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Prime Medical College is one of the best and largest private medical college in Bangladesh. It was established in 2008 by a group of dedicated people of Rangpur, by the leadership of Professor Dr. Md. Akkas Ali Sarker. The ideas of establishing this Medical College is to provide international standard Medical Education and Health Services to the people of the country at affordable cost.

The objectives of the institute are

- | To promote and provide studies in Medical Science leading to be recognized by the postgraduate institutes.
- | To conduct research work on the diseases prevalent in the country.
- | To conduct research on medical education with the aim of raising the standard of medical education in the country.
- | To provide skilled manpower in the medical, nursing and paramedical fields.
- | To provide quality medical care and health services to people at reasonable cost.

The establishment of a medical college imparting medical education leading to recognized medical degree was taken as the first and foremost aim to the institute.

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Home Based Rehabilitation Program for Cerebral Palsy

Wahed M A

Disability means any restriction or lack of ability to perform or participate in an activity in the manner or within the range considered normal for a human being for his age and sex. Approximately 10% of the world's population suffers from disability (WHO)¹. About 10% (12 million) peoples are disabled in Bangladesh (Census 2001) and 18% of the disability occurs due to birth related causes². Among all the disabled persons 33% are within 0-10 years, 17% are within 11-17 year and 50% are above 18 years of old. The rate of disability is gradually increasing day by day as many procedures are available to prolong life in modern civilization³. A disabled child may be a burden in the family, society and nation. He cannot participate in the developmental work of the society. Moreover family spends resources on him. This leads to poverty. On the other hand, poverty makes a family unable to take care of the family members especially pregnant women. This indirectly leads to disability in a vicious cycle⁴.

There are various types of disability in children but cerebral palsy is very common. CP is a term that includes a heterogeneous group of neurological deficits causing movement disorder due to damage or faulty development in the brain which usually occurs around birth process⁵. The incidence of CP is 1-3/1000 live births and there has been no change in the prevalence over the last few decades rather it is increasing day by day as many of the dying newborn babies survive due to improved perinatal care⁶. It is an important cause of disability in under-five children in our country with loss of working hours, mental and physical exertion and paying extra costs of treatment by

the parents^{7,8}.

There are many risk factors of CP. The important ones are perinatal asphyxia and LBW^{9,10}. Both of these are very common in neonatal/perinatal period in our country. Because only about 18% deliveries are conducted by trained birth attendants and 88% deliveries take place in home by untrained birth attendants^{11,12}. The maternal risk factors are not always detected during pregnancy. As a result, there is difficult labor and newborn babies suffer from perinatal asphyxia. Again almost 70% child bearing women suffer from various types of malnutrition and give birth to LBW babies¹³. In a tertiary care hospital, two-third of all admitted cases of neonates were suffering from these two conditions which is an indirect magnitude of the above scenario¹⁴. The other risk factors are intrauterine infection, severe jaundice, postnatal infections and injuries etc which are modifiable and preventable by improving the socio-medical factors, maternal education, political commitment, target based well run programme and involvement of NGOs and civil societies¹⁵.

There are various types of CP but the most common is spastic type. Here the muscles are rigid and stiff in one or more limbs and the child cannot walk, move, talk, eat or play like normal peers¹⁶. Then the parents seek medical advice. Paediatricians advise mothers for physiotherapy. After attending several times, many of the parents discontinue attending the therapy center because of many causes such as another morbidity of the child, family crisis due to illness of the parents, lack of finances for therapy or transport etc¹⁷. This attitude of parents turns the child to become more crippled. On the other hand proper treatment with training and guidance to mother's may make the situation reverse and the disabled children can contribute in the society.

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Home Based Rehabilitation (HBR) is an appropriate approach to get rid of this situation. HBR was initiated by WHO in following the declaration of Alma-Ata in 1978 for low and middle income countries. HBR programme supports people with disabilities in attaining their highest possible level of health as it provides health promotion, prevention, medical care, rehabilitation and assistive devices¹⁸. HBR also improves overall physical wellbeing, ensures routine monitoring of isolated clients and maintains the continuity of care in the community. If a mother is trained for rehabilitative treatment (physiotherapy and occupational therapy) there is less cost incurred by the family and mothers become mentally more relaxed¹⁹.

Bangladesh is a developing Country with limited resources. Many of the people have marginal economy & have no or very small amount of money to spent for rehabilitation practice. So, HBR Program is very suitable for children of our country.

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Medico-legal examination of cases of death due to acute poisoning in Rangpur Division.

Sarker D H¹, Rahim M², Dill Naher L A³

Abstract:

Globally more than thousand chemicals are currently used as pesticides & insecticides. Organo-phosphorus compounds (OPC) are most popular among the pesticides & insecticides in Bangladeshi cultivators. As they are cheap and easily available among the rural areas in Bangladesh, so acute poisoning by organo-phosphorus compound (OPC) is the most common incidence in this country. The objectives of this study were to increase the social awareness and prevention and proper management of organo-phosphorus poisoning cases. About 246 cases of post mortem examinations were carried out in Forensic Medicine Department of Rangpur Medical College in the calendar year 2010 from 1st January to 31st December. Among them 67 were suspected to cause by acute poisoning. For confirmation, viscerae were sent to the Chief Chemical Analyzer, Mohakhali, Dhaka for chemical analysis report; 53 out of 67 cases were confirmed as acute poisoning by organo-phosphorus compound (OPC) after receiving analysis report. Data were collected from the documents available in the Forensic Medicine Dept. of Rangpur Medical College. It was observed that suicide by organo-phosphorus compound (OPC) poisoning is more frequent among young rural female person than others, which can be prevented if we take proper measures. (*Prime Med. j.* 3(1): 7-9)

Indexing word: Death due to poisoning, Chemical analysis report, Post mortem.

Introduction

Acute poisoning is a common and major problem in all developed and many developing countries of the world. Incidence of poisoning as reported is 13 fold higher in developing countries than in highly industrialized countries, as they are responsible for 85% of world's pesticide production¹. Another major source of human poisoning is through self administration, where the easily available substances are used for suicide. For example in Srilanka, each year many thousands of hospital admissions takes place due to agrochemical poisoning (916649 cases in 1983). Out of these about three quarters were self

administered, the remainder being accidental or occupational². In Europe more than 50% poisoning cases is from benzodiazepines or barbiturates. But in developing countries like India, Bangladesh, Srilanka etc. 95% of death is due to agricultural poisoning particularly organo-phosphorus and organo-chloro compound³. Acute poisoning has significant contributions to mortality and morbidity throughout the world. According to WHO, among three million cases 220000 death occurs annually in developed & developing countries. Of these 90% of fatal poisoning occurs in developing countries particularly among agricultural workers⁴.

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Dr. Vishal Garg *et.al.* conducted a retrospective study from 1st April 2007 to 31st march 2009 at AIMS, Bathinda, observed the trends of poisoning cases occurring in rural areas of south west Punjab. Out of 784 case studies 95(12.1%) were poisoning. The trend showed more involvement of male (80%) than females (20%), preponderance of 21-30 years age group, dominance of rural over urban and suicidal manner of poisoning (65.5%) over riding accidental (34.7%). Aluminium phosphide was responsible for 36.8% and insecticides (31.6%)¹. In developed countries the tendency to suicide is more than developing Muslim countries. Also in developed countries the male commit suicide more than female⁵.

Materials and methods:

The study was conducted at the Forensic Medicine Department of Rangpur Medical College from 1st January to 31st December 2010 with the permission and co-operation of the head of the dept of Forensic Medicine of Rangpur Medical College. All the reports such as requisition from the legal authority, inquest reports, chalan, death certificates from respective medical college hospital or upazilla health complex, autopsy reports and chemical analysis reports from chief chemical analyzer Mohakhali, Dhaka were analyzed and final opinion as to the cause of death was given. Data were edited, processed and analyzed manually with the help of scientific calculator.

Diagnosis in dead subject:

It is difficult to diagnose properly of a poisoning case in death subject, as true and relevant history of the case is not always available. However, it is comparatively easier to diagnose in a living subject. Autopsy surgeon has the scope to inspect the internal organs and to send the viscera to chief chemical examiner for proper diagnosis whether the death was due to poisoning and type of poisoning. For the purpose of diagnosis of a dead victim in all cases of suspected poisoning a careful and keen searching and autopsy should be done. In postmortem cases of poisoning there was external signs observed during post mortem examinations such as signs of asphyxia, e.g. face congested, cyanosis of face, fingers and nose with blood stained froth were seen at the mouth and nose. Internal signs observed were e.g. the stomach contents had kerosene like smell, the mucosa of stomach was congested with sub-mucous petechial hemorrhage and respiratory passages were also congested and there was frothy hemorrhagic exudates. Viscerae e.g. whole stomach with its contents, liver not less than half kg in case of adults, whole liver in case of children, one full kidney or half of each kidney longitudinally dissected, should be handed over to the escorting police constable for sending it to the chief chemical examiner, Mohakhali, Dhaka.

Results:

Total 246 cases of post mortem examination were done in Forensic Medicine Department of Rangpur Medical College in the calendar year 2010. Out of 246 cases of post mortem

examinations 67 were due to poisoning case and most of them were due to OPC poisoning.

Out of 67 viscerae, 56 chemical analysis reports were received in the above mentioned time: Fifty three (94.64%) out of 56 victims had organo-phosphorus compound (OPC) poisoning (Figure-1). The trend showed more involvement in female 66.66% (n=42) than male 33.33% (n=14) (figure-2), preponderance of 15-30 years age group 55.35% (n=31)(Figure-3), dominance of rural over urban area. Among the occupation of the victim 55.35% (n=31) were found housewives and 21.42% (n=12) were students and 23.23%(n=13) others (Figure-4). Majority of the victims of poisoning were found married 69.64% (n=43) and 30.36% (n=13) were unmarried (Figure-5). 55.35% (n=31) were in between 15-30 age group and rest were 44.65%(n=25). Motive of suicide is mostly due to familial disharmony 77.35%(n=41) disappointment of love 5.6 %(n=03), poverty 13.27 %(n=07) and others 03.77 %(n=02) (Figure-6).

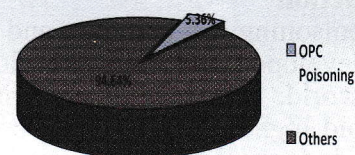


Figure 1: Distribution of the subjects according to types of poisoning



Figure 2: Distribution of subjects according to sex.



Figure 3: Distribution of subjects according to age preponderance.

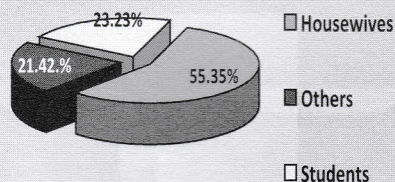


Figure 4: Distribution of subjects according to occupation.

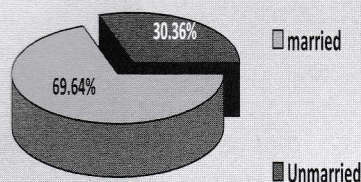


Figure 5: Distribution of subjects according to marital status.

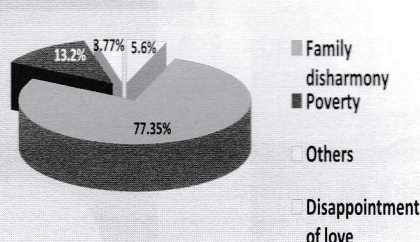


Figure 6: Distribution of subjects according to cause of poisoning.

Discussion:

Organo-phosphorus poisoning may be of any nature e.g. accidental, suicidal, para-suicidal or self inflicted. In young children particularly below the age of 05 years, they are virtually all accidental, where as in older groups the majority are intentional and self inflicted or suicidal. We have observed that motive behind poisoning were familial disharmony, disappointment of love, poverty, hardship, monetary and business loss and incurable painful diseases. The causes behind poisoning were known from inquest report, chalan and history taking from the attendance of the victim at the time of autopsy. Acute poisoning particularly suicidal is more common in all age groups. The trends showed more involvement in female than males. At present, occupational poisoning due to pesticides are also common in our country due to unsafe practices, illiteracy, ignorance and lack of protective clothing. Occupational poisoning is also a commonest cause of emergency hospitalization in our country. But how many patients are admitted into tertiary hospitals is not known to us. Thome S.H.L & White J. have demonstrated that acute poisoning is common accounting for about 10% of hospital admission in UK⁶.

Conclusion:

We can conclude from the above findings that suicide due to organo-phosphorous compound poisoning is more frequent among young rural female person, which can be prevented by some extent by restriction of its availability, proper diagnosis and treatment.

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Complications of Spinal Anaesthesia In Caesarean Section - 5 Years Study in a Medical College Hospital

Mohiuddin M¹, Al Maruf A²

ABSTRACT

Background and Objective: At Present Spinal anaesthesia is the first choice of Anaesthetic technique for caesarean section, but it is not without complication. The objectives of this study were to report and evaluate the complications after spinal anaesthesia on parturient which occurred during caesarean section.

Methods: A retrospective descriptive study was performed on pregnant parturient who underwent caesarean section under spinal anaesthesia in a period of 5 years from September 2007 to August 2012 at Prime Medical College and Hospital, Rangpur. The anaesthetic data were collected during pre-anesthetic, intra-operative, post operative period. Complications of spinal anaesthesia (immediate and late) were recorded when these incidents occurred.

Results: There were 5747 caesarean section operations performed. Age group between 20 to 30 years was majority (64.04%), below 20 years (10.99%), between 30 to 40 years (24.89%), and over 40 years (0.08%). Patient's American Society of Anaesthesiologists (ASA) physical statuses were I (81.82%), II (12.66%), III (4.365) and IV (1.16%). Pre-anaesthetic co-morbidity found pregnancy induced hypertension (PIH) (9.23%), anemia (3.87%), gestational diabetes mellitus (GDM) (2.93%), bronchial asthma (1.49%) and others (0.66%). The early complications were hypotension (28.08%), bradycardia (10.67%), shivering (6.74%), and nausea and vomiting (9.24%). Serious early complications were high spinal and total spinal anaesthesia (0.42%) and managed with vasopressor, atropine, fluid load, supplemental oxygen and ventilatory support. Late complications were post dural puncture headache (PDPH) (6.05%), backache (2.82%) and neurological complications like, paraesthesia (0.21%), pain and weakness in extremity (0.10%). Late complication were minor, transient and managed conservatively.

Conclusion: According to this study, the most common complications were hypotension, bradycardia PDPH. Serious complications were rare, but do occur. Incidences of neurological complications were scarce and resolved spontaneously with time. A continuing survey will be useful because of the significant changes in Practice that continue to occur. (*Prime Med. j.* 3(1): 10-16)

Key words: Spinal anaesthesia, Caesarean section, Complications.

INTRODUCTION

Obstetric anesthesia is a demanding subspecialty of anesthesiology.

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The widespread acceptance and use of regional anesthesia for labor has made obstetric anesthesia a major part of anesthetic practices. Regional anesthesia spinal or epidural has become the preferred technique because general anesthesia has been associated with higher maternal mortality¹. Other advantages of regional anesthesia include (1) less maternal exposure to potentially depressant drugs, (2) a decreased risk of maternal pulmonary aspiration, (3) an awake mother at the birth of her child and (4) the option of using spinal opioids for postoperative pain relief². Spinal anesthesia was first used in 1900s, became popular USA in 1920s, it also increased popularity in UK towards the end of 1900s³. Spinal anesthesia is easier to perform, has a more rapid predictable onset, may produce a more intense block, and does not have potential serious systemic drug toxicity, because of small dose of local anesthetic employed⁴.

Though spinal anesthesia have proved to be safe, it is not without complications which are related to medication introduced or the needle used to perform the procedure. Adverse reactions and complications range from pain with injections to permanent neurological deficits and even death. Incidences of serious complications of spinal anesthesia include cardiac arrest, cauda equina syndrome, radiculopathy, and death⁵. This retrospective descriptive study was designed to report the and death. This retrospective descriptive study was designed to report the complications after spinal anesthesia on parturient, during caesarean section in a period of 5 years in Prime Medical College and Hospital, Rangpur and also to adapt and keep the data for further research in the future.

MATERIALS AND METHODS

We performed a retrospective descriptional study on pregnant parturient who underwent caesarean section under spinal anaesthesia in a period of 5 years from September 2007 to August 2012 at Prime Medical College and Hospital, Rangpur. During pre-anaesthetic assessment, every patient underwent thorough physical examination with ASA classifications. Every patient was preloaded with 25 (G) spinal needle at level L2-L3 or L3-L4 level. Patient's heart rate, blood pressure, respiratory rate, SpO₂ and ECG were monitored through out the whole procedure. Immediate complications of spinal anaesthesia like hypotension (systolic BP 30% less than baseline record or less than 90 mm of Hg), bradycardia (heart rate less than 60/min), shivering, nausea and vomiting, and high/total spinal anaesthesia were observed, recorded and managed. Late complications like post dural puncture headache (PDPH), backache and neurological complications were also recorded and managed. Related data from anesthetic procedure records and history charts of patients were collected for above mentioned period. General data included age, ASA physical status, body weight, and height. The anaesthetic data encompassed preanaesthetic co-morbidity, monitoring, complications evolved intra and postoperatively. Results were reported as mean + standard deviation (SD) or percentage (%) where appropriate.

RESULTS

Patient's characteristics of are shown in table I. There are 5747 caesarean sections performed under spinal anaesthesia from September 2007 to August 2012 at Prime Medical College and Hospital, Rangpur. Mean age was 26.67 ± 7.69 years. Age group between 20 to 30 years was majority 3680 (60.04%), below 20 years 632 (10.99%), between 30 to 40 years 1430 (24.89), and over 40 years 5 (0.08%). Majority of patients were ASA physical status I 4702 (81.82%), remainder were II 728 (12.66%), III 251 (4.36%) and IV 66 (1.16%). Mean body weight was 63.54 ± 6.43 kg and mean height was 153.24 ± 5.86 cm. Number of caesarean sections in yearly basis are shown in table II, and number gradually increased by year. Pre-anaesthetic co-morbidities of patient are shown in table III.

There were 1044 (18.18%) patients in low ASA classification out of total 5747 patients. They involved mainly pregnancy induced hypertension (PIH) 530 (9.23%), anaemia 222 (3.87%), gestational diabetes mellitus (GDM) 168 (2.93%), bronchial asthma 86 (1.49%) and others (hypothyroidism, hyperthyroidism and renal disease) 38 (0.66%). Early complications during surgery under spinal anaesthesia are shown in table IV. The most frequent complication was hypotension 1614 (28.08%) which was corrected by administration of vasopressor (ephedrine) and crystalloid fluid loading. Other early minor complications were bradycardia 613 (10.67%), shivering 560 (9.74%), nausea and vomiting 531 (9.24%), and were corrected conservatively. Serious complications like high spinal and total spinal anaesthesia were observed in 24 (0.42%) patients, managed with vasopressor, atropine, crystalloid fluid loading, oxygen and ventilatory support. Late complications of spinal anaesthesia are shown in table V. Post dural puncture headache (PDPH) was found in 348 (6.05%) patients and neurological complications were backache 162 (2.82%), paresthesia 12 (0.21%), and pain and weakness in extremity 6 (0.10%). Late complications were minor, transient and managed conservatively.

Table I : Patient's Characteristics

Characteristics	Number	Percentage
Age(years)	632	10.99%
<20	3680	64.04%
20-30	1430	24.89%
30-40	5	0.08%
>40		
ASA physical status		
I	7402	81.82%
II	728	12.66%
III	251	4.36%
IV	66	1.16%
Mean age±SD (Years)	26.67±7.69	
Mean body weight±SD (kg)	63.54±6.43	
Mean height±SD(cm)	153.24±5.86	

There were 5,747 cases, but age and ASA physical status were nit the same.

Table II : Number of caesarian section in yearly basis

Year	Number	Percentage
2007-2008	827	14.39%
2008-2009	1012	17.61%
2009-2010	1153	20.06%
2010-2011	1306	22.73%
2011-2012	1449	25.21%
Total	5747	100%

Table III : Co-morbidity of the patient

Co-morbidity	Number	Percentage
Pregnancy induced hypertension	530	9.23%
Anaemia	222	3.87%
GDM	168	2.93%
Bronchial asthma	86	1.49%
Others	38	0.66%
Total	1044	18.18%

Table IV : Early complications of SAB

Year	Number	Percentage
Hypotension	1614	28.08%
Bradycardia	613	10.67%
Shivering	560	9.74%
Nausea and vomiting	531	9.24%
Dyspnoea in high spinal	19	0.33%
Apnoea in total spinal	5	0.09%
Total	3342	58.15%

Table V : Late complications of SAB

Complications	Number	Percentage
PDPH	348	6.05%
Backache	162	2.82%
Neurological complications:		
Paresthesia	12	0.210
Pain and weakness in extremity	6	0.10%
Total	528	9.18%

DISCUSSION

Caesarean section is one of the common operations in the childbearing age of a woman. The World Health Organization estimates the rate of Caesarean sections at between 10% and 15% of all births in developed countries. In 2004, the Caesarean rate was about 20% in the United Kingdom, while the Canadian rate was 22.5% in 2001-2012⁶. Regional anaesthesia (spinal, epidural or combined spinal and epidural anaesthesia) is the technique of choice for this operation; however, spinal anaesthesia is preferred as it is quicker, cheaper, easier, less painful, uses a lower dose of local anaesthetic, produces a denser block and mother can react immediately with her baby⁷⁻⁸. To understand the anaesthetic risk in obstetric patient it is important first to fully appreciate obstetric risk in general. The majority of women of child bearing age are healthy, but in pregnancy certain maternal/factors and preexisting medical conditions significantly increase anaesthetic and obstetric risk. The marked cardiovascular changes associated with pregnancy, labour, and delivery often cause pregnant patients with heart disease (2%). Although most patients have rheumatic heart disease, and increasing number of parturient are presenting with congenital heart disease⁹. In United States pre-eclampsia complicates approximately 7-10% of pregnancies¹⁰. Other coexisting diseases found gestational diabetes mellitus, bronchial asthma, endocrine and renal disorders¹¹. In our study, we found 1044 (18.18%) parturient with preexisting diseases and pregnancy induced complications.

Complications of spinal anaesthesia during caesarean section range from the bothersome to the crippling and life threatening and the complications can be thought of as those resulting from physiological excessive side effects, placement of the needle or drug toxicity¹². Auroy *et al* demonstrated in a very

large survey of regional anaesthesia from France, a relatively low incidence of serious complications from spinal and epidural anaesthesia¹³. In contrast, the American Society of Anesthesiologists, Closed Claim Project helps to identify the most common causes of liability claims involving regional anesthesia in the operating room in a 20 years period (1980-1999). Serious injuries in the claims included death (13%), permanent nerve injury (10%), brain damage (8%), and other permanent injuries (4%). The majority of the claims involved either lumbar epidural anaesthesia (42%) or spinal anaesthesia (34), and tended to occur mostly in the obstetric patients¹⁴.

Most common early complication of spinal anaesthesia in obstetric patients is transient hypotension as sympathetic nerves are blocked. This usually responds to prompt fluid replacement starting with crystalloids followed by colloids¹⁵⁻¹⁶. Occasionally hypotension can be severe and may require vasopressors along with fluids¹⁷⁻¹⁸. Care must be taken in patients with a cardiac history as they may develop myocardial ischaemia with minor drops in blood pressure¹⁹. It is suggested that heart rate variability prior to spinal anaesthesia represents autonomic dysfunction and may help to determine patients who are more likely to develop hypotension²⁰. Cases of bradycardia with asystole leading to cardiac arrest have also occurred and it appears the underlying aetiology is complicated and not just related to autonomic dysfunction. Shivering usually associated with rapid cold fluid administration and lower operation theatre temperature. Nausea and vomiting sometimes precedes hypotension. Serious life threatening early complications are high neural blockade, total spinal anaesthesia, cardiac arrest even death²¹⁻²². Spinal anaesthesia ascending into the cervical levels causes severe hypotension, bradycardia,

respiratory insufficiency, apnoea, and unconsciousness. High levels of spinal anaesthesia are referred as 'high spinal' or 'total spinal'. Treatment of an extensively high neural block involves maintaining an adequate airway, ventilation and circulation. Apnoea is often transient, and unconsciousness may leave the patient without recall.

Charuluxananan S *et al* reported in a prospective study that six cases of total spinal blockade among them five were cesarean section patients²³. Therefore, cesarean section parturient should be considered as high risk of total spinal block. A recent examination of this problem identified increased vagal responses and decreased preload as key factors and suggests that patients with high baseline vagal tones are at risk. Prophylactic volume expansion is recommended and aggressive vagolytic (atropine) treatment of bradycardia followed by ephedrine and epinephrine if necessary²⁴. In this study, we found mild hypotension in 1614 (28.08%) patients, bradycardia in 613 (10.67%) patients, shivering in 560 (9.74%) and nausea and vomiting in 531 (9.24%) patients. These minor early complications on operation theatre Table were managed with vasopressor, atropine, fluid load, antiemetics and small doses of opioid. Serious life threatening complications like dyspnoea and apnoea observed in high spinal and total spinal blockade in 24 (0.42%) patients, managed with vasopressor, atropine, fluid loading oxygen and ventilatory support.

Among delayed complications, PDPH is most common and troublesome, especially in obstetric patients. The headache results from CSF leak from the puncture site and decreased intracranial pressure. It is enhanced by use of larger gauge needles and reduced by pencil tipped and small gauge needles²⁵⁻²⁶. Symptoms may include headache, photophobia, vomiting and dizziness²⁷. It is treated with simple analgesics, adequate hydration, Caffeine, subcutaneous sumatriptan and epidural saline as a bolus or infusion. Rarely epidural blood patch is used at the site of the meningeal tear²⁷⁻²⁸. Neurologic injury related to labor and delivery occurs more commonly than anesthetic related deficits. Parturients who do not receive regional or general anesthesia may experience compression nerve injury, or rarely, an ischemic spinal cord injury²⁹. Neurologic complications are uncommon after spinal anesthesia with careful

patient selection, meticulous technique, and use of safe concentrations of spinal anesthetic mixtures. Two thirds of anesthesia related neurological complications are associated with paresthesia, backache, pain and numbness in the extremity, and an occasional weakness in the leg. Serious neurological complications related to regional anesthesia are fortunately very rare. Data from Third National Audit Project of the Royal College of Anaesthetists are reassuring and suggest that central neuroaxial block has a low incidence of major complications, many of which resolve within 6 months and serious neurological effects like paraplegia, cauda equina syndrome are rare during spinal anaesthesia³⁰. In our study we found PDPH in 348 (6.05%) patients backache in 162 (2.82%) patients and neurological complications like, paresthesia in 12 (0.21%) patients, pain, and weakness in extremity in 6 (0.10%) patients. Late complications were minor, transient and managed conservatively. No incidences of major serious neurological complications were recorded in this study.

CONCLUSION

Spinal anaesthesia is the most common and popular anaesthetic technique for caesarean aection. According to study, of 5747 caesarean in 5 years period, the most common erly complication was hypotension and delayed complication was postdural puncture headache. Hypotension after spinal anesthesia is a physiological consequence of sympathetic blockade. Some other complications were considered avoidable and preventable. Serious complications after spinal anesthesia are rare, but do occur. Incidences of neurillogical complications like backache, panesthesia was scarce and resolved spontaneously with time. A continuing survey will be useful because of the signifcant changes in practice that continue to occur.

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Reproductive health situation among rural Madrasah going female adolescents

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ABSTRACT:

A descriptive type of cross sectional study was carried out among 103 female adolescent students of selected madrasah in Noakhali District to assess the level of knowledge on reproductive health issue during the period of January to July, 2012. Information's were collected by face to face interview using pre-tested structured questionnaire. In the study, the mean age of the respondents were 15.29 ± 1.7 years ranging from 12-19 years. About three-fourth of the respondents (74%) had secondary level of education. They are regularly exposed to some form of mass media, 76 (73.1%) respondents knew about puberty and its physical changes. During menstruation, 62 (60.1%) respondents used old cloth and the rest 41 (39.8%) used sanitary pad or cotton. Majority of the students thought, regular bathing was the way of maintaining menstrual hygiene 87 (84.5%). Due to unhygienic menstrual practice, 69 (67%) respondents told about itching as their problems. More than one fourth (42.7%) respondents gave their opinion on unsafe sex as risky adolescent behavior. One third of the adolescents 40 (33.8%) had ever heard of RH services and majority of them, got treatment from health care center 76 (73.7%). The main obstacles from the adolescents' getting RH services were social problem, religious misinterpretation, lack of knowledge and absence of friendly relationship with parents. Near about two third of the Madrasah students had poor level of knowledge about reproductive health problems, events, associated factors and the rest had good knowledge. The relationship between respondents' age, knowledge on RH events and source of information were statistically significant. So the Government should take necessary steps to include special educational program in Madrasah curriculum to improve rural Bangladeshi adolescent girls' awareness about reproductive health. (*Prime Med. J.* 3(1): 17-25)

Key words: Knowledge, adolescent period, menstrual hygiene, reproductive health issue.

Introduction :

Adolescent constitute one-fourth of the population of Bangladesh¹. According to WHO, adolescent is the period between 10-19 years of age. The period is further divided into early

adolescent (10-14 years) and late adolescent (15-19 years) of age. The physical changes that take place in early adolescents includes rapid growth spurt, facial, bodily and pubic hair, enlarged breast among females including onset of menstruation and in boys wet dream². In Bangladesh, adolescent population was estimated at about 28 million in 2000. Due to the effect of population momentum, this age group will contribute significantly to the incremental population size of Bangladesh, during the next 20 years, increasing by 21% to reach 35 million by 2020³. Educational attainment is increasing for both boys and girls and there has been a significant increase for obtaining higher education. This increased from 10.5% to 54.95 for boys and 5.5% to 47.1% for girls between 1994 and 2000⁴. The overall adult literacy rate is 41%⁵. For secondary school the net enrollment ratio of girl is 51% while it is 49% for boys⁶. Early marriage, especially among the females, is highly prevalent in Bangladesh.

There are more than 2.5 million married adolescents in Bangladesh, 78% of adolescent girls marry before the age of 18. Adolescent fertility rate is one of the highest in the world with 147 births per 1000 women below age 20 and one-fifth of adolescent mothers have little knowledge about life threatening conditions

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during pregnancy, 60% receive no antenatal care, 92% of mothers aged less than 20 years deliver at home and the unmet need for contraception among this group is 27%⁷. Births to adolescents will increase up to 2.9 million in 2020. A large majority of adolescents (both married and unmarried) do not have any information on reproductive health issue, sexuality, contraception, or STD's and HIV/AIDS⁸. Five year collaborative effort under the global fund for AIDS, Tuberculosis and Malaria (GFATM) has found that adolescent have insufficient knowledge regarding reproductive health and practice risky sexual behaviors⁹. While adolescents have unmet needs for reproductive health information and services, these are not addressed by parents, schools or the existing health care systems. To avoid the social consequences of unplanned pregnancy, transmission of STD's and HIV/AIDS, adolescents need to be aware of their reproductive health especially the madrasah students have many misconceptions which may lead them to risky behavior and reduced sense of vulnerability. Because reproductive health education has not been a part of the education curriculum of the madrasah⁸.

In Bangladesh, there are two kinds of madrasah, namely Aliya madrasah and Qaumi madrasah. The Qaumi madrasah are private which are supported by religious endowments, zakat or donations. The curriculum is not approved by the Government. Most of the madrasah are for extremely poor male students. On the other hand, the Aliya madrasah are registered and supervised by the Government appointed Bangladesh Madrasah Education Board. These madrasahs follow Government curriculum - both Islamic studies and regular school subjects. These students are relatively better than Qaumi madrasah. But in reproductive health issue, the condition is the same⁹. In our country there is no provision of sex education in the schools and colleges openly. Recently some topics related to reproductive health issue is added to the curriculum. But these chapters are skipped away and avoided. Most of the madrasah teachers think that there is no need to give education about reproductive health issue to the adolescents. They think it is a very dangerous period and if they get information about RH, there is more chance to spoiled out¹⁰. But the madrasah students have rights to get information about reproductive health issue and reproductive health rights. Usually they are not aware about their reproductive health rights. Low rates of educational attainment, limited sex education activities and inhibited attitudes towards sex

contribute to this ignorance. This situation in our country including madrasah is very common. According to WHO, worldwide girls younger than 18 are up to 5 times more likely to die in child birth than are women in their twenties¹¹. In Bangladesh a significant high percentage of young adolescent girls are married. About 30 % of adolescents are married by age 15 and about 60 % are married by age 18 (legal age of marriage)¹². Once married the girls are under pressure to prove their fertility. One third of the adolescents aged 15-19 bear child, 28% have given birth and another 5% are pregnant with first child. They face a number of important health risks like early pregnancy, violence, early marriage, unsafe abortion, inadequate nutrition etc¹³. The importance of adolescent reproductive health is further realized because RH of present generation has an impact on the health of the next generation. It has also crucial importance for socio economic development. The reproductive health situation in Bangladesh still remains unsatisfactory. The high rates of MMR, IMR, RTI, STD's are the indicators of reproductive health conditions in our country. In this context, the adolescents' reproductive health is a major concern.

Methodology

This was a cross sectional descriptive study to assess the level of knowledge on reproductive health issue among adolescent female students of madrasah. Study was conducted from 1st January to 1st of June 2012 in Rampur, Deoti, Sonapur at Sonaimuri upazilla in Noakhali district. A sample size consists of 103 respondents selected from a madrasah on the basis of their availability and with the permission of madrasah authority during their class time. Among the respondents, all were female students of adolescent age group. Convenient sampling technique was adopted to select the sample of population. A structured pre-tested questionnaire was developed. The questionnaire had two parts consisting of socio-demographic characteristics and knowledge on reproductive health issue related variables. The respondents' knowledge was graded on the basis of weighted markings for 10 related questions pertaining to mothers' knowledge about the reproductive health needs of their adolescent girls.

On the basis of the number of correct answer, each question was weighted with marks 5. Scores of each question was graded according to Likert's scale. The data were collected, checked, verified & then entered into the computer. Only the fully completed questionnaire was entered into the computer for final analysis.

The analysis was carried out with the help of SPSS (Statistical package of Social Science, version-17) windows software program.

Results

It was revealed that, out of 103 respondents, 62 (60.2%) of the respondents were in 15-19 age groups in the study. Twenty three (22 %) of the respondents completed the higher secondary class (Alim), 76 (74 %) up to secondary and 04 (4%) primary level. Regarding father's occupation 38 (36.5%) respondents were businessman followed by 20 (19.2%), 29 (28%), 06 (5.8%), 10 (9.7%) as teachers, service holders, farmers and from other occupations

respectively.

Table 2 shows 76 (73.1%) respondents knew about puberty and its physical changes. During menstruation, 62(60.1%) respondents used old cloth and the rest 41(39.8%) used sanitary pad or cotton. Majority of the students thought, regular bathing was the way of maintaining menstrual hygiene 87(84.5%), whereas 57(55.3%) washed cloth regularly. Due to unhygienic menstrual practice, 69(67%) respondents told about itching as their problems followed by 68(66%), 35(33.9%) and 20(19.4%) suffered from whitish discharge, UTI and excessive bleeding respectively.

Table: 1 Socio-demographic characteristics of the respondents

Characteristics of the respondents (n=103)	Frequency (%)	Percent (%)
Age		
12-14 years	41	39.8
15-19 years	62	60.2
Mean=15.29, SD=(±) 1.7		
Education		
Primary	04	4.0
Secondary	76	74.0
Higher secondary	23	22.0
Occupation (Fathers)		
Business	38	36.5
Teaching	20	19.2
Service holder	29	28.0
Farmer	06	5.8
Others	10	9.7
Monthly family income		
Taka <5000	50	48.5
Taka 5000-10000	43	41.7
Taka >10000	10	9.7
Mean=11213.5, SD=(±) 12566.51 Tk		
Housing status		
Kacha	58	56.3
Semi pacca	34	33.0
Pacca	11	10.6
Possession of mass media		
Yes	74	72.0
No	29	28.0

Fifty eight (56.3%) of the respondents lived in kacha house, the remaining 34 (33%) lived in semi pacca house and only 11 in pacca house. Fifty (48.5%) respondents had monthly income Tk. <5000, 43 (41.7%) had monthly family income of Tk. 5000 - 10000 and 10 (9.7%) had 10000 or more. About two third of the adolescents (74), possessed means of communication (Table 1).

Eighty percent (80%) students knew about sexually transmitted disease. More than one fourth (42.7%) respondents gave their opinion on unsafe sex as risky adolescent behavior as shown in Table 3. Forty (33.8%) adolescents had ever heard of RH services and majority (73.7%) of them used health care center.

Table 2: Reproductive health knowledge of rural adolescents

Variables	Frequency (n=103)	%
Know about puberty		
Yes	76	73.1
No	27	26.2
Physical changes during puberty (n=76)		
Menstruation	32	31.0
Development of breast	25	24.2
Development of pubic hair	19	18.4
Materials used during menstruation		
Old cloth	62	60.1
Sanitary pad /cotton	41	39.8
Know about menstrual hygiene		
Regular bathing	87	84.5
Washing cloths	57	55.3
Changing pads frequently	13	12.6
Know about RH problems		
Itching	69	67.0
White discharge	68	66.0
UTI	35	33.9
Excessive bleeding	20	19.4
Know about STDs		
Yes	83	80.5
No	20	19.4
Know about risk behavior		
Unsafe sex	44	42.7
Drug addiction	40	38.8
Suicidal tendency	38	36.9
Social crime	37	36.0
Others	05	4.8

Among the study population 49 (47.6%) used government health facilities and 21 (20.3%) preferred private health facilities. There was also a sizeable contribution of traditional healers for 13 (12.6%) of the adolescents. The main obstacles refraining RH services from health institutions were social problem, religious misinterpretation, lack of knowledge and absence of friendly relationship with parents

were listed by 42 (40.7%), 33 (42.7%), 36 (34.9%) and 31 (30.0%) of the adolescents. More than one third of the adolescents had never discussed RH topics with their parents. More than one third of the adolescents had never discussed RH topics with their parents due to fear 77 (74.7%), shy 25(24.2%) and social/cultural restriction 21(20.3%) respectively.

Table 3: Reproductive health services utilization and related factors among rural adolescents

Variables	Frequency (n==103)	Percent
Ever heard of RHS		
Yes	40	38.8
No	63	61.1
Place of seeking treatment		
Govt. hospital	49	47.5
Private clinic	21	20.3
Health care center	76	73.7
Others traditional healers	13	12.6
Obstacles from getting RHS		
Social problem	42	40.7
Religious misinterpretation	44	42.7
Lack of knowledge	36	34.9
Absence of friendly relationship with parents	31	30.0
Reasons for not discussing RH topics		
Fear	77	74.7
Shy	25	24.2
Social & cultural restriction	21	20.3

Table 4: Knowledge about RH problems, associated factors and health events (n=103)

Variables	Level of knowledge							
	Very poor (%)		Poor (%)		Good (%)		Very good (%)	
RH problems	22	21.3	30	29.1	24	23.3	19	18.4
Associated factors	32	31.0	26	25.0	30	28.8	26	25.0
RH events	35	33.9	27	26.2	26	25.2	22	21.3

Table 4 shows that near about two third of the madrasah students had poor level of knowledge about reproductive health problems, associated factors and events and rest had good knowledge.

Among the respondents it has been revealed that the relationship between respondents' age, knowledge on RH events and source of information are statistically significant. (Table 5)

Table 5: Association between respondents' age, knowledge on RH events and source of information

Characteristics	Total	Knowledge		Test of significance
Source of information(media)		Poor	Good	
Yes: n (%)	73	28(37.5)	45(62.5)	$\chi^2 = 10.893$ P =0.001
No: n (%)	30	22 (73.3)	8 (26.7)	
Age group in years				
Below 15yrs n (%)	41	27(65.9)	14(34.1)	$\chi^2 = 9.126$ P =.003
15-19 years n (%)	62	22 (35.5)	40 (64.5)	

Discussion:

The study was carried out among 103 female adolescent madrasah students by using pretested structured questionnaire and conducted at Sonaimury in Noakhali with a view to assess the level of knowledge on reproductive health issue. The mean age of the respondents were 15.29 ± 1.7 years ranging from 12-19 years. About three forth of the respondents (74%) had secondary level of education followed by (22%) had primary level of education. According to BDHS¹⁴ survey 2007, the percentage of 15-19 year old women with completed secondary education has increased by 41% during 1993-2007 which reveals to a marked rise in secondary education in all age groups.

Regarding reproductive health knowledge, 76(73.1%) respondents knew about puberty and its physical changes. P.V. Kotecha, Sangita V. Patel *et al* in a study conducted in India to assess the 'Reproductive health awareness among urban school going adolescents in Vadodara city' found that as age increases, knowledge about physical changes during adolescence increases. More boys and girls from the older age groups were aware of the less visible changes like erection/ejaculation, hair growth in pubic area and menstruation in the opposite sex¹⁵. One rural study has reported that two third of study subjects had knowledge of menstruation prior to attainment of menarche¹⁶. During menstruation, 62(60.1%) respondents used old cloth and the rest 41(39.8%) used sanitary pad or cotton. A

study report by Nahar Q, Gazi R on 'Reproductive Health Needs of Adolescents in Bangladesh' shows that girls used old cloths (nekra) during menstruation¹⁷. It is comparable to a study about 'Knowledge on Reproductive Health Issues Among the Unmarried Adolescent Girls' by Akter N. where majority (90%) of the respondents use old torn cloth during their menstrual period, only (8.5%) use sanitary napkin and (1.5%) use underwear¹⁸. Majority of the students thought, regular bathing was the way of maintaining menstrual hygiene 87 (84.5%), whereas 57 (55.3%) washed cloth regularly. In a similar study conducted among 1373 adolescent school girls from 22 schools of 11 districts in Chittagong Division of Bangladesh by I. B. Muhit *et al*¹⁹, where an average 62% respondents do bath daily and 26% bath in alternate day and the rest percentage were bath after three or four days.

Due to unhygienic menstrual practice, 69 (67%) respondents told about itching as their problems followed by 68 (66%), 35 (33.9%) and 20 (19.4%) suffered from whitish discharge, UTI and excessive bleeding respectively. In a survey, done by Water Aid in Bangladesh reported health problems such as vaginal scabies, abnormal discharge, urinary infections and associated these with menstrual hygiene. This highlights a need for robust scientific research, in order to better understand the impact of poor menstrual hygiene on health²⁰. In the study about eighty percent students knew about sexually transmitted

disease. A similar study was done by Florence N Samkange-Zeeb *et al.* where the highest awareness and knowledge were reported for HIV/AIDS²¹. More than one third (42.7%) respondents gave their opinion on unsafe sex as risky adolescent behavior.

Forty (33.8%) had ever heard of RH services and majority of them used, health care center 76 (73.7%), Government health facilities 49 (47.6%) and private health facilities 21 (20.3%) were the preferred health institutions from where the services were obtained. There was also a sizeable contribution of traditional healers for 13 (12.6%) of the adolescents. Ever use of RH services is basically utilized by about a fifth of adolescents. The situation in Ethiopia shows that there is a significantly lower RH services utilization rate among rural adolescents compared with urban setting in Jimma city, where 41.1% have experienced ever utilization of the services²². The main obstacles from the adolescents' perspective refraining them from getting RH services from health institutions were social problem, religious misinterpretation, lack of knowledge and absence of friendly relationship with parents were listed by 42 (40.7%), 33 (42.7%), 36 (34.9%) and 31 (30.0%) of the adolescents. More than one third of the adolescents had never discussed RH topics with their parents due to fear 77 (74.7%), shy 25 (24.2%) and social/cultural restriction 21 (20.3%) respectively. Reasons refraining adolescents from discussing RH issues with their parents were fear, worthlessness and social and cultural restrictions. As a result, less than a third of adolescents were well informed about such issues. This complements with the situation is still in many parts of Bangladesh where restrictive socio-cultural norms inhibit disclosure of information about sexual activities and other RH-related issues to unmarried adolescents²³.

Near about two third of the madrasah students had poor level of knowledge about reproductive health problems, events and associated factors and the rest had good knowledge. Multivariate analysis was done to reveal the association between RH knowledge and service utilization and different social, demographic, economic and other factors. Accordingly, age, level of school, living status and family income are found to

affect the level of knowledge among the rural adolescents²⁴.

In the study, the respondents had been revealed that the relationship between respondents' age, knowledge on RH events and source of information were statistically significant. While the evidence presented describes the national situation of female adolescents, the gap between needs and access may vary even more widely among specific population groups within countries, such as by rural or urban residence or being in or out of school/ madrasah. Additional research that examines differences in service use, barriers and preferences among key socio-demographic groups can inform resource prioritization and help direct program efforts to reach especially neglected subgroups of adolescents.

Conclusion and recommendations:

Information on reproductive service, human reproduction related issues and events are far from satisfactory level and needs special attention among students specially from madrasah. A culture of silence exists in Bangladesh that inhibits open discussion regarding sensitive topics such as sex education, part of life-skills and family life education. This situation can be improved through educational programmes, school health personnel, compulsory sex education in school/ madrasah curriculum and friendly knowledgeable parents. So formal, informal and special educational program may be taken to educate and address this gap so that they are fully informed of their rights to improve their status of knowledge on reproductive health issues and to lead a healthy life.

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Association Of Autoantibodies, Anti-Gad And Anti-Ia2 In Childhood Diabetes In A Bangladeshi Population.

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Abstract

Introduction: According to American Diabetic Association and World Health Organization criteria of classification, Diabetes mellitus is classified into two major classes - Type 1 and Type 2. Type 1 Diabetes accounts for 10% of diabetes and it usually appears in children. Autoantibody directed against pancreatic beta-cell represent the hallmark of autoimmune abnormality associated with Type 1 diabetes. But, these is a group childhood diabetes patients who present with some features of both Type 1 and Type 2 diabetes. They are of below 18 years with very low to moderate BMI, moderate to severely hyperglycemic and moderate to very low serum C-peptide level. But they are resistant to ketoacidosis. The objective of the present study was to determine autoantibody status and insulin secretory capacity of the childhood diabetic patients in our country.

Methodology: The study was conducted by the Biomedical Research Group of Bangladesh institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM) during period of July 2001 to June 2002. To find out any autoimmune involvement 33 childhood diabetic patients were selected with some features of Type 1 diabetes. They were non-obese with moderate to severely hyperglycaemic. All the patients were selected as relatively newly diagnosed with maximum duration of 3 months. Glycaemic status was assessed by measurement of serum glucose, HbA1c and insulin secretory capacity was measured by serum C-peptide levels. Immunological involvement was determined by measuring serum IA-2Ab and GAD- Ab. ICA and IAA was not measured; because these antibodies were measured previously in different studies, but no conclusive results could be obtained.

Results: Thirty three childhood diabetic subjects were studied. The mean age of the patients were $14.23 \pm SD2.7$ years with BMI $16.14 \pm SD 4.07$. According to Gomez classification of malnutrition 94% of the study subjects were suffering from malnutrition. The fasting glucose and HbA1c was $19 \pm SD7.4$ mmol/L and $14.9 \pm SD3.8\%$ respectively. The fasting serum C-peptide level was $0.489 \pm SD0.378$ ngm/ml. Only 1 (3%) patient was positive for both antibodies. The age of that patient was 15 years with fasting serum glucose 20.8 mmol/l, HbA1c 11.4% and serum C-peptide 0.013 ngm/ml. All these features were suggestive of Type 1 Diabetes.

Conclusion: The findings of this study suggest that childhood diabetic subjects in our population have moderate to very low BMI and suffer from malnutrition. The fasting serum glucose and HbA1c levels are moderate to very high and C-peptide value is moderate to very low. The diabetes of childhood subjects are not autoimmune mediated. The exact nature of diabetes is yet to be confirmed whether these patients are atypical Type 1 or modified early onset Type 2 diabetes. (*Prime Med. j.* 3(1): 26-32)

Key words: Children, Type 1 diabetes, autoantibody.

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Introduction:

Diabetes mellitus is a group of metabolic disorders characterized by chronic hyperglycemia resulting from defects in insulin secretion, insulin action, or both. The chronic hyperglycemia of diabetes is associated with long-term damage, dysfunction and failure of various organs. There are more than 2.5 million married adolescents in Bangladesh, 78% of adolescent girls marry before the age of 18. Adolescent fertility rate is one of the highest in the world with 147 births per 1000 women below age 20 and one-fifth of adolescent mothers have little knowledge about life threatening conditions

especially the eyes, kidneys, heart, and blood vessels. Epidemiological studies confirm that this syndrome occurs commonly in a wide variety of ethnic groups, including Caucasians, Afro-Americans, Mexican-Americans, Asian Indians, Chinese, Australians, Aborigines, Polynesians and Micronesians. So, diabetes is one of the world-wide major health problems. The first widely accepted classification of diabetes mellitus was published by WHO in 1980 and in modified form, in 1985. The 1980 Expert Committee proposed two major classes of diabetes mellitus and named them, IDDM or Type 1, and NIDDM or Type 2. In the 1985 Study Group Report the terms Type 1 and Type 2 were omitted, but the classes IDDM and NIDDM retained, and a class of Malnutrition-Related Diabetes Mellitus (MRDM) was introduced. The 1985 classification was widely accepted and is used internationally¹.

Type 1 diabetes usually appears in children and it accounts for about 10% of diabetes^{2,3}. Diabetes in children usually presents with severe symptoms, high blood glucose levels, marked glycosuria, and ketonuria. In most children diagnosis is confirmed without delay by blood glucose measurements, and treatment (including insulin injection) is initiated immediately, often a life saving measure. Type 1 diabetes include those cases attributed to an autoimmune process, as well as those with beta-cell destruction and who are prone to ketoacidosis for which neither an aetiology nor a pathogenesis is known (Idiopathic). Type 1 indicate the process of beta-cell destruction that may ultimately lead to diabetes mellitus in which insulin is required for survival to prevent the development of ketoacidosis, coma, and death^{1,4}. Marker of immune destruction of the beta-cell include Islet cell autoantibodies (ICA). Autoantibodies to Insulin (IAA), Autoantibodies to Glutamic acid decarboxylase (GAD-A) and Autoantibodies to protein Tyrosin phosphatase (Islet Antibody-2, IA-2). One and usually more of these autoantibodies are present in 85-90% of individuals when fasting hyperglycemia is initially detected. Autoimmune Type 1 diabetes in children is rare in the Asian population of India and also uncommon among migrant Asian India population in the United Kingdom. There are some forms of Type 1 diabetes, which have no known aetiology. Some of these patients have

permanent insulinopenia and are prone to ketoacidosis, but no evidence of autoimmunity termed Idiopathic Type 1 diabetes. This form of diabetes is more common among individuals of African and Asian origin^{5,6,7}. A vast number of young diabetic subjects from the tropical developing countries have certain characteristic constellation of symptoms and metabolic profiles, such as young age (usually below 30 years), leanness with subnormal BMI, moderate severe hyperglycaemia, lack of ketosis in the absence of stressful situation and requirement of large dose of insulin for metabolic control. These patients are incorporated in a new clinical class MRDM; subtype of which is POPD & FCPD. MRDM might constitute 40-70 percentage of all cases of young onset diabetes mellitus in several developing^{8,9}. So this study was conducted to measure autoantibodies in childhood diabetic population, to help in the classification of the childhood diabetes among Bangladeshi population and to study the clinical and biochemical characteristics of the childhood diabetes in this population.

Materials And Methods :

The cross-sectional study was conducted by the Biomedical Research Group of Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM) during period of July 2001 to June 2002. Subjects

were diabetic children attending at the Paediatric OPD & admitted in Paediatric ward. In total 33 subjects were included in this study. The children were under 18 years of age and who were newly diagnosed as diabetic within last 3 months. Diabetes was diagnosed following WHO Criteria¹. The children suffering from any type of acute or chronic systemic illness were excluded from the study. Detailed socio-demographic data, family history of diseases and medical history were taken and physical and clinical examinations were done on the very first day of the visit. The body weight (kg) was measured on light cloths and height in centimeter, by using appropriate scales on bare foot (Detect-medic, Detect Scales INC. USA).

Body mass index of subjects was calculated using standard formula ($BMI = Wt \text{ in kg}/(ht \text{ in m})^2$, Normal BMI is 19-25).

After selection, all the subjects were explained in details about the purpose of the study and informed consents were taken from each of them. Subjects were requested to fast overnight (10-12 hours) and report at around 8:30 am in the research Division, BIRDEM. Nutritional status of the study subjects were assessed on the basis of Gomez classification. Blood samples were collected following all aseptic precaution from the anticubital vein using disposable plastic syringe. Blood samples were allowed to clot for 10 mins and then centrifuged for 10 minutes at a rate of 3000rpm at 4°C. Serum samples were preserved at - 70°C until biochemical analysis. Serum glucose estimation was done by glucose oxidase (GOD-PAP) method using Autoanalyzer, AMS (Analyzer Medical System, Rome, Italy). For diabetes mellitus the diagnostic value of the fasting plasma glucose concentration is 7.0 mmol/L and above. Percentage of HbA_{1C} was estimated in whole by a Variant hemoglobin testing system (Bio-Rad mode) using a modified HPLC method (Ellis 1984, Watts 1982). Clinical decision on HbA_{1C} range were

- HbA_{1C} (%) Degree of glucose control
- >8 Hyperglycaemia, Action suggested
 - 7-8 Hyperglycaemia, Good control
 - <7 Hyperglycaemia, Sub-clinical diabetes
 - 7-7 Near normal glycemia
 - <6 Nondiabetic levels

Serum C-Peptide was estimated by ELISA method DRG Instrument GmH, Germany (Bonser 1984, Heding 1975, Horwitz 1975, Ashby 1982). Normal C-peptide value 0.9 – 4.2 ngm/ml (298-1324 pmol/l). Serum GAD was estimated by an ELISA using kit from Roche Diagnostics GmbH Germany (Srikanta 1980, Wild 1997). Normal range and cut off value Anti-GAD. Samples with values ≥ 32 ng/ml were regarded as anti-GAD positive. Serum IA-2A estimated by an ELISA using kit from Roche Diagnostics GmbH Germany (Kawasaki 1996). Samples with values > 0.9 U/ml were regarded as anti-IA2 positive. Results were expressed as mean \pm SD unless otherwise stated. All analysis

was done using Statistical Pakage for Science (SPSS) pakage for Window version 7.5. To compare statistical differences between the two groups Students unpaired 't' test was performed. P value less than 0.05 was taken as level of significance.

Results :

Total Thirty three (33) childhood diabetic subjects were studied. Average age of the study subjects were 14.23 ± 2.70 years. Among the patients 16 (48.48%) were male and 17 (57.52%) were female. Average BMI of the subjects was 16.14 ± 4.07 . Regarding family history, 27.7% of the first degree relatives of the study subjects were suffering from diabetes. According to Gomez classification 36.4%, 36.0% and 21.2% of the study subjects were suffering from severe, moderate and mild malnutrition respectively (Table I).

Fasting serum glucose level in diabetic patients was 19.00 ± 7.47 and HbA1c level was 14.91 ± 3.85 . Both fasting sugar and HbA1c level of the study subjects were moderate to severely high (Table II and Table III). Fasting C-peptide levels of the patients were 0.489 ngm/ml. Frequency distribution of C-peptide values present that in 18% of the cases the values were ≤ 0.200 , in 28% cases within 0.201-0.400, in 27% cases within 0.401-0.600, in 15% cases within 0.601 – 0.800 and in 12% cases > 0.800 ngm/ml (Table IV). Out of 33 diabetic subjects only 1 (3%) subject found to be positive for both IA-2Ab and GAD-Ab and the same subject was positive for both the antibodies. This antibody positivity was not significant in favour of Type1 diabetes (Table V). There was negative correlations among age, BMI, HbA1c, Glucose and C-peptide values (Table VI).

Table I: Nutritional status (Gomez Classification) of the study subjects

Nutritional Status	No of Patients	% of Patients
Severe malnutrition (<60%)	12	36.4
Moderate malnutrition (60-74%)	12	36.4
Mild (74.1-83%)	7	21.2
Normal (89.1-110%)	0	0
Obese (>110%)	2	6.1

Table II: Frequency distribution of Serum Glucose (n=33)

Serum Fasting Glucose (mmol/l)	No of Subjects	%
≤ 10	5	15
10.1-15	5	15
15.1-20	6	18
20.1-25	9	28
> 25	8	24

Table III: HbA1c level of the study subjects

HbA1c (%)	No of Subjects	%
≤ 10	4	12
10.1-14	7	21
14.1-18	16	49
>18	6	18

Table IV: Fasting C-peptide levels of the patients

C-peptide (ng/ml)	No of Subjects	%
≤.200	6	18
.201-.400	9	28
.401-.600	9	27
.601-.800	5	15
>.800	4	12

Table V : Autontibody positivity of the study subjects

Parameters	Treated (n=17)		Untreated (n=16)	
	n	%	n	%
IA-2A	1	5.88	0	0
GAD-A	1	5.88	0	0

Table VI: Correlations among age, BMI, HbA1c, Glucose and C-peptide values of the study subjects.

Parameter	BMI		HbA1c		F-glucose		C-peptide	
	r value	p value	r value	p value	r value	p value	r value	p value
Age	.015	.936	.156	.386	.194	.280	.000	.999
BMI	-	-	-.555	.001	-.359	.040	.357	.042
HbA1c	-.555	.001	-	-	.535	.001	-.563	.001
F-glucose	-.359	.040	.535	.001	-	-	-.378	.030
C-peptide	.357	.042	-.563	.001	-.378	0.30	-	-

r = correlation coefficient, p=level of significance

Discussion :

Classification of Diabetes mellitus still remains controversial. An appropriate system of classification is required to diagnosis, predict and prevent the disease. According to etiological and clinical stages the classification of diabetes was: a) Type 1, b) Type 2, c) Other specific type and d) Gestational diabetes mellitus. Although differential diagnosis between Type 1 and Type 2 diabetes is complicated, because no specific marker are available in either disease, still there are some differentiation points between this types of major classes of such as the Type 1 diabetic patients are usually young with low BMI, very high blood sugar level, very low or absent of insulin secretory capacity. They usually present with ketoacidosis at the time of diagnosis and 85-90% have autoantibody positive. The Type 2 patients are older, overweight with slowly developing hyperglycemia. They have normal to high BMI and c-peptide value is usually normal to high and lack of ketoacidosis¹⁰.

The present study was designed to determine the autoantibody status of newly diagnosed childhood diabetic patients. The chance of

finding of autoantibody positively would be highest among these populations. In this study, we have measured autoantibodies against IA2 and GAD. But we haven't measured ICA and IAA; because these antibodies were measured previously in a different studies^{8,11}. From those studies no conclusive result was obtained. On the other hand, ICA and IAA yield a high proportion of false positive result in general population^{12,13}. Among 33 patients we have positive result in only 1 patient which is very negligible and indicates that the diabetes of childhood subjects are not auto-immune mediated. Two studies showed that IA-2A in Type 1 diabetes have a high diagnostic specificity which compliment GAD65Ab and help to predict Type 1 diabetes in European countries^{14,15}. Kelly *et al* determined the genetic and immunological features associated with Type 1 diabetes mellitus in a cohort of Indo-Aryan population residing in UK and they found that one or more autoantibodies are found in 89.6% of the diabetic patients compared with 11.8% of control subjects⁵. The result of this study contrasts those findings and suggests that typical Type 1 diabetes is rare in our country.

In a previous study in Bangladesh it was found that 453 "Under 30" diabetic subjects were reported at BIRDEM during the period of August 1991 to May 1992. It constituted 4.7% of the total 9643 new diabetic subjects attending the BIRDEM during the same period. These young diabetic patients presented with the features of both Type 1 and Type 2 diabetes. Out of those 453 subjects 49.9%, 4.9% and 45.3% were diagnosed as MRDM, IDDM and NIDDM respectively¹⁶. These arises confusion to classify these patients signifying whether these patients are a variety of Type 1 or Type 2 or other special type. Because according to the recent WHO classification of diabetes this group of patients can not be categorized. So the classification of diabetes mellitus still remains controversial. For epidemiological and clinical research and for the diagnosis and clinical management of the disease, an appropriate system of classification is required.

The other associated features such as age distribution, BMI, nutritional status, glucemic status, HbA1c and C-peptide levels were also determined in our subjects. Percentage of age distribution of the study subjects indicated that 75.8% of the patients within the age group 12 to 16 years which was almost similar with that of western countries. Maximum (72.7%) of the patients had BMI 16, which is very low and correlates with the features of Type 1 diabetes. According to "Gomez classification of malnutrition" 36.4% were severely, 36.4% were moderately and 21.1% were mildly malnourished respectively which is very consistent with the nutritional facts of our country.

Glycemic status was assessed by measuring serum fasting glucose and HbA1c levels. The fasting serum glucose level of 70% of study subjects were above 15 mmol/L and 52% above 20 mmol/L which is very high. HbA1c of 58% of study subjects were above 15 (%). This glycemic status of study subjects also correlates with that of Type 1 diabetes. The serum C-peptide mean value of the study subjects was 0.489 ng/ml and 73% of them had 0.600 ng/ml, which indicate very low insulin secretory capacity of the diabetic subjects. The severely compromised insulin secretory capacity may indicate a disease of Type 1 variety. However, absence of ketoacidosis points against it and severe depression of beta-cell function as glucotoxicity

can not be ruled in these cases. Absences of ketoacidosis and antibody negativity are related to Type 2 diabetes. So the childhood diabetic subjects in our study have both the features of Type 1 and Type 2 diabetes. On the other hand they are not malnutrition related^{17,18}. So, it very essential to explore and classify this group of patients for proper diagnosis and treatment.

Constraints of the study:

The duration of diabetes influence autoantibody levels. All the patients were selected as relatively newly diagnosed with maximum treatment period of three month. The number of samples was also small and study period was short. If a large number of patents could be followed up for a long time the antibody level could be different. To characterize the childhood diabetic patients properly it is important to do the genotyping of these patients for both HLA-DR and DQ would give better findings.

Conclusion:

Classification of childhood diabetes in Bangladeshi population is a special problem as this group childhood diabetes patients present with some features of both Type 1 and Type 2 diabetes. Type 1 Diabetes usually appears in children. Autoantibodies directed against pancreatic beta-cell represent the hallmark of autoimmune abnormality associated with Type 1 diabetes. But childhood diabetic subjects in our population have moderate to very low BMI and are suffering from malnutrition. They have moderate to very high fasting serum glucose and HbA1c levels and C-peptide value is moderate to very low. They are not autoimmune mediated. The exact nature of diabetes is yet to be confirmed whether these patients are atypical Type 1 or modified early onset Type 2 diabetes.

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An alive full term primary abdominal pregnancy- A case report

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Abstract:

The survival of foetus of an abdominal pregnancy is very rare. Most of the cases, abdominal pregnancy is secondary one. Foetal outcome is poor as diagnosis is delayed or difficult. In most of the cases diagnosis is made on laparotomy. High index of suspicion, expertness of Obstetrician & Sonologist can overcome this difficulty. A case of an alive full term primary abdominal pregnancy has been reported here. Patient was admitted in obstetric & gynaecological department of Prime Medical College Hospital, Rangpur. Fortunately here diagnosis was made accurately both clinically & also by ultrasonogram.

Conclusion: Inspite of poor outcome of abdominal pregnancy, it is possible to get better result if diagnosis done accurately with proper management protocol. (*Prime Med. j.* 3(1): 33-37)

Key words: Ectopic pregnancy, Abdominal pregnancy.

Introduction:

An ectopic pregnancy is one in which fertilized ovum implants in an area other than the endometrial lining of uterus. It may occur in fallopian tubes, uterine cornua, ovary, cervix, abdominal cavity etc. More than 95% of ectopic pregnancies occur in the fallopian tube. Abdominal pregnancy is rarest one & most of the abdominal pregnancy is secondary following rupture of tubal pregnancy¹.

Incidence of abdominal pregnancy varies

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widely ranging from 1:1320 to 1:10 200 births. The etiology of ectopic pregnancy is not well understood. Several risk factors have been found to be associated with ectopic pregnancy like PID, use of IUCD, tubal surgery or damage, ART pregnancies, prior ectopic pregnancy etc. It is more common in developing countries due to more prevalence of PID, low socioeconomic status, low level of medical care, antenatal care^{2,3}.

Abdominal pregnancy may be primary or secondary. A primary abdominal pregnancy is one in which fertilized ovum implants itself initially on some abdominal organ other than uterus & adnexa. In case of secondary abdominal pregnancy, fertilized ovum is first implanted in the tube, ovary or uterus. If implants in tube, after a few weeks, the foetus is extruded through the abdominal ostium or through a break in the wall of the tubes but does not die because its chorionic attachment & amniotic sac remain intact. Though amnion is intact, the amount of liquor amni is always small, probably because the normal contribution from the decidua, via the membrane is missing. The chorion grows through the rent & forms attachment to the

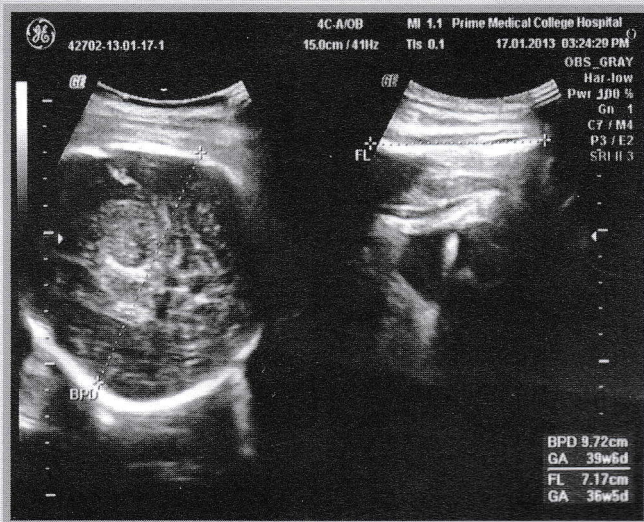


Fig - 1 : Foetus on Ultrasonography



Fig- 2 Laparotomy Showing intact Amniotic Cavity.



Fig- 3 Laparotomy Showing Seperate Uterus.



Fig- 4 Laparotomy Showing Delivery of Baby



Fig- 5 Showing Delivered Healthy Male Baby

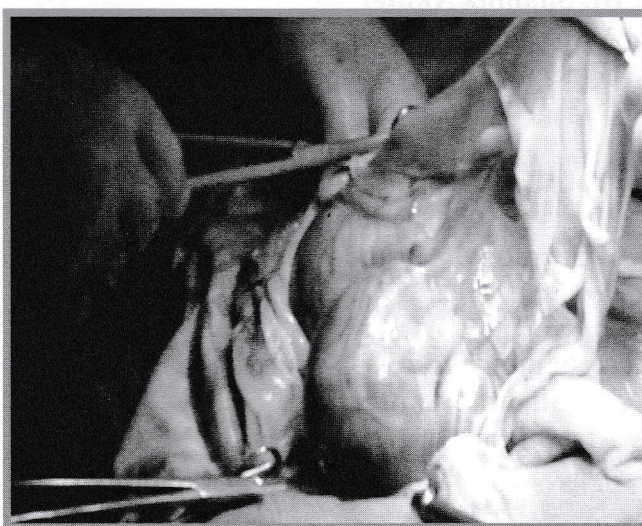


Fig- 6 Laparotomy Showing Separation of Placenta & Membrane.

pelvic peritoneum, broad ligaments, uterus, omentum & intestine. These structures react by developing large vessels to serve the placenta, & their anatomy becomes grossly disturbed. The foetus develops in the peritoneal cavity, its amniotic sac becoming supported by an outer coat of organizing lymph & blood exudate. The placenta attachment is so insecure & the local reaction so weak that retroplacental & intraabdominal haemorrhage is likely at any time⁴.

Some abdominal pregnancies proceed to term when spurious labour ensues. The uterus then contracts painfully & rhythmically & there is some dilatation of cervix with a discharge of blood & deciduas. Most of the cases foetus dies but remains in the abdominal cavity where it undergoes maceration or other change like lithopaedion. Most of the abdominal pregnancy proceeds normally except it is unusually uncomfortable; intestinal distension, periodic abdominal pain, & slight uterine bleeding are common. On examination, the abdomen is tender in one or other area, the foetus is not easily palpable. The uterus may be felt as a tumour separate from the pregnancy sac & be mistaken for a leiomyoma or a cyst. On vaginal examination, the cervix is nearly always found displaced, often upwards & backwards with fetal parts lying below & behind it⁴.

Ultrasonography can help in diagnosis of abdominal pregnancy. The criteria for diagnosis of primary abdominal pregnancy are normal tube & ovaries with no evidence of recent or past pregnancy; no evidence of utero-placental fistula; pregnancy related to the peritoneal surface and early enough to eliminate the possibility of secondary implantation⁴.

Laparotomy should generally be undertaken as soon as the diagnosis of abdominal pregnancy is made. The operation is dangerous because the anatomical relations are likely to be disturbed & great skill & gentleness are necessary if serious haemorrhage is to be avoided. The difficulty is to control the sinuses of the placental site when it involves the intestine & the peritoneum. If placenta is implanted dangerously, it is often better to remove the foetus without disturbing its sac. The umbilical cord is cut short to the placenta then placenta & membrane are left to be

absorbed during the next one to two years. Methotrexate has been used to manage the residual placenta. There are many circumstances where the patient has only chance to have a live child, operation can be delayed until the foetus is viable after considering serious maternal & foetal risk. If foetus dies in the abdomen, it is sometimes wiser to defer operation to allow the placental sinuses become thrombosed. In such cases the maternal coagulation profile needs to be monitored⁴.

Case report:

A 20 years old, primigravida, housewife of poor socioeconomic condition hailing from Patgram, Latmonirhat, was admitted in Prime Medical College Hospital on 17.01.2013 at 3:00 pm for delivery.

She was presented as term pregnancy with abdominal pain. She had no antenatal check-up before admission & could not mentioned exact date of LMP. Her antenatal period is more or less uneventful except some sort of discomfort in abdomen.

On examination, She was slightly ill looking with poor nutritional status & mildly anaemic. Her pulse was 90/minutes, blood pressure was 110/80 mm of Hg. Temperature was 99°F, respiratory rate was 32/minutes. Abdomen was

distended but no definite contour of pregnant uterus was observed. On palpation, abdomen was slightly tender & soft. Symphysio-fundal height could not possible to well delineated, seem to 34 weeks & not ballottable. Foetal parts were easily palpable with good foetal movement. Foetal heart rate could not located specifically. Foetal lie seemed to be transverse. On per vaginal examination, cervix was soft, tubular, os closed & presenting part could not possible to felt. On physical findings, there was a suspicion of rupture uterus or abdominal pregnancy.

On investigation, Hb-09gm %. On ultrasonography, single alive foetus of about 38 weeks 02 days was detected in abdominal cavity outside the uterus. Placenta was also outside the uterus in relation to its right conua & right adnexal region. Amniotic fluid was also interestingly adequate with normal & regular

foetal heart movement. Apparently no anomaly could be detected in foetus. Foetal lie was transverse.

Decision of laparotomy was taken on that day. Laparotomy done under G/A, peritoneal fluid was found mucinous (amniotic fluid) & meconium stained. The uterus was found bulky about 08 weeks size. The amniotic sac was found to the left side of the abdominal cavity pushing the gut towards right & completely surrounded by the omentum. The amniotic sac was ruptured & a healthy mature male baby delivered by breech extraction. The amniotic fluid was adequate and mild meconium stained, which was sucked out. Then we gently proceed to cut and separate the membranes from omentum and later on the placental attachment was found to the right broad ligament posteriorly between the right cornu of uterus and right ovary.

The placental vessels were attached to the vessels of the broad ligament. The placenta was not a discoid shaped but like the base of a cone. The umbilical cord was normal & healthy. No other risky attachment of placenta

with any great vessel or viscous organ found. We successfully remove the placenta completely from the omentum and broad ligament but sacrificing the medial half of the right tube. The right ovary was healthy and preserved. The left tube and ovary was found healthy.

No other adhesions were found. Bleeding was very minimum & secured by proper haemostasis. Abdomen was closed after peritoneal toileting, drainage tube was kept in situ. Baby was male weighing 2.75kg with good APGAR score with no congenital anomalies. Neonatal period was uneventful. Postoperative period of mother was also uneventful with good wound healing. Three units of whole blood was transfused.

Discussion

Abdominal pregnancy is a very rare type of ectopic pregnancy with very high maternal mortality & morbidity & high perinatal mortality. Maternal morbidity & mortality is mainly due to bleeding, infection, toxemia, anaemia, DIC, pulmonary embolism, fistula formation etc^{5,6}.

Perinatal mortality is due to congenital

malformation, prematurity, inadequate neonatal care facilities specially in developing countries. Main problem of its management is diagnostic error & operation done by inexperienced surgeon. There are many diagnostic tools for diagnosing abdominal pregnancy like USG, X-Ray, CT-Scan, MRI, Serum β hCG etc. Among them, ultrasonogram can accurately diagnose the case if it is done by an expert & experienced sonologist & a modern ultrasonogram machine though MRI still considered as Gold standard for diagnosis⁷.

If the foetus is dead, some clinicians recommended a period of observations of about 3 to 8 weeks to allow atrophy of placental vessels⁸.

If foetus is alive, some recommended immediate laparotomy regardless of gestational age. Some clinician may adapt an individual approach. If gestational age is less than 24 weeks, immediate laparotomy is indicated as high risk of maternal complications & the poor prognosis of the baby if the pregnancy continues⁹. If patient present after 24 weeks, surgery being delayed to allow time for foetal maturity under close supervision have been reported¹⁰.

The management of the placenta in an abdominal pregnancy is still a matter of debate. Partial removal of the placenta may result in massive uncontrolled haemorrhage & shock. Complete removal of the placenta should be done only when the blood supply can be identified & careful ligation is possible¹¹. This case had no abnormality & all the features of uterus & pelvic organs were normal except place of implantation.

Conclusion

Inspite of poor outcome of abdominal pregnancy, it is possible to get better result if diagnosis done accurately with proper management protocol. With advancement of modern medical science with modern equipment & modern facilities like ICU care, NICU care, maternal morbidity, mortality & perinatal mortality will be reduced. High index of suspicion is necessary for diagnosis. USG done by a devoted obstetricians may give early diagnosis due to better correlation.

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Uses & Abuses of Antibiotics

Akhter S¹, Moniruddin ABM², Sarker MAA³

Antibiotics are now the most commonly used drugs in world-wide medical practice. A lot of expenditure is there to be borne by the patients or their guardians as well as by the national & regional health authorities all over the world because of use, abuse, misuse, overuse & underuse of this class of medicinal products¹. More than one hundred antibiotics are there in use all over the world². The history of rational & scientific use of antibiotics by physicians does not go back much. It is only about eighty years³.

But it is known that since the time immemorial (the prehistoric period) people used various antimicrobials & not antibiotics to prevent & combat infections although they didn't know what infection was. Greeks & Indians used topically molds, moldy breads & other plants to combat infection. Russians used beer soup, turtle shells & snake skins⁴. Babylonians used mixture

of frog bile & sour milk. Sri-Lankans used oil-cake⁵. In addition, honey, garlic & several other known & unknown matters, plants, plant extracts were used by people in different times in different regions of the world till the end of nineteenth century⁴. The additive efforts of AV Leewenhoek, Lois Pasteur, Robert Koch & Joseph Lister then brought a dramatic change in understanding, prevention & treatment of microbial infections⁶.

Now a days, antibiotics are defined as natural, semi-synthetic & synthetic chemicals that are processed in oral, parenteral, rectal, aerosolized & topical forms to prevent & treat various bacterial infections⁷. Though the term antibiotic was coined by Selman Waksman in 1942, his definition of antibiotic as substances produced by one type organisms that antagonize the growth of other organisms has been made obsolete because of reasonable reasons of restricted sense⁸. Many antibacterial compounds are relatively small molecules with a molecular weight of less than 2000 atomic mass units⁹.

With advances in medicinal chemistry, most of today's antibacterials are chemically semisynthetic modifications of various natural compounds. These include, the beta-lactam antibacterials, which include the penicillins (produced by fungi of the genus *Penicillium*), the cephalosporins, and the carbapenems etc¹⁰. Compounds that are still extracted from living organisms are the aminoglycosides, whereas other antibacterials for example, the sulfonamides, the quinolones, and the oxazolidinones are produced solely by chemical synthesis¹¹. In accordance with this, many antibacterial compounds are classified on the basis of chemical/biosynthetic origin into natural, semisynthetic, and synthetic. Another classification system is based on biological activity; in this classification, antibacterials are

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divided into two broad groups according to their biological effect on microorganisms: bactericidal agents kill bacteria and bacteriostatic agents slow down or inhibit bacterial growth¹². Penicillin, the first natural antibiotic discovered by Alexander Fleming in 1928 (*Penicillium fungus*)⁹. Before the early 20th century, treatments for infections were based primarily on medicinal folklore. Mixtures with antimicrobial properties that were used in treatments of infections were described over 2000 years ago¹³.

Many ancient cultures, including the ancient Egyptians and ancient Greeks, used specially selected mold and plant materials and extracts to treat infections. More recent observations made in the laboratory of antibiosis between microorganisms led to the discovery of natural antibacterials produced by microorganisms⁶. The discovery of microscope & microbes by AV Leewenhoek in seventies of eighteenth century gave us understanding a new hidden world of life in our circum-ambient environment¹⁴. Louis Pasteur invented the process of pasteurization which was officially recognized by French govt in 1865. Robert Koch in 1884 announced his famous postulate of microbial aetiology of diseases¹⁵. The invention of electron microscope by Leo Szilard in 1931 revolutionized our understanding in microbial & molecular aetiology, diagnosis & treatment of diseases. The first sulfonamide and the first commercially available antibacterial antibiotic, Prontosil, was developed by a research team led by Gerhard Domagk in 1932 at the Bayer Laboratories of the IG Farben conglomerate in Germany. Domagk received the 1939 Nobel Prize for Medicine for his efforts¹⁶. The main classes of antibiotics are (1) Penicillins, (2) Cephalosporins, (3) Macrolides, 4. Quinolones, (5) Sulfonamides, (6) Tetracyclines, (7) Aminoglycosides, (8) Polymixins, (9) Carbapenems, (9) Special group of anti-TB drugs, (10) Imidazoles, (11) Oxazolidones & streptogramins, (12) Cyclic lipopeptides, (13) glycylcyclines, (14) Miscellaneous group like vancomycin, chloramphenicol, clindamycin etc⁸.

A penicillin allergy preventing a doctor from

prescribing amoxicillin & similar other antibiotics that exhibit cross sensitivity/cross allergy¹⁷. In some cases, laboratory tests may be used to help a doctor make an antibiotic choice. Special strains of the bacteria such as Gram stains, can be used to identify bacteria under the microscope and may help narrow down which species of bacteria is causing infection. Certain bacterial species will take a stain, and others will not. Cultures may also be obtained. In this technique, a bacterial sample from an infection is allowed to grow in a laboratory. The way bacteria grow or what they look like when they grow can help to identify the bacterial species¹⁷. Cultures may also be tested to determine antibiotic sensitivities. A sensitivity list is the roster of antibiotics that kill a particular bacterial type. This list can be used to double check that the patient is taking the right antibiotic¹⁸. Sulfonamids & tetracyclines are not now the systemic antibiotic of choice because of their nephrotoxic, hepatotoxic & haematotoxic adverse effects¹⁹. Cephalosporins are relatively hepatotoxic when compared with penicillins¹⁰. Macrolides are not effective against *staphylococcus aureus*. Aminoglycosides are nephrotoxic & ototoxic²⁰. Aminoglycosides, like quinolones are inactive against streptococci & anaerobes. Imidazoles are effective against anaerobes & clostridia¹¹. Carbapenems & vancomycins are extended spectrum antipenicillinase antibiotics; but still resistant strains are emerging⁸. Chloramphenicol, a potent broad spectrum antibiotic has lost its systemic use because of its toxicities like hemolytic & aplastic anaemias & grey baby syndrome²¹. Nitrofurantoin once was a potent antibiotic, but it was banned by the FDA because of its mutagenic & carcinogenic adverse effects¹¹. Quinolones are first oral antibiotic for use against aerobic gram negative bacilli. But resistant strains have emerged due to abuse & misuse over the last three decades¹². It is the preferable safe antibiotic for use in jaundiced patients provided its use is justified by culture & sensitivity tests.

'Prevention is better than cure' is an ancient saying in medical practice²². If we can take proper prophylactic measures to prevent

infection from developing in human body, we can save life of millions of our patients & we can reduce the morbidity & treatment cost to a large unimaginable extent. There are definite guidelines to prevent infection that includes vaccination, neatness & cleanliness in hospitals, health centers, peri-operative prophylaxis, adequate antenatal, perinatal & postnatal care, standardized trauma care protocols, ensuring adequate personal hygiene by physicians, paramedics, patients & their guardians including attendants etc²³. Frequent nationwide surveillance & audits are essential to implement the preventive measures²⁴.

There are some definite established problems of antibiotic therapy²⁵. These include (1) problems in drug delivery (oral, rectal, topical, aerosolized, parenteral i.e., intramuscular, intravenous etc.), (2) drug retention problems (leading to increased toxicities that require frequent monitoring for serum levels of the offending antibiotic, looking for kidney & liver functional status), (3) wrong dose of the antibiotic, (4) selecting the ineffective wrong antibiotic, (5) side effects of antibiotic that include toxicities, allergic reactions, worsening endotoxic shock, development of resistance, cross resistance, multi-drug resistance, life-threatening infections by multi-drug resistant microbes, opportunistic infections like pseudomembranous colitis, gastro-intestinal & vaginal candidiasis leading to increased morbidities & mortalities, increased hospital stay & treatment costs⁴.

These problems can be overcome & minimized⁴ by (1) choosing the right antibiotic (possible narrow spectrum which is the sensitive 1st line antibiotic with least cost, least toxicities, greater availability; then the 2nd line antibiotic having a higher risk for side effects if unresponsive to the 1st line or relapse following use of the 1st line; lastly the third line antibiotic with greatest risk for side effects including toxicities if the 2nd line is resistant & the potential benefit of using it outweigh the risk), (2) preventing resistance by using only the necessary antibiotic singly or in combination at right doses for the right duration or may need rotational use of antibiotics to prevent the development of resistance, (3)

Eliminating the pathogens or preventing their growth by suitable bactericidal or bacteriostatic antibiotic & enhancing host response (chiropractice); combination of bacteriostatic antibiotic with a bactericidal antibiotic is considered incompatible & unjustified, (3) not abusing, misusing, overusing, underusing the relevant antibiotic. It is to be noted that antibiotics don't work in most of the infections caused by viral, fungal & protozoal microbes. Viral sore-throat, cold, flue, cough, bronchitis, bronchiolitis etc are not cured by antibiotics. Antibiotics rather can cause much harm in these instances²⁶.

Therefore, before & during prescribing antibiotics, the prescribing physician must consider the following parameters of the patient; (1) age, (2) body weight, (3) liver functional status, (4) Kidney functional status, (5) pregnancy & lactational status etc. The definite indication & sensitivity must be documented as far as practicable. Before getting the culture & sensitivity report, the physician should start a narrow spectrum 1st line antibiotic empirically followed by switching over to the right one or ones in accordance to the report, if required. The broader the spectrum of the antibiotic used, the more multi-drug resistant pathogen/pathogens will emerge⁴.

Antibiotics like penicillins fall to the pregnancy category A & thence are said to be safe during pregnancy²⁷. Antibiotics of pregnancy categories B & C should be used during pregnancy if the potential benefits following use outweigh the potential risks if the causative organism is not sensitive to the antibiotics of pregnancy category A. Antibiotics of pregnancy category D are harmful to the fetus & their use is justified only if they are life saving. Antibiotics of pregnancy category E are so notorious & embryocidal that they are totally contra-indicated during pregnancy. There are many antibiotics which were not categorized as regards to their safety in using during pregnancy. They fall to the pregnancy category X. Their use during pregnancy is controversial & they should not be used until & unless their safety is documented².

It is to be well understood & remembered that antibiotics alone can't prevent & treat infection. For successful prevention & treatment of infection, it needs a team work comprising physicians, paramedics, hospital-regional-national health authorities, plus continued medical & surgical audit to go ahead with better & better results in the days to come¹⁶.

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College News

List of Topics of Integrated Teaching Presented

SL	Name of Topics	Name of Department	Date of Persentation
1	Thyriod function & its disorders	Physiology	28.04.10
2	Postoperative fluid therapy	Surgery	06.10.10
3	Childhood immunization update	Paediatrics	27.10.10
4	Antharx	Community medicine	03.11.10
5	Hypetension	Medicine	17.11.10
6	Rational use of Drug	Pharmacology	08.12.10
7	Staphylococal infections	Microbiology	15.12.10
8	Staptococcal infections	Microbiology	22.10.10
9	Granlomatous inflammation & Granulomsa	Pathology	29.12.10
10	TB	Community Medicine	05.01.2011
11	Cell Injury	Pathology	09.02.2011
12	Chromosome	Anatomy	23.02.2011
13	Childhood Cancer	Paediatrics	02.03.2011
14	Fate of RBC and Jaundice	Physiology	23.03.2011
15	Lipid Profile	Biochemistry	14.04.2011
16	Wound and Wound Repiar	Pathology	13.04.2011
17	Death Due to acute Organophosphorus Poisoning cases in Rangpur Division	Fornsic Medicine	22.06.2011
18	RFST (Residential Field Site Training) Program	Community Medicine	10.08.2011
19	Pregnancy with Diabetes	Gynae & Obs	28.09.2011
20	Pre-anaesthetic Assessment for Premedication	Anaestheology	21.09.2011
21	Physiotherapy Management of Knee Osteoarthritis	Physioterapy	26.10.2011
22	Shock Management and Infection Control	Microbiology	16.10.2011
23	Cerebal Palsy	Paeditrics	19.07.2012

External Examiners in Different Professional Examinations

First professional Examination (January 2013)

Prof. Bulbul Afroz

Professor, Department of Anatomy
Rangpur Medical College, Rangpur

Prof. Nazmul Haque

Professor, Department of Physiology
Northern international Medical College, Dhaka

Dr. Wadud Mostofa

Professor, Department of Physiology
Community Medical College, Rangpur.

Dr. Chandra Rani Sarker

Assosicate Professor, Department of Physiology
Rangpur Medical College, Rangpur.

Dr. Khandoker Abu Raihan

Associate Professor of Anatomy
Popular Medical College, Dhaka

Dr. Abdur Rahim

Assosicate Professor, Department of Biochemistry
Northern Private Medical College, Rangpur.

Dr. Newaz Ahmed

Assosicate Professor, Department of Biochemistry
Rangpur Medical College, Rangpur.

Dr. Rashedul Haque Rahel

Assosicate Professor, Department of Biochemistry
Rangpur Medical College, Rangpur.

Scnd Professional Examination (January 2013)

Professor Parimal Chandra Sarker

Professor of Microbiology
Rangpur Medical College, Rangpur.

Dr. Md. Mojib Uddin

Assosicate Professor, Pharmacology
Rajshahi Medical College.

Dr. Abu Saleh Md. Musa

Assosicate Professor, Department of Microbiology
Rajshahi Medical College, Rajshahi.

Prof. Md. Abdus Salam

Department of Forensic Medicine
Community Medical College, Rangpur.

Dr. Rozina Akther Banu

Associate Professor, Department of Community Medicine
Rangpur Medical College, Rajshahi.

Visits & Inspections

Inspection from BCPS:

A high powered inspection team from BCPS visited this College on 28-06-2012 to extend the recommended period of residency training from 6 months to two year in the subjects of Medicine, Surgery, Gynae & obs. and Paediatrics and to recommend residency training in Cardiology for the first time. The recommend period of residency training in this college is shown as below:

Subject	Period Applied for	Recommend Period by BCPS
Medicine	2 Years	1 Year
Surgery	2 Years	6 months
Obs & Gynae	2 Years	1 Year
Paeditrics	2 Years	1 Year
Cardiology	1 Year	Nil

Visits form Rajshahi University:

A high powered inspection team from University of Rajshahi made a visit to this college on 05-06-2012 to extend the recommended period of affiliation for the session 2012-13 and beyond. There was also a visit at the same time to grant this college as a center/sub-center for second Professional MBBS Examination and extend the period of First Professional MBBS Examination Center.

Information for the contributors

The Prime Medical Journal is Published twice a year in the month of January & July. The Journal Publishes Original articles, Review Articles, Case Reports, Procedures, Letter to the Editors etc. in all branches of medical Science.

Editorial scope:

- ◆ The Prime Medical Journal (PMJ) is intended to promote publication of concise scientific article based on the study in all fields of medical and health sciences.
- ◆ Submitted manuscripts should not be previously published or being considered for publication elsewhere.
- ◆ All Submitted articles will undergo double blind peer review as per recommendations by subject specific experts selected by editors.
- ◆ Reviewed manuscripts will be sent to the corresponding author for appropriate response if it is indicated.
- ◆ Acceptance is based on significance, originality, clarity and fulfillment of the criteriaes of the publication Policy of this journal.
- ◆ The Editor- in- Chief will make all final decisions regarding acceptance.
- ◆ Selection of the reviewed and accepted manuscripts intended for publication on a particular issue will be decided by Editoril Board.
- ◆ Rejected manuscript will be retuned if accompanied by stamped & self-addressed envelop.
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- ◆ Review article should be written by a subject expert

Ethical aspects :

- ◆ Manuscripts based on the study should be conducted according to the ethical standards laid down in the 1994 Declaration of Helsinki revised in 2000.
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- ◆ Permission of the patients or their families to reproduce photographs of the patients where identity is not disguised.
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Manuscripts Prepared following the "Uniform Requirements for Manuscripts to Biomedical Journals" is acceptable to this journal for publication. The authors are requested to strictly follow the lines below for submission of manuscript to PMJ for publication. The following documents with manuscripts are to be submitted for publication.

- ◆ A Covering letter addressed to the Editor-in-Chief of the journal (Sample given at the end).
- ◆ Abstract and key words in the first page followed by the text.
- ◆ Authors must submit 2 hard copies of all documents and one copy in electronic form preferably written in a IBM compatible CD with adequate labeling.
- ◆ In special case, submission through E-mail with file attachment of all documents is acceptable.

Covering letter:

- ◆ All authors must sign after seeing the manuscript with the Statement that they are the only authors.
- ◆ The corresponding author should mention the contribution of each author to the work.
- ◆ It should contain a declaration that this manuscript has not been submitted elsewhere or not under consideration in any journal.
- ◆ It should clearly indicate the publication type (Original/Review/Case report/Letter etc.)
- ◆ It should also mention the expected benefit of the medical science from publishing of this article.

Authors are requested to submit new and revised manuscript to:

Editor-in-Chief

Prime Medical College

Pirjabad, Badargonj Road, Rangpur.

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E-mail :pmcrang@gmail.com.

Manuscript Organization:

Typing

- ◆ Double Spaced throughout with justified and 2.5 cm margins in left & top.
- ◆ Font type is Times New Roman with size 12.
- ◆ Printed on a good quality A4 80 gm white paper on one side of paper.
- ◆ Manuscript should have uniform style, correct journal format, carefully proofed for grammar, spelling and punctuation.

Manuscript format

In general, original article should be divided into following sections: Title page, Abstract, Text, Tables with titles and foot notes, alternatively Graphs with title and Illustrations with legends. Each of the sections is to start on a separate page. Pages should be numbered consecutively beginning from the abstract.

Title Page:

- ◆ Title of the article (Not exceeding 60 characters).
- ◆ Names of all authors with their designation and institutional affiliations with name of the department and institute where the study was undertaken.
- ◆ Name of the corresponding author with contact address, telephone number, E-mail address.
- ◆ Disclosure of conflict of interest (if any).
- ◆ Disclosure of source of funding or sponsor.

Abstract :

- ◆ Structured with headings (Background, Objectives, Methods with statistical analysis, Result and Conclusion).
- ◆ Authors name should not be given.
- ◆ Preferably within 250 words.
- ◆ Avoid abbreviations in the title and abstract except standard abbreviation.
- ◆ A non structured abstract is suggested for review article and case report.

Text:

- ◆ Text should be arranged into Introduction, Materials & Methods, Results, Discussion, Acknowledgement & References (IMRDAR).

Introduction :

- ◆ Statement of the problem with a short discussion of its importance and significance.
- ◆ Review of the literature related to the problem with pertinent reference.
- ◆ Objectives/hypothesis/benefits expected stated in 1-2 paragraph.

Materials & Methods :

- ◆ Study type, place and time.
- ◆ Description of study variables.
- ◆ Description of study subjects and grouping.
- ◆ Selection criteria.
- ◆ Approval of the study involving human subjects by ethical review committee and description of the ethical aspects in such study.
- ◆ Description of procedure, methods, apparatus, drugs or chemicals as applicable.
- ◆ Description of statistical procedure with enough detail to enable a knowledgeable reader with access to the original data to verify the reported results.

Result:

- ◆ Present result in logical sequence in text, table and illustration with most important finding first.
- ◆ Describe without comment.
- ◆ Restrict number of table and figure needed to support assessment of paper.
- ◆ Do not duplicate data in table and figure.

Table :

- ◆ Simple self explanatory with brief title, not duplicate in text.
- ◆ Each table should be numbered in Romans and printed in separate page.
- ◆ Do not use internal horizontal and vertical rules.
- ◆ Uses of many tables are not encouraged.

Illustration :

- ◆ All illustrations must be numbered consecutively in English numerals as they appear in the text.
- ◆ Submit print photograph of each illustration along with its electronic file.
- ◆ Figure number, title of manuscript, name of the corresponding author and arrow indicating top should be written on a sticky label on the back of each photograph.
- ◆ Scanned picture, graph, chart with title and figure number should be printed on separate page and its original data presentation file should be inserted in the CD along with text.

Legend :

- ◆ Must be typed in separate sheet of paper.
- ◆ Photomicrograph should indicate the magnification, internal scale and method of staining.
- ◆ All drugs should be mentioned in their generic form. The commercial name may be used in parenthesis.

Acknowledgement:

- ◆ Individuals, Institutions, Sponsors, Organizations of bodies can be acknowledged in the article for their contribution or financial or any form of assistance the work.

References:

- ◆ For reference, use author number style (Vancouver) which is based on an ANSI standard adapted by the national Library of Medicine (NLM).
- ◆ References should be numbered consecutively in the order on which they are first mentioned in the text.
- ◆ Identify reference in the text, tables and legend by English numerals in superscript.
- ◆ All citations to electronic references should be presented in numbered references following the text.

The titles of the journals should be abbreviated as:

- ◆ Coding to the style used in Index Medicus.
- ◆ Write names of 6 author followed by *et al*, if authors number is more than six.
- ◆ The reference list is also checked by the editorial staff or reviewer, so it is the responsibility of author to provide accurate information.

Standard journal article:

Example:

Khalil M, Chowdhury MAI, Rahman S, Sultana SZ, Rahman MM *et al*. Splenic mass and its relation to age, sex and height of the individual in Bangladeshi People. J Bangladesh Soc Physiol 2008;3(1): 71-78.

Journal article with organization as author:

American diabetes Association. Diabetes Update. Nursing, 2003 Nov: Suppl;19-20.

Journal article with multiple organization as author:

American Dietetic association; Dietitians of Canada; Position of Dietetic association and Dietitians of Canada Nutrition and Women's health. J Am Diet Assoc 2004 Jun; 104(6): 948-1001.

Journal article with Governmental body as author:

National Institute on Drug Abuse (US); Caribbean Epidemiology Centre; Pan American Health Organization ; world Health Organization. Building a Collaborative research agenda; drug abuse and HIV/AIDS in the Caribbean 2002-2004. West Indian Med J. 2004 Nov; 53 suppl 4; 1-78.

Standard book with initials for authors:

Eyre HJ, Lange DP, Morris LB, Informed decisions: the complete book of cancer diagnosis, treatment and recovery 2nd ed. Atlanta: American Cancer Society ; 2002. 768p.

Contributed chapter of a book :

Rojko JL, Hardy WD. Feline leukemia virus and other retroviruses. In: Sherding RG, editor . The cat; diseases and clinical management. New york: Churchill Livingstone; 1989. p 229-332

Conference Proceedings :

Pacak K, Aguilera G, Sabban, E, Kvetansky R, editors. Stress: Current neuroendocrine and genetic approaches. 8th symposium on Catecholamines and Other Neurotransmitters in stress: 2003 Jun 28-July 3; Smolenice Castle (place of conference), Slovakia. New york (Place of Publication), new York Academy of Sciences (publisher) ; 2004 Jun. 590p .

Scientific and Technical Reports:

Page E, Harney JM. Health hazard evaluation report. Cincinnati (OH) (Place of publication; National Institute for Occupational Safety and Health) (US) (Publisher); 2001 Feb. 24p (Total number of pages). Report No: HETA2000-0139-2824.

Dissertation & Thesis:

Entire Reference

Kempner JL, Aching heads. making medicine gender and legitimacy in headache (title) [dissertation] [Philadelphia] University of Pennsylvania; 2004-271p.

Alam M. Study of Heart Rate Variability in Adolescent Athletes [M Phil Thesis]. [Dhaka] Bangabandhu Sheikh Mujib Medical University; 2008

Part of Dissertation & Thesis:

Mackowski MP. Human factors: aerospace medicine and the origins of origins of manned space flight in the United States [dissertation]. [Tempe (AZ)]: Arizona State University; 2002 May. Part 2, Space medicine ; p. 188-377.

Alam M. heart Rate Variability in Adolescent Athletes [M Phil thesis]. [Dhaka (bangladesh)]. Bangabandhu Medical University; 2008 July. Appendix (name of the part 4 (number of the part), Classification of physical Activity Intensity (Title of the Part). p.7 (Location of the Part).

Standard journal article on the Internet:

Kaul S, Diamond GA. Good enough.: a primer on the analysis and interpretation of noninferiority trials. *Ann Intern Med* [Internet]. 2006 July 4 [cited 2007 Jan 4] ; 145 (1) : 662-9, Available from:<http://www.annals.org/cgi/reprint/145/1/52.pdf>

Journal article on the Internet with organization (s) as author:

National osteoporosis Foundation of South Africa. Use of generic alendronate in treatment of osteoporosis. *S Afr Med J* [Internet]. 2006 aug [cited 2007 Jan 9] ; 9 (8);696-7. Available from:<http://blues.sabinet.co.za/WebZ/Authorize?>

Journal article on the Internet with governmental body as author:

Centers for Disease Control and Prevention (US), National center for HIV/AIDS, Hepatitis, STD, and tuberculosis and control of tuberculosis in correctional and detention facilities: recommendations from CDC. Endorsed by the American correctional Association. *MMWR R Rep* [Internet]. 2006 July 7 [cited 2007 Jan 9]; 55(RR-9); 1-44. Available from:<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5509a1.htm>.

Journal article on the Internet with no author:

Prevention strategies for asthma-secondary prevention. *CMAJ* [Internet] 2005 Sept [cited 2007 Jan 5]; 173(6Suppl); S25-7. Available from:http://www.cmaj.ca/content/full/173/6__suppl1/s25.

Journal article on the Internet without standard volume, issue or article number:

Jacobs JL, Lee MT, Lindberg M, Kamin C. Problem based learning, multimedia paucity of behavioral issue learning *Med Educ*. Online [Internet]. 2005 [cited 2005]; [5p]. Available from:<http://www.med-ed-online.org/pdf/10000006.pdf>.

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Dear Sir,

I/We are submitting in your journal. This article has not been published or submitted for publication elsewhere. There is no Conflict of interest between the authors.....b

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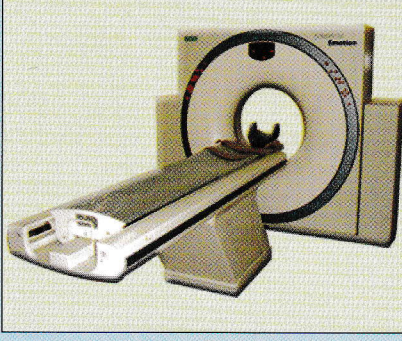
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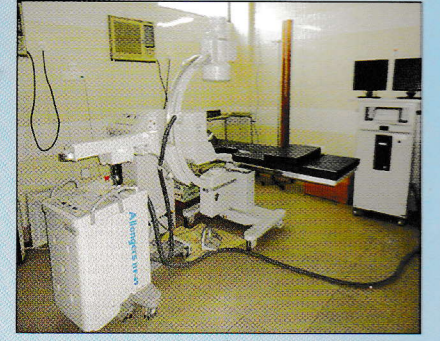
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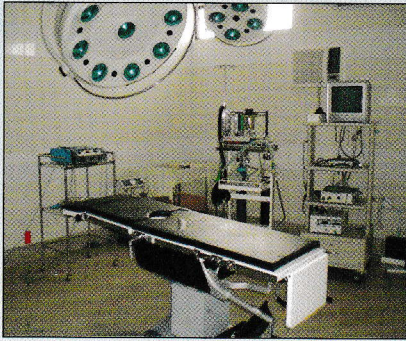
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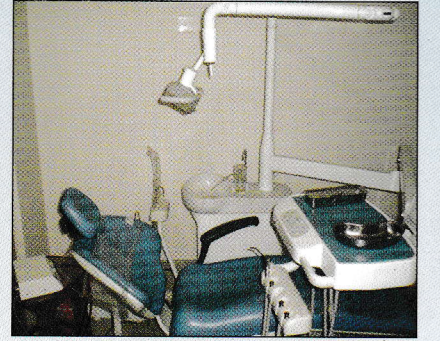
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অপারেশন থিয়েটার - ৭



ডায়ালাইসিস মেশিন



ডেন্টাল ইউনিট

হাসপাতালের বিভাগ সমূহ

- ❖ মেডিসিন বিভাগ
- ❖ সার্জারী বিভাগ
- ❖ স্ত্রীরোগ ও প্রসূতি বিভাগ
- ❖ শিশু ও নবজাতক বিভাগ
- ❖ অর্থোপেডিক্স বিভাগ
- ❖ হৃদরোগ বিভাগ
- ❖ নাক, কান ও গলা বিভাগ
- ❖ ইউরোলজি বিভাগ
- ❖ নিউরোলজি বিভাগ
- ❖ চক্ষু বিভাগ
- ❖ ক্যান্সার বিভাগ
- ❖ ডায়াবেটিক সেন্টার
- ❖ এ্যাজমা সেন্টার
- ❖ দন্ত বিভাগ
- ❖ ফিজিওথেরাপী সেন্টার



প্রাইম মেডিকেল কলেজ হাসপাতাল, রংপুর
PRIME MEDICAL COLLEGE HOSPITAL, RANGPUR

পীরজাবাদ, বদরগঞ্জ রোড, রংপুর (কেন্দ্রীয় বাস টার্মিনালের অর্ধ কিলোমিটার পশ্চিমে)
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