College, Dhaka	Orthodontics and Dentofacial Orthopaedics
080-7964	Dr. Mohammad Rakibul Islam Babu	Dhaka Dental College, Dhaka	Orthodontics and Dentofacial Orthopaedics
080-7968	Dr. Muhammad Nazrul Islam	Chittagong Medical College, Chitagong	Otolaryngology
080-7974	Dr. Abdullah Al Harun	Dhaka Medical College, Dhaka	Otolaryngology
080-7975	Dr. Abdul Karim	Mymensing Medical College, Mymensing	Otolaryngology
080-7979	Dr. Phub Tshering	Kelaniya University, Sri Lanka	Otolaryngology
080-8032	Dr. Mumtahina Setu	Sher-E-Bangla Medical College, Barisal	Paediatrics
080-8061	Dr. Al Mamun Hossain	Rajshahi Medical College, Rashahi	Paediatrics
080-8075	Dr. Lubaba Shahrin	Sher-E-Bangla Medical College, Barisal	Paediatrics
080-8080	Dr. Jubaida Rumana	Rangpur Medical Collee, Rangpur	Paediatrics
080-8090	Dr. Farzana Rahman Chowdhury	Sir Salimullah Medical College, Dhaka	Paediatrics
080-8096	Dr. Fahmida Islam	MAG Osmani Medical College, Sylhet	Paediatrics
080-8102	Dr. Ayesha Hasina	Shahid Ziaur Rahman Medical College, Bogra	Paediatrics
080-8106	Dr. Ayesha Sultana	Rangpur Medical College, Rangpur	Paediatrics
080-8114	Dr. Ahmed Nazmul Anam	Faridpur Medical College, Faridpur	Paediatrics
080-8116	Dr. Afroza Akhter	Chittagong Medical College, Chittagong	Paediatrics
080-8127	Dr. Mohammad Nurul Akhtar Hasan	Sir Salimullah Medical College, Dhaka	Paediatrics
080-8134	Dr. Md. Shafiul Alam Quarashi	Jahurul Islam Medical College, Bajitpur	Paediatrics
080-8141	Dr. Rabi Biswas	Mymensing Medical College, Mymensing	Paediatrics
080-8142	Dr. Nibedita Paul	Rangpur Medical College, Rangpur	Paediatrics
080-8147	Dr. Mohammad Zahir Uddin	Rajshahi Medical College, Rajshahi	Paediatrics
080-8154	Dr. Chowdhury Mohammad Walid	Armed Forces Medical College, Chittagong	Physical Medicine & Rehabilitation
080-8155	Dr. Fauzia Sobhan	Chittagong Medical College, Chittagong.	Physical Medicine & Rehabilitation
080-8161	Dr. M M Jalal Uddin	Mymensing Medical College, Mymensing	Psychiatry
080-8165	Dr. Mohammad Mamun-Ur-Rashid	Sir Salimullah Medical College, Dhaka	Radiology & Imaging
080-8168	Dr. Md. Umar	Chittagong Medical College, Chittagong	Radiology & Imaging
080-8174	Dr. Tarana Yasmin	Mymensing Medical College, Mymensing	Radiology & Imaging
080-8177	Dr. Rukhsana Rabbani	Dhaka Medical College, Dhaka.	Radiotherapy
080-8178	Dr. Sadia Sharmin	Dhaka Medical College, Dhaka.	Radiotherapy
080-8179	Dr. Faizunnesa Bhuiya	Dhaka Medical College, Dhaka.	Radiotherapy
080-8180	Dr. Md. Mohsin Howlader	Chittagong Medical College, Chittagong	Radiotherapy
080-8181	Dr. A.T.M. Zillur Rahman	Rajshai Medical College, Rajshahi	Surgery
080-8198	Dr. Nelema Jahan	Mymensingh Medical College, Mymensing	Surgery
080-8207	Dr. Mst. Shahnaj Pervin	Sir Salimullah Medical College, Dhaka	Surgery
080-8219	Dr. Mohammad Nurul Momin	Khulna Medical College, Khulna	Surgery
080-8225	Dr. Mohammad Masudur Rahman	MAG Osmani Medical College, Sylhet	Surgery
080-8232	Dr. Mohammad Kamruzzaman	Rajshahi Medical College, Rajshahi	Surgery
080-8238	Dr. Mohammad Emrul Hasan Khan	Rajshahi Medical College, Rajshahi	Surgery
080-8243	Dr. Mohammad Ali	Rajshahi Medical College, Rajshahi	Surgery
080-8248	Dr. Md. Shariful Islam	Dhaka Medical College, Dhaka	Surgery
080-8256	Dr. Md. Nur Alam	Sir Salimullah Medical College, Dhaka	Surgery
080-8289	Dr. Mohammod Taufiq Ul Islam	Sir Salimullah Medical College, Dhaka	Surgery

Roll No.	Name	From where graduated	Subject
080-8316	Dr. Md. Tariq Hasan	Sir Salimullah Medical College, Dhaka	Surgery
080-8325	Dr. Md. Mukti Mahmud	Mymensing Medical College, Mymensing	Surgery
080-8345	Dr. Md. Abdullah Al Farooq	Dhaka Medical College, Dhaka	Surgery
080-8356	Dr. Ishtiaq Alam	Mymensing Medical College, Mymensing	Surgery
080-8357	Dr. Ishrat Jahan	Sir Salimullah Medical College, Dhaka	Surgery
080-8359	Dr. Ibrahim Khalil	Khulna Medical College, Khulna	Surgery
080-8365	Dr. D M Mohiduzzaman	Mymensing Medical College, Mymensing	Surgery
080-8370	Dr. Azizur Rahman	Sir Salimullah Medical College, Dhaka	Surgery
080-8376	Dr. Akhter Ahmed	Sir Salimullah Medical College, Dhaka	Surgery
080-8391	Dr. Ahmed Mizanur Rahman	Sir Salimullah Medical College, Dhaka	Surgery
080-8407	Dr. Md. Abdul Mannan	Sir Salimullah Medical College, Dhaka	Surgery
080-8415	Dr. Md. Joynal Abeden	Rangpur Medical College, Rangpur	Surgery
080-8427	Dr. K.M. Saiful Islam	Jahurul Islam Medical College, Bajitpur	Surgery
080-8436	Dr. Abu Taher Md. Ashaduzzaman	Rangpur Medical College, Rangpur	Surgery
080-8438	Dr. Ruksana Parvin	Sir Salimullah Medical College, Dhaka	Surgery
080-8442	Dr. Zahidur Rahman	Dhaka Medical College, Dhaka	Surgery
080-8457	Dr. SM Rezaul Karim	Rangpur Medical Colelge, Rangpur	Surgery
080-8460	Dr. Showkat Uddin Ahmed	MAG Osmani Medical College, Sylhet	Surgery

The following candidates satisfied the Board of Examiners and are declared to have passed the Preli-FCPS Examination held in January 2012 subject to confirmation by the council of Bangladesh College of Physicians and Surgeons.

Roll No.	Name	From where graduated	Subject
014-8613	Dr. Sadiqa Tuqan	Mymensing Medical College, Mymensing	Preli-Medicine
014-8620	Dr. Aminul Islam	Rajshahi Medical College, Rajshahi	Preli-Medicine
014-8633	Dr. Ismat Jahan	Sir Salimullah Medical College, Dhaka	Preli-Paediatrics
014-8634	Dr. Mosammad Alpana Jahan	Z.H. Sikder Women's Medical College, Dhaka	Preli-Paediatrics
014-8636	Dr. Sheikh Mohammad Zahirullah Rasha	Bangladesh Medical College, Dhaka	Preli-Surgery
014-8637	Dr. Rafiq Uddin Ahmed	Comilla Medical College, Comilla	Preli-Surgery
014-8641	Dr. Mohammed Shahabuddin Khaled	Comilla Medical College, Comilla	Preli-Surgery
014-8644	Dr. Mirza Osman Beg	Comilla Medical College, Comilla	Preli-Surgery
014-8645	Dr. Zaman Ummay Humayra	Medical College For Women's and Hospital, Dhaka	Preli-Surgery
014-8646	Dr. Tanveen Kamal	Mymensing Medical College, Mymensing	Preli-Surgery
014-8654	Dr. Md. Habibul Hasan	Rajshahi Medical College, Rajshahi	Preli-Surgery
014-8661	Dr. Md. Shahin Shah	Rangpur Medical College, Rangpur	Preli-Surgery
014-8671	Dr. Avisak Bhattacharjee	Chittagong Medical College, Chittagong	Preli-Surgery

The following candidates satisfied the Board of Examiners and are declared to have passed the MCPS Examination held in January 2012 subject to confirmation by the council of Bangladesh College of Physicians and Surgeons.

Roll No.	Name	From where graduated	Subject
080-9005	Dr. Md. Rejaul Hasan	Chittagong Medical College, Chittagong	Anaesthesiology
080-9012	Dr. Mohammad Rezaul Karim	Sir Salimullah Medical College, Dhaka	Anaesthesiology
080-9016	Dr. Md. Ayub Ali	Shahid Ziaur Rahman Medical College, Bogra	Anaesthesiology
080-9120	Dr. Tarana Taslima Tithi	Community Based Medical College, Mye	Anaesthesiology

FROM THE DESK OF EDITOR in CHIEF

(J Bangladesh Coll Phys Surg 2012; 30: 121)

Dear Readers, with your extreme support we have been able to continue with the ongoing process of improving the standard of one of the most read medical journal of the country, The Journal of BCPS. This quarter we had arranged a workshop for updating the 'Information for Authors' section of the journal. The attention to this part was long overdue. We had an overwhelming response from the participants and thus have been able to place in-front of you a new set of criteria and outline for submission of manuscript for the journal. This will help the new and aspiring researchers to write quality articles acceptable in an international arena. With your support further improvements will see light in the near future.

Prof. HAM Nazmul Ahasan
Editor-in-Chief

Obituary

(J Bangladesh Coll Phys Surg 2012; 30: 122)

The following Fellow who died on 15th March 2012

Professor A.K.M. Mahbubur Rahman

Professor A.K.M. Mahbubur Rahman died on 15th March 2012. He passed fellowship in Surgery in July, 1981 from Bangladesh College of Physicians and Surgeons (BCPS). He was president, Bangladesh College of Physician & Surgeons from 3-3-2001 to 12-3-2003. He was Chairperson, Journal of Bangladesh College of Physician & Surgeons from 2009 to 2011.