ISSN: 2226-7964

PRIME MEDICAL JOURNAL

Vol. 4 No: 1 Jan- 2014

An official organ of Prime Medical College

CONTENTS

ISSN: 2226-7964

PRIME MEDICAL JOURNAL

Vol. 4 No: 1 Jan- 2014

An Official Organ of Prime Medical College, Rangpur
E-mail: pmcrang@gmail.com, website: www.pmcrang.bd.org

ISSN 2226-7964

Printed at:
Prime printers
Prime Medical College Campus , Rangpur.

Request for re-print:
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Informations about Prime Medical College, Rangpur

Prime Medical College is one of the best and largest private medical college in Bangladesh. It was established in 2008. The ideas of establishing this Medical College is to provide standard Medical Education and Health Services to the people at an affordable cost.

The objectives of the institute are :

- To promote and provide education in Medical Science and to Provide training in different discipline of medicine recognized by the postgraduate institutes and universities.
- To conduct research work on the diseases prevalent in the country.
- To conduct research on medical education with the aim of uplifting the quality and standard of medical education in the country.
- To produce and provide skilled manpower in the medical, nursing and paramedical fields.
- To provide quality medical care and heath services to the people at reasonable cost.

The first and foremost objective of establishment of this medical college is to offer MBBS degree under Rajshahi University of Bangladesh and to provide good quality medical graduates, who can fulfill the need of health care prevailing in the country.

Editorial

Small Group Teaching in Medical Education.

Naher LAD

Teaching is a noble profession. Medical teachers are highly recognized in every society of the world. New era of medical education notices teacher's role beyond traditional teaching tasks. The role of teachers are now diversified where they perform as information provider, facilitator, Role model, Examiner, Planner, and Resource developers etc [1].

To teach systematically and effectively a teacher must consider input, process and output and choose objectives, contents, methods and assessment which are the means of quality education. The teaching method or process of input delivery is most important for effective outcome. It may be in large group or small group format and is organized in hospital or community settings[2].

Medical teachers have to promote active learning sessions for which Small group teaching in tutorial classes is a requirement. By definition, a small group is a number of people interacting in a face to face situation. Interaction among the participants is not perfectly possible if the number is too large. About 8 to 12 is an optimal number, which allows all the participants to be regularly active[3].

Active participation by the students helps to break down inhibitions and other barriers of communication, promoting a more intense and intimate level of interaction between students as well as between students and teachers. The students in the group work and interact with each other to achieve common learning objectives and active involvement also allows students to learn effectively. Again, through discussion students can comprehend in depth about the tasks rather than just memorizing and reproducing[3]. Moreover, Small group work encourages students to take responsibility and motivate themselves to self-directed learning. It also allows exchange of views, ideas and knowledge among participants thereby promotes self-confidence through expressing and defending one's ideas[4].

The role of teacher in small group teaching is crucial, he/she act as a catalyst in the group. Teacher may act as an organizer, coordinator and evaluator of the work. As an organizer teacher inform the students about the task. As a coordinator he/she maintain a group, clarify the questions ask by the students, establish a climate that is open, trustful and supportive, and summarize the discussion at the end. Lastly the teacher provides tasks needed to be carried out by the students. Moreover, at the end of the class, tutor may need to have a debriefing session to identify what has been achieved and what still require further [4].

In some points group discussion is disadvantageous as it required skilled attention. Weak participant may be discouraged by more articulate fellow. Some participants may depend too much on others to solve their problems. Lack of participation by the students with withdrawn personality type may be present. There may be lack of coordination between lecture and group session. Moreover, group teaching cost more than lecture in terms of time and accommodation[3].

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Despite some limitations small group methods have a valuable role to play in undergraduate medical curriculum. For continuation there is a requirement to expertise the teaching staffs. Success of teaching depends on good planning and effective facilitation of it. It is imperative to all discipline to plan for an extended use of small group method, which will help in active learning of all the students by active participation.

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Original article

Knowledge and Practice of Oro-dental Care and illness among Primary School Children in Rural Community.

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ABSTRACT

***INTRODUCTION**: Oro-dental diseases are more common in young children due to their food habit and lack of proper attention by their parents. **OBJECTIVE:** To assess the knowledge and practice of Oro-dental care and Oro-dental health condition among the primary school children. **STUDY DESIGN:** This cross-sectional study included 317 primary school children. They were interviewed and examined clinically regarding oro-dental health condition. Data were collected from three purposively selected primary schools of Mohadipur Union of Polasbari Upazilla by following the procedure of cluster sampling. The study period was 1st January to 30th Jun 2013. **RESULTS**: Out of 317 respondents 55.21% were male, 94.32% were Muslim, 31.29% responder's fathers were farmer, only 16.13% responder's father were service holder, 95.90% responder's mother were housewife. Regarding knowledge about oral care 40.38 % (128) mentioned washing of mouth, 63.41%(201) respondents has the knowledge about prevention of oral problem and regarding knowledge about dental care 97.48 % (309) mentioned regular tooth brushing. Regarding practice of Oro-dental care 98.42%(312) brush their teeth arising from bed, only 47% (149)brush their teeth before going to bed, 51.79%(159) clean their mouth after taking biscuit, ice-cream and chocolate, 56.78% (180)brush with toothpaste, 35.33%(112) use tooth powder, 41.96%(133) massage their gum, 98.11%(311) wash their mouth regularly. Regarding oro-dental condition 44.78% (142) children's teeth were normal, 23.34% (74) children's teeth were staining and 24.61% (78) children's teeth affected by caries. **CONCLUSION**: This study result indicates that they had satisfactory knowledge about oro-dental health care but practice of keeping the teeth and gum clean as a whole was not satisfactory .*

KEY WORDS: knowledge, practice, Oro-dental care, primary school children, rural.

INTRODUCTION

Oro-dental health care means practice of keeping mouth and teeth clean properly. Oro-dental diseases are the most common diseases among the Bangladeshi people. Millions of individuals suffer from dental caries and periodontal diseases that cause difficulty in swallowing, chewing and speaking[1]. More than 80% people of our country suffer from one or more oro-dental health problem like gingivitis, dental caries, periodontitis, alveolar abscess, pulpitis, dental cyst, oral carcinoma etc. due to poor knowledge about oro-dental health care and improper and inadequate practice of maintaining oro-dental hygiene. There are no treatment facilities for the dental patients in the rural areas as well as inadequate facilities in the upazilla level, so it is very difficult to provide proper dental treatment in the rural areas[2]. Among the dental problems, 86% suffer from toothache, 69% gum bleeding, 49% suffer from swelling of gum[3]. It has shown that by the age of 12 years 46% children suffer from at least one decay [4]. Incidence of gingivitis is common

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around 6-7 years of age, when eruption of permanent teeth begins[5].

According to World Health Organization almost 100% adult and 60-90% of school going children have dental cavities. Oral diseases are also higher among poor and disadvantagedpopulation group[6]. Oro-dental diseases are more common in young children due to their food habit and lack of proper attention by their parents. It is generally assumed that good oral hygiene practices are best acquired in childhood, when they may be integrated with other developing health habits. The 6-12 years age stage is marked by acceptance of increasing responsibilities of the children for oral hygiene and behavioral change activities with the help of active involvement and supervision of parents[7].

It has been shown that there is an association between periodontal and systematic diseases. Growth rate is low among the children of dental caries. As oral health is essential component of general health and recognized to be equally important in relation to general health, measures to be taken to prevent oral and periodontal diseases and thereby ensure good oral health[8]. Therefore, this study was conducted among the primary school children in a selected rural community of Polasbari Upazilla under Gaibandha District to assess the knowledge and practice of Oro-dental care and Oro-dental health condition.

MATERIALS AND METHODS

This cross sectional descriptive study was carried out in three rural primary schools (Mohadipur, Shimulia & Bangolia Govt. primary school) at Mohadipur union under Palashbari upazilla in Gaibandha district. Period of study was 1st January to 30th June, 2013 and we followed cluster sampling procedure and data was collected from all the students of selected three primary schools by face to face interview using pretested questionnaire. Oro-dental condition was examined by inspection and using torch & tongue depressor. Before going for data collection 4th year MBBS students of Rangpur Medical College(Batch B) were taught and trained for data collection and examination. After collection of data, these were checked, verified and edited manually to reduce error. Data was processed manually and master table had been prepared and then compilation done by using scientific calculator.

RESULTS

Out of 317 respondents 55.21% were male & 44.79% were female. Male female ratio was 1:0.81. Regarding age of the respondents 44.79% were 10 yrs, 16.72% were 9 yrs, 16.40% were in 8 yrs, 10.41% were 7 yrs and 11.67% were 6 yrs. The mean age was 8.73 years with 1.42 standard deviation. Regarding educational status 26% read in class V, 17% class IV , 20% in class III , 18% in class II and 19% in class I. Among the respondents 94.32% were Muslim and 5.68% were Hindu. Regarding respondent's father's occupation 31.29% were farmer, 18.71% were businessman, 16.13% were service holder, 15.23% were day laborer, 7.74% were driver, 6.77% were rickshaw puller and only 4.13% were carpenter. Almost all 95.90% respondent's mothers were house wife. Regarding housing condition 37.85% had kacha, 40.38% had semi pucca and 17.04% had pucca house. Regarding the source of drinking water almost all 99.38% use tube well (Table I).

Table I: Distribution of respondents by socio demographic characteristics (n= 317)

Characteristics	Respondents	%
Sex:		
Male	175	55.21
Female	142	44.79
Age (Yrs):		
6	37	11.67
7	33	10.41
8	52	16.40
9	53	16.72
10	142	44.79
Mean age 8.73 (yrs)	and S.D 1.42	
Education status:		
Class I	60	19
Class II	56	18
Class III	63	20
Class IV	57	17
Class V	81	26
Housing condition:		
Kacha	120	37.85
Semi pucca	128	40.38
Pucca	54	17.04
Others	15	4.73
Source of drinking water:		
Tube well	315	99.38
Pond	1	0.31
Supply water	1	0.31

The knowledge about methods of oral health care, majority (87.07%) mentioned tooth brushing, 40.38% mentioned washing of mouth, 11.04% mentioned gurgling, 2.84% mentioned gum & teeth massaging by finger. Only a few (0.63%) mentioned others than the above methods (Table II).

Table II: Respondent's knowledge about oral health care*

Knowledge	Respondents	%
Tooth brushing	276	87.07
Washing of mouth	128	40.38
Gurgling	35	11.04
Gum massage	9	2.84
Others	2	0.63

***Multiple Responses**

Regarding the knowledge about oral health problems 24.92% mentioned oral sore, 25.87% mentioned gum bleeding, 9.46% mentioned angular stomatities, 6.94% mentioned ulceration of tongue , 3.47% mentioned whitish patch&4.41% mentioned others. But 34.38% had no knowledge about oral health problems (Table III).

Table III: Knowledge about oral health problem*

Knowledge	Respondents	%
Oral sore	79	24.92
Gum bleeding	82	25.87
Angular stomatitis	30	9.46
Ulceration of tongue	22	6.94
Whitish patch	11	3.47
Others	14	4.41
No knowledge	109	34.38

***Multiple Responses**

The knowledge about prevention of oral health problems was shown in Table IV. No knowledge was found in 36.59% children, among others 59% mentioned regular mouth washing, 13% mentioned gurgling, 2.2% mentioned salt with Luke warm water gurgling and the rest 0.95% mentioned gurgling with mouth wash.

Table IV: Knowledge about prevention of oral health problem*

Knowledge of	Respondent	%
Regular mouth wash	187	59
Gurgling	41	13
Salt with Luke warm water gurgling	7	2.2
Gargling with mouth wash	3	0.95
No knowledge	116	36.59

***Multiple Responses**

Considering the knowledge about dental health care, almost all of the respondents (97.48%) mentioned regular tooth brushing, 4.85% mentioned using of toothpick, and 3.79% mentioned gum massaging. Only 0.63%

mentioned using of dental floss. Among the 317 respondents, 69.40% had the knowledge about dental health problem. Among them 35.33% mentioned toothache, 40.38% mentioned dental carries, 25.24% mentioned gum bleeding, 5.68% mentioned gum ulceration, 8.83% mentioned gum swelling, 2.21% mentioned discharge from gum, 0.95% mentioned dental plaque, and only 0.32% mentioned foul odour (Table V).

Table V: Knowledge about dental health care*

Knowledge	Respondent	%
About dental health care:		
Regular tooth brushing	309	97.48
Use of tooth pick	15	4.85
Gum massaging	12	3.79
Use of dental floss	9	0.63
About dental health problem-		
Toothache	112	35.33
Dental caries	128	40.38
Gum bleeding	80	25.24
Gum ulceration	19	5.68
Gum swelling	28	8.83
Discharge from gum	7	2.21
Dental plaque	3	0.95
Foul odour	1	0.45

***Multiple Responses**

Regarding the habit of mouth washing, 98.11% washed their mouth regularly, 1.26% washed their mouth occasionally and the rest (0.63%) respondents had no habit of washing mouth. Among them, 94.32% washed their mouth after rising from bed, 33.76% before going to bed, 11.35% after coming from school, 8.20% before eating, 7.89% after eating and 3.47% after playing (Table VI).

Table VI : Habit of mouth washing

Habit	Respondents	%
Regularly mouth wash	311	98.11
Occasionally m. wash	4	1.26
No habit of m. wash	2	0.63
Time of washing*:		
After rising from bed	299	94.32
Before going to bed	107	33.76
After coming from school	36	11.35
Before eating	26	8.20
After eating	25	7.89
After playing	11	3.47

***Multiple Responses**

Almost all the respondents 99.36% clean their teeth regularly and only 0.64% clean occasionally. Among the respondent 42.22% cleaned once daily, 43.17% cleaned their teeth twice daily and14.51% cleaned their teeth more than two times daily.Regarding the practice about time of cleaning teeth, 98.42% cleaned their teeth after rising from bed, 47% cleaned before going to bed and remaining 4.73%, 7.89%, 10.73% and 2.52% cleaned their teeth before eating, after eating, after coming from school after playing respectively. Among the respondent almost all respondents (89.16%) used tooth-brush, 8.83% used finger, 1.57% used meswake and only 0.31% used others. Regarding the material used in teeth cleaning 56.78% mentioned tooth-paste, 35.33% mentioned tooth-powder, 4.10% mentioned charcoal, and 3. 78% mentioned ash-dust (Table VII).

Table VII: Habit of teeth cleaning

Practice	Frequency	%
Regularity of cleaning:		
Regularly	315	99.36
Occasionally	2	0.64
Frequency of cleaning:		
Once daily	133	42.22
Twice daily	136	43.17
More than two times daily		46 14.61
Time of cleaning*:		
After rising from bed	312	98.42
Before going to bed	149	47
Before eating	15	4.73
After eating	25	7.89
After coming to school	34	10.73
After playing	8	2.52
Methods of cleaning:		
Using tooth brush	283	89.29
Using finger	28	8.83
Meswake	5	1.57
Others way	1	0.31
Material used for tooth cleaning:		
Tooth paste	180	56.78
Tooth powder	112	35.33
Charcoal	13	4.10
Ash dust	12	3.79

***Multiple Responses**

Regarding the practice about cleaning of inter-dental space, among the 317 respondents, 57.10% cleaned their inter-dental space and 42.90% did not clean. Out of 181 respondents, 148 respondents (81.77%) used toothpick, 14 (7.73%) used dental floss and remaining 19 (10.50%) used others (Table VIII).

Table VIII: Practice of cleaning inter-dental space

Practice	Respondents	%
Cleaned	181	57.10
Did not clean	136	42.90
Material used for cleaning		
Tooth pick	148	81.76
Dental floss	14	7.73
Others	19	10.50

Among the respondents 41.96% had the habit of massaging gum and 58.04% did not have the habit. Among them 57.90% massaged their gum by finger, 37.60% massaged by brush, 2.25% massaged by bamboo stick and remaining 2.25% massaged by cloths (Table IX).

Table IX: Practice of gum massaging

Practice	Respondents	%
Gum massaged	133	41.96
Gum did not massaged	18458.04	
Methods of gum	**massaging**	**N-133**
By finger	77	57.90
By brush	50	37.60
By bamboo stick	3	2.25
By cloth	3	2.25

N= number of respondents

Among the respondents, 96.85% had the habit of taking chocolate, biscuit, ice-cream etc. and the remaining 3.15% did not have the habit of taking those. Among the 307 respondent 51.79% cleaned their mouth after taking chocolate, biscuit, ice-cream etc. The remaining 48.21% did not clean their mouth after taking those (Table X).

Table X: Chocholet, biscuit, icecream eating habit

Habit	Respondents	%
Habit of eating	307	96.85
No habit of eating	10	3.15
Habit of cleaning mouth after eating chocolet, biscuit, icecream		**N-307**
Cleaned after eating	159	51.79
No habit of cleaning	148	48.21

N= number of respondents

Among the 317 respondents only 23.34% respondents had previous experience of dental problem and the majority of the respondents 76.66% did not have any previous experience. Among the 74 respondents, 24 respondents faced toothache, 13 respondents faced gum bleeding, 2 respondents faced tooth break, 13

respondents faced dental caries, 1 respondent faced gum swelling, 3 respondents faced gum pain & 1 respondent faced extra teeth. Among the 74 respondents, 36 respondents (48.65%) had consulted with the dentist to solve their problem and remaining 38 respondents (51.35%) did not visit the dentist (Table XI).

Table XI: Past experience of dental problem

Past dental problem	Respondents	%
Past experience present	74	23.34
Past experience absent	243	76.66
Types of past problem	**N=74**	
Toothache	24	32
Gum bleeding	13	17.57
Tooth break	13	17.57
Dental caries	19	25.67
Gum swelling	1	1.35
Pain in gum	3	4.05
Extra teeth	1	1.35
Solving Problem by dentist		**N=74**
Consult with dentist	36	48.65
Did not consult	38	51.35

N= number of respondents

Data regarding the assessment of oro-dental condition of the study population is shown in table XII.

Table XII: Assessment of Oro-dental condition of the respondents

Condition	Respondents	%
Gum		
Healthy	306	96.57
Unhealthy	11	3.47
Tongue		
Healthy	283	89.27
Coated	27	8.52
Ulcerated	7	2.21
Oral cavity		
Healthy	310	97.79
Ulcerative	1	0.32
Whitish patch	6	1.89
Teeth		
Normal	142	44.79
Caries	78	24.61
Staining	74	23.34
Coating	23	7.26
Foul smelling		
Absent	294	92.74
Present	23	7.26

DISCUSSION

In this study the sample size was 317. Respondents were the primary school students of rural community and there age was within 6 to 10 years. Among the respondents father 31.29% were farmer, 18.71% were businessman, 16.13% were service holder and only 15.23% were day labour. Among them 40.38% live in semi pucca house,17.04% live in pucca house and almost all (99.38%) use tube well water. These indicate there socio-economic condition was satisfactory. They knew that oral health can be maintained by tooth brushing (87.07%) and by mouth washing (40.38%) and 63.41% knew about preventive method of oral health problem. As 36.59% respondent had no knowledge about prevention of oral health problem. So measures to be taken to improve their knowledge. Considering the knowledge about dental health care 97.48% mentioned regular tooth brushing which was similar to the study conducted in Bangladesh by Khan AM (99%)[3].

Practice of mouth washing after rising from bed was satisfactory (94.32%) but it was not satisfactory before going to bed (33.76%), before eating (8.2%) and after eating (7.89%). Practice of teeth cleaning was satisfactory after rising from bed (98.42%), but only 47% clean their teeth before going to bed. Similarly practice of cleaning teeth before eating and after eating (4.73% & 7.89%) was not also satisfactory. So, emphasis to be given on mouth washing and teeth cleaning before going to bed and before & after eating. In this study regarding the frequency of teeth cleaning 44.22% cleaned their teeth once in a day and 43.17% cleaned twice daily. Similar result had been observed by Zhu et al.[9] but they have got the results regarding frequency of teeth cleaning twice daily. However, Harikiran AG et al.[10]and

by Perveen et al[11] have demonstrated slightly less value (38.5%. and 38.9% respectively) than our result regarding frequency of teeth cleaning twice daily. In our study Almost all respondent clean their teeth either by tooth paste (56.78%) or tooth powder (35.33%) but majority (58.04%) did not have the habit of gum massaging.

Almost all respondent (96.85%) had the habit of eating chocolate, biscuit, ice cream, but 48.21% did not clean their teeth after eating these things. Most of the respondent had healthy gum, healthy tongue, normal tonsil, but only 44.79% had normal teeth, 24.60% had dental caries, and 23.34% had staining teeth. This study result may not consistent with national finding as because of small sample size, satisfactory socio-economic condition, massage regarding personal hygiene given by their teachers and is purposively selected place for repeated RFST programme, data collection and health education programme for the 4th yr. MBBS students of Rangpur Medical College from many years. These types of activities may be the cause of satisfactory knowledge of the children.

CONCLUSION

In our study we found that the primary school going children have satisfactory knowledge about oro-dental care and oro-dental health condition. However, their practice as a whole was not satisfactory. As a result some of them are having unhealthy oro-dental condition. In order to reduce oro-dental health problem existing school health program should be increased with special emphasis on practice of oro-dental health care and they also should be encouraged to regular check up by dentists.

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Original article

Caudal Anaesthesia in Children under Ketamine Sedation: A prospective study of 211 Cases

Maruf Al A[1], Mohiuddin Md[2], Nazrina S[3]

ABSTRACT

INTRODUCTION: *Caudal anaesthesia is a common procedure for children undergoing infra umbilical surgery, mostly performed in conjunction with general anaesthesia. To avoid the complications of general anaesthesia, caudal block in sedated, spontaneously breathing patients might be a safe alternative.* ***OBJECTIVE:*** *The study was designed to evaluate the efficacy and side effects of ketamine sedation during caudal anaesthesia for infrabumbilical surgery in a case series of children.* ***METHODS:*** *This prospective type of descriptive study was done on 211 children of both sexes, ASA (American Society of Anaesthesiologists) grade I and II, aged 1-10 years scheduled for infra umbilical surgery. Pre-medication consisted of injection atropine 0.01mg/kg body weight, sedation was induced with injection ketamine 1 mg/kg body weight and injection diazepam 0.01 mg/kg body weight. Caudal block was performed with injection bupivacaine 0.25% 1 ml/kg body weight.* ***RESULTS:*** *Data were obtained from 211 children. Mean age was 5.37 ± 2.13 (mean±SD) years, mean body weight was 15.26±4.79 (mean±SD) kg.10.0 (4.8, 15.3) kg. Caudal block was successful in 98.11%. The incidences of side effects of sedation were; transient apnoea 6(2.84%), desaturation (SpO2<93%) 10(4.74%), stridor 8(3.79%), laryngospasm 5(2.37%) and agitation 7(3.32%). Side effects were transient, self limiting and managed conservatively. There were no serious adverse events reported in any child. The mean surgical time was 53.24±8.39 (mean ± SD) minutes and recovery time was 95.17±10.21 (mean ± SD) minutes. The post operative period was uneventful.* ***CONCLUSION:*** *Caudal anaesthesia under sedation with ketamine and diazepam is associated with high success rates and a low incidence of side effects for paediatric infra umbilical surgery.*

KEYWORDS: Children, caudal anaesthesia, sedation, ketamine, diazepam, complications.

INTRODUCTION

Pediatric regional anesthesia techniques comprised primarily of neuroaxial (spinal, epidural, or caudal) injections and less commonly peripheral nerve blocks, have become increasingly popular. This may be largely due to improvements in administration equipment and local anesthetics[1,2,3].Caudal epidural block is one of the most preferred regional anaesthesia methods for infants and children who need operations under umbilical level, for example urogenital, rectal, inguinal, lower extremity surgeries etc. Caudal anesthesia is usually performed in children after an inhaled or intravenous induction. It is a useful alternative of general anesthesia and for providing postoperative analgesia after genital, lower abdominal, and lower limb operations[4]. Even if serious complications of general anaesthesia with modern anaesthetic agents are rare but the risk of postoperative apnoea is significant, especially in infants born preterm

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and operated upon before 46 weeks of post-conceptual age[5]. Therefore, surgery under caudal block in sedated, spontaneously breathing infants and children might be a safe alternative. Some case reports[6,7] and only a few small studies have been published on caudal anaesthesia as a sole anaesthetic technique[8,9,10]. Children usually cannot tolerate the administration of regional anesthesia injections unless they are under general anesthesia or deeply sedated

Ketamine has been widely used worldwide since its introduction in 1970 and its safety profile has proven excellent in various settings[11-17]. Ketamine produces a unique state of cortical dissociation that allows painful procedures to be done more consistently and effectively than with other procedural sedation and analgesia drugs. This state of "dissociative sedation"[18,19] is characterized by profound analgesia, sedation, amnesia, and immobilization, and can be rapidly and reliably produced with intravenous or intramuscular administration.

We therefore designed a study to assess the outcome of ketamine sedation during caudal anaesthesia for infrabumbilical surgery in a case series of children. Side effects of sedation also analyzed in the study.

MATERIALS AND METHODS

This prospective type of descriptive study was conducted in Prime Medical College and Hospital, Rangpur and Combined Military Hospital, Rangpur in one calendar year from July, 2012 to June 2013. 211 children of both sexes ASA grade I and II, aged 1-10 years undergoing infra umbilical surgery were enrolled in this study. Exclusion criteria were anatomic abnormalities in the caudal region, history of local anaesthetic allergy, anatomic upper airway abnormalities and parental refusal to participate in the study.

Total procedure was explained to parents and informed consent was obtained from the parents of all children. Children were instructed to fast 6 hours after normal meal and 2 hours after clear liquid before operation. On the operation day child was brought to operation theatre and baseline vital parameters; pulse, blood pressure, respiratory rate and oxygen saturation (SpO2) were recorded. A reliable intravenous access was established in every child. Injection atropine 0.01 mg/kg body weight was given intravenously to every child to prevent excessive secretion. A loading dose of injection ketamine 1 mg/kg body weight was given intravenously over 60 seconds. Injection diazepam 0.1 mg/kg body weight was given intravenously to prevent agitation and nightmares. The maintenance of spontaneous respiration was verified and oxygen was supplemented via facemask. Under all aseptic precautions cauadal anaesthsia was administered placing patient in left lateral position. Injection bupivacaine 0.25% was injected into caudal space at dose 1 ml/kg body weight. The patients were turned in supine position immediately after caudal anaesthesia. Skin incision followed after 15 minutes of caudal anaesthesia. Insufficient surgical block resulted in general anaesthesia with controlled ventilation. Additional incremental doses of keatmine 0.5 mg/kg body weight was given intravenously if initial sedation was inadequate. Patient's pulse, blood pressure, SpO2 were observed and recorded through out operation period. Side effects of ketamine sedation like transient apnoea (cessation of respiration more than 15 seconds), desaturation (SpO2 less than 93%), laryngospasm, stridor and agitation were observed, recorded and managed.

RESULTS

Data were collected from 211 consecutive patients who underwent caudal anaesthesia for infra umbilical surgery. No parental refusal was observed through out study period. Demography of study population is shown in table I. Among study population male were 190 (90.05%) and female were 21 (9.95%). ASA physical status I were 178 (84.36%) and II were 33 (13.27%). Mean age of children was 5.37±2.13 (mean ± SD) years and mean body weight was 15.26±4.79 (mean ± SD).

Table I: Demography of study population (n=211)

Characteristics	Number (%)
Male	190(90.05)
Female	21(9.95)
ASA physical status I	178(84.36)
ASA physical status II	33(15.64)

Different types of surgical procedures is presented in table II. Types of surgery were; circumcision 73 (34.60%), inguinal hernia repair 63 (29.86%), orthopaedic lower limb procedures 28 (13.27%), hypospadius repair 26 (12.32%), hydrocele repair 11 (5.21%) and orchidopexy 10 (4.74%).73 (34.60%) patients under go surgical procedure for circumcision, frequency of inguinal hernia repair, orthopaedic lower limb procedure, hypospadias repair, hydrocele repair and orchidopexy are 63, 28, 26, 11, and 10 shown in Table II.

Table II: Distribution of study population according to pattern of surgery (n=211)

Pattern of Surgery	Number(%)
Circumcisions	73(34.60)
Inguinal hernia repair	63(29.86)
Orthopaedic lower limb procedure	28(13.27)
Hypospadias repair	26(12.32)
Hydrocele repair	11(5.21)
Orchidopexy	10(4.74)

n = total number of subjects

Peroperative anaesthetic events is shown in table III. Caudal anaesthesia was successful in 207 (98.11%), Insufficient block was found in 4 (1.89%) patients due to poor anatomical landmarks and subsequent impossibility of correct needle placement. Self limiting movements of none blocked were documented in 30 (14.21%) and 12(5.68%) of those patients required further sedation.

Table III: Distribution of study population according to the events regarding anaesthesia (n=211)

Events	Number
Successful block	207(98.11%)
Insufficient block	04(1.89%)
Self limiting movements of non blocked area	30(14.21%)
Requirement of further sedation	12(5.68%)

The incidences of side effects of sedation are shown in table IV. Transient apnoea after induction of sedation recorded in 6(2.84%) patients and those required assisted ventilation Twith bag, valve-mask until spontaneous respiration reestablished. Desaturation (SpO2<93%) was noticed in 10(4.74%) patients, Stridor observed in 8(3.79%) children and laryngospasm observed in 5(2.37%) children. Agitation was seen in 7(3.32%) children and they were treated with additional dose of diazepam. There were no serious adverse events reported in any child.

Table IV: Incidence of side effect of sedation among study population(n=211)

Side effects	Number(%)
Transient apnoea	6(2.84)
Desaturation	10(4.74)
Stridor	8(3.79)
Laryngospasm	5(2.37)
Agitation	7(3.32)

The mean surgical time was 53.24±8.39 (mean ± SD) minutes and recovery time was 95.17±10.21 (mean ± SD) minutes. The post operative period was uneventful in each patient.

Table V: Anaesthesia related data among study population (n=211)

Data	Values (mean ± SD)
Duration of surgical procedure (minutes)	53.24±8.39
Recovery time (minutes)	95.17±10.21

DISCUSSION

A large number of children require inguinal, anorectal and lower extremity surgery. The ease of placing caudal block, its safety and reliability in providing are well known[20]. The success rate is high and complications are rare and minor[21,22,23]. An awake, excited and crying child would be definitely be less suitable for regional anesthesia technique unless they are under deeply sedated or under general anaesthesia. One of the most important topics under discussion is to imply regional anaesthesia techniques under general anaesthesia or not. Vast majority of children will definitely need sedation or general anaesthesia during regional anaesthesia technique. Krane et al[24]. published that regional blocks would be more safe and ethical in an anaesthetized child. It is suggested that caudal block may be stressful for the awake child, is associated with a significant failure rate and requires experienced performers[9,25]. Sedation during the performance of the regional bock might minimize these limitations.

In this study, sedation regimen; ketamine and diazepam provided optimal conditions for caudal anaesthesia represented success rate more than 98%. General anaesthesia regarded to be safe, but the risk of post operative apnoea and hypoxaemia is not negligible in infants who are born preterm and operated upon before 46 weeks of post conceptual age[26-30]. The rate of apnoea in this study was very low (2.84%), short apnoea after induction of sedation required short time bag-valve-mask ventilation until spontaneous respiration regained. The specific dangers of airway compromise are suggested to be less with ketamine[31,32,33]. Incidences of desaturation (SpO2<93%) found in 10(4.74%) children, managed with supplemental oxygen. The 13 (6.16%) children, who suffered from laryngospasm and stridor, could be treated conservatively. The fewer incidences of airway problems and desaturation supported the safety of ketamine administration regarding airway and hypoxia.[14,17,34] The potential for adverse events may be increased when three or more sedating medications are administered[35,36]. The safety of this sedation regimen was published in children underwent magnetic resonance imaging[37]. Though diazepam was given, few incidences of agitation were observed in this study and those were transient and minor inconvenience.

Study conducted by Sleth JC et al,[38] showed successful performance of caudal anaesthesia in remote locations under ketamine sedation. Caudal anesthesia with sedation also showed effective for inguinal hernia repair in high risk neonates[39].

Recovery time from sedation was more 95.17±10.21(mean ± SD) minutes in this study. Keatmine is safe and useful for procedural sedation agent but it delays recovery when used with long acting benzodiazepines like diazepam.[37] A limitation of this study was that we could not measure end tidal carbon dioxide (EtCO2). For measurement of EtCO2, require special sensor containing facemask.

CONCLUSION

Caudal block under ketamine sedation is a safe

and effective choice for paediatric infra umbilical surgery. It is possible to provide sedation to produce satisfactory conditions for children requiring caudal anaesthesia and surgical procedure. Ketamine sedation is effective and has fewer side effects.

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Original article

A comparative study of volar locking plate versus percutaneus K wire fixation in distal radius fractures among elderly.

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ABSTRACT

INTRODUCTION: *Distal radius fracture is a common injury and without proper treatment leads to high functional impairment and frequent complications.* ***OBJECTIVES:*** *To compare the functional and radiological outcome among volar locking plate and percutaneous K-wire fixation group.* ***MATERIALS AND METHODS:*** *This is a multicentered, retrospective study in Rangpur division during the period of December 2011 to May 2013. Total 36 patients were studied by dividing into two groups- volar locking plate (n=18) and percutaneous K-wire fixation group (n=18). The patients were assessed with the use of the modified Green and O'Brien scoring system. The functional outcomes and radiological results were obtained and compared between these two groups.* ***RESULTS:*** *Almost all fractures were healed within three months. At final follow-up, radial shortening (0.6±0.9 vs2.1±1.5), radial inclination(21.0±3.1 vs15.1±1.3) and dorsal tilt (0.2±0.1vs 8.8±3.9) were better in the VLP group compared with the PKW group. There were two complications (11.11%) in volar locking plate group and four complications (22.22%) in percutaneous K-wire fixation group. At twelve months follow up, the range of movement of wrist was very satisfactory and the mean grip strength was 90% in VLP group and 81% in PKW group.* ***CONCLUSION:*** *Volar locking plate fixation is better than percutaneous K-wire fixation in distal radius fracture among elderly.*

KEY WORDS: Distal radius fractures, volar locking plate, percutaneous K-wire fixation.

INTRODUCTION

Distal radius fractures(DRF) with dorsal angulations are a serious medical problem[1]. DRF are the sixth most commonly occurring fracture[2]. The incidence of these injuries is expected to increase with an aging population[1]. Distal radial fracture in adults are usually the result of high-energy trauma and have intra-articular involvement. The goal of treatment should be anatomical reduction and stable fixation in order to minimize the risk of post traumatic arthritis. At the present time, there are two generally accepted methods of fixation. Before the advent of volar fixed-angle locking screw and plate systems, the more popular method of treatment was external fixation. External fixation is often supplemented with percutaneous fixation with Kirschner wires to maintain the reduction of the articular fragments[3].

Distal radial fractures tend to suffer secondary displacement after conservative treatment. Because the distal radius is important in the kinematics of the radiocarpal and radioulnar joints, open reduction of the articular surface and restoration of the radial length, volar angulation, and radial inclination are the

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prerequisites for good clinical outcome. Because this is the foundation of the wrist joint and an indispensable part of ligamentous support, reconstruction of articular congruity and stable fixation reduces the incidence of post-traumatic osteoarthritis and allows early functional rehabilitation[4].

The ideal method of fracture fixation should produce good results and be able to be mastered by most orthopaedic surgeons. So far, most studies have evaluated limited numbers of fractures that have been treated in a variety of ways. The purpose of the present study is to test the hypothesis that open reduction and plate fixation is a better method than with percutaneous K-wire fixation for the treatment of distal radius fractures in adults. The two treatment groups were compared with use of standardized clinical and radiographic measures. We undertook this study to evaluate the functional and radiological results of treating the dorsal unstable distal radius with a volar locking plate and PKW.

MATERIALS AND METHODS

This is a multicentered retrospective study conducting in different private hospital in Rangpur division. The study period was December 2011 to May 2013. Total 36 adult patients were selected who had radiologically confirmed distal radial fracture and did not have multiple fracture sides. Among them 18 patients treated with volar locking plating (VLP) and rest of the patients treated by percutaneous K-wiring (PKW). The patients were matched according to age (within five years) and sex. All patients were followed-up for at least 12 months after discharge from the hospital. All statistical analysis were done using SPSS version 20.0, result were expressed as mean, standard deviation or in percentage as appropriate.

VLP procedure9

Under anaesthesia a tourniquet was used in all cases. Via a volar approach the radius was approached through the bed of flexor carpi radialis tendon. The carpal tunnel was opened to improve the exposure of the fracturein some cases. After release of the pronator quadratus muscle from its radial insertion, the fracture site and the palmar surface of the distal radius were exposed. Fracture reduction was temporarily stabilised with K-wires. The fixed-angle 2.7-mm locking plate was placed on the volar cortex and fixed using the standard technique of screw fixation at gliding hole to allow for appropriate positioning. Depending upon the fracture, fragments were indirectly reduced using a combination of direct pressure and ligamentotaxis before inserting the distal screws. When feasible, the pronator quadratus muscle was repaired to protect the flexor tendons. Postoperatively, the injured wrist was immobilised in a below-elbow splint or cast for approximately two weeks. Physiotherapy after cast removal was carried out routinely.

PKW procedure9

Under anaesthesiathe fracture was reduced with traction and direct manipulation. To maintain the reduction,few K-wires were then used. At least three K-wires were used to secure the radial styloid to the diaphysis. Intraoperative fluoroscopy was used to confirm adequate reduction and pin position. Most of the K-wires were placed under the skin. A below-elbow cast was applied for four to six weeks. Postoperatively, finger ROM was encouraged immediately. All the K-wires were removed under local anaesthesiaat eight to ten weeks after surgery. Professional physiotherapy after cast removal was performed. Strengthening was initiated as ROM improved and symptoms returned to normal.

Standard anteroposterior and lateral radiographs were taken for radiological evaluation including dorsal tilt, radial inclination, and radial shortening at two, four, eight, 12 weeks and at final follow-up. The dorsal tilt was expressed as the number of degrees from the neutral position. Fracture reduction was defined as acceptable when dorsal tilt was less than ten degrees, radial shortening was not more than two millimetres and articular incongruity was not more than one millimetre. Radiographic healing was interpreted by the attending surgeon at each follow-up and was verified by the first author of this study. Radiographic healing was defined as evidence of bridging callus across the fracture sites or the obliteration of the fracture lines within three months. Patients with incomplete callus bridging four months after surgery were considered to have delayed healing. Patients without radiographic evidence six months after surgery were considered to have fracture nonunion.Functional assessment included measurement of active range of wrist flexion, extension, supination, and pronation using a goniometer. Grip power was measured with a dynamometer. At the last follow-up, we evaluated the subjective and objective data by using the modified Green and O'Brien score [Appendix-1]. An overall score of 90–100 points ranked as excellent, 80–89 points as good, 65–79 points as fair, and <65 points as poor results. We defined excellent and good results as a satisfactory outcome. Fair and poor results were considered an unsatisfactory outcome.

RESULTS

Volar locking plating (VLP) and Percutaneous K-wiring (PKW) fixation groups were having similar in injury mechanism shown in table I.

Table I: Aetiology of fracture of study population (n=36).

Injury mechanism	simple fall	Vechular trauma	Other trauma
VLP	11 (61.11%)	4 (22.22%)	3 (16.66%)
PKW	12(66.66)	3 (16.66%)	3 (16.66%)

VLP- volar locking plating, PKW- percutaneous K-wiring.

Injury-surgery interval time among the two groups were shown in table II.

Table II: Injury-surgery interval time among study population (n=36).

Injury-surgery interval	VLP	PKW
<4 hours	1 (5.55%	1 (5.55%)
4-8 hours	4 (22.22%)	5 27.77%)
>8 hours	13 (72.22%)	12 (66.66%)

VLP- volar locking plating, PKW- percutaneous K-wiring.

The operative time was less in the PKW group in comparison to the VLP group. Again, hospital stay incase of PKW group was lower (2.8 ± 1.3 days, range 1–5 days) than the VLP group (3.2±1.3 days, range 1–6 days) group. In both the VLP and PKW groups healing time of all fractures took about three months. The mean healing time was 10.2±2.2 and 9.6±3.1 weeks in VLP and PKW groups repectively (Table III).

Table III: Operative time, hospital stay and healing time in the two groups.

variables	VLP	PKW
Operative time	57±8.9 (min)	26±5.3 (min)
Hospital stay	3.2±1.3 (days)	2.8±1.3 (days)
Healing time	10.2±2.2 (weeks)	9.6±3.1 (weeks)

VLP- volar locking plating, PKW- percutaneous K-wiring

In the VLP group, satisfactory reduction was achieved intraoperatively in almost all fractures, however 3 fractures (16.66%) had loss of reduction at final follow-up. In the PKW group, 3 fractures (16.66%) had loss of reduction preoperatively and at final follow-up 8 fractures (44.44%) had loss of reduction (Table IV).

Table IV: Loss of reduction on initial preoperative and final follow-up.

Loss of reduction	VLP	PKW
Initial preoperative	0 (0%)	3 (16.66%)
Final follow-up	3 (16.66%)	8 (44.44%)

VLP- volar locking plating, PKW- percutaneous K-wiring

At final follow-up, radial shortening, radial inclination and dorsal tilt were better in the VLP group compared with the PKW group (Table V).

Table V: Outcome of study population according to radiological result (n=36).

Measurement	Radial shorting (mm)	Dorsal tilt (degree)	Radial inclination (degree)
VLP	0.6±0.9	0.2±0.1	21.0±3.1
PKW	2.1±1.5	8.8±3.9	15.1±1.3

VLP- volar locking plating, PKW- percutaneous K-wiring

The mean of active ranges of motion and grip strength at final follow-up for the two groups are shown in Table VI. The mean values were almost similar between the two groups for the grip strength. However, ulnar deviation, extension and flexion were better in the VLP group compared with the PKW group. According to modified Green and O'Brien criteria, the mean score was 88.0 ± 8.3 points (range 65–100) for the VLP group and 82.3 ± 9.8 points (range 50–100) for the PKW groups. Satisfactory outcome was achieved in 15 fractures (83.3%) for the VLP group. Satisfactory outcome was achieved in 13 fractures (72.22%) for the PKW group. The VLP group showed a trend of increased rate of satisfactory outcome compared with the PKW group (Table VI)

Table VI: Functional outcome of study population (n=36).

Measures	VLP (%)	PKW(%)
Extension, degree (%)	62.3±9.8 (97)	47.8±12.3 (76)
Flexion, degree (%)	70.1±7.8 (97)	51.2±9.9 (73)
Pronation, degree (%)	83.2±7.4 (94)	83.1±7.9 (94)
Supination, degree (%)	84.2±7.2 (97)	74.5±8.9 (97)
Radial deviation, degree (%)	24.8±7.8 (34)	22.3±9.6 (95)
Ulnar deviation, degree (%)	43.1±6.4 (94)	31.2±7.9 (92)
Grip strength, kp (%)	28.5±6.7 (90)	25.1±1.2 (81)

VLP- volar locking plating, PKW- percutaneous K-wiring

DISCUSSION

Distal radius fractures are among the most common fractures encountered by orthopaedic surgeons as they are the commonest fractures in the elderly individuals.Following a distal radial fracture, the attainment and maintenance of anatomical reduction of the articular surface is

crucial to the preservation of wrist function. Factors such as fracture types, associated injuries, bone quality and general health of the patients should be considered when choosing treatment. Irrespective of the method used to treat distal radial fractures, we know that the most important factor that influence long-term results are early mobilisation and restoration of normal anatomy[5].

Trumble et al.[6] stated that the degree to which articular step-off, gapping between fragments, and radial shortening could improve with surgery correlates strongly with improved outcome. Hence, a treatment method that was more likely to achieve these goals will result in better function.

In our study mean age of the subjects was 56 years and we have used volar locking plates method for treating displaced distal radial fractures. The similar methods was also used in elderly patient by Stevenson et al.[7] where 33 patients with mean age 49.5 years having displaced distal radial fractures were treated by volar locking plates.

We have observed that open reduction and platefixation is better than PKW. Similar observation was demonstrated by Leung Fet al.[8] Moreover, at 12 months follow up by Green and O'Brien criteria score the outcome was satisfactory in our study . Leung Fet al.[8] also observed better result in the same group, however they have assessed with the Gartland and Werley clinical grading system and the arthritis grade.

According to modified Green and O'Brien criteria, the mean score was 88.0 ± 8.3 points (range 65–100) for the VLP group and 82.3 ± 9.8 points (range 50–100) for the PKW groups.

Satisfactory outcome was achieved in 15 fractures (83.3%) for the VLP group. Satisfactory outcome was achieved in 13 fractures (72.22%) for the PKW group. Satisfactory outcome (90.3%) and low complication rate (3.2%) were reported in volar locking plating procedure by Lee YSet al.[9] and Marcheix et al.[10] for treating Colles' fractures among the elderly. Again, Komano M et al.[11] used VLP procedure where they had satisfactory outcome in this group. However, they had used Gartland and worley score for demonstrating functional outcome. Moreover, Orbay and Fernandez[12,13] also reported no secondary displacement while treating with volar fixation using distal volar radius plate..

In addition to restoring anatomy, the other advantage of using locking plates was improved fracture stability. Our experience showed the subchondral bone of the distal radius could be adequately maintained by the fixed angled locking screws. The VLP group had greater ability to return to their previous work in three months after surgery when compared to the PKW group. We found that the locking plate gave very stable fixation with early wrist range of motion. The patients treated by this method had a greater ability to return to work and previous activities in a shorter time.

Again, high level of satisfactory outcome (83.3%) determine that open reduction and internal fixation using volar locking plating is an adequate method for treating distal radial fractures in elderly patients facilitating early

mobilisation and functional recovery.

CONCLUSION

In both PKW and VLP groups union rate was high. However, better functional results was found in open reduction and volar locking plating.

Appendix- I

Green and O'Brien Score (Cooney odification)[14]

- Pain (25 points)
  - None 25
  - Mild, occasional 20
  - Moderate, tolerable 15
  - Severe or intolerable 0
- Range of motion (25 points): flexion + extension, percentage of normal
  - 100 25
  - 75-99 15
  - 50-74 10
  - 25-49 5
  - 0-24 0
- Grip strength (25 points), percentage of normal
  - 100 25
  - 75-99 15
  - 50-74 10
  - 25-49 5
  - 0-24 0
- Activities (25 points)
  - Returned to regular employment 25
  - Restricted employment 20
  - Able to work but unemployed 15
  - Unable to work because of pain 0
- Final result
  - Excellent 90-100
  - Good 80-89
  - Fair 65-79
  - Poor < 65

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Review article

Neonatal exchange transfusion in Bangladesh

Rahman F

Jaundice in newborn infants, neonatal hyperbilirubinemia, has been recognized for many centuries. This is a common problem that occurs in about 60% of newborns during the first week of life. About 0.02 – 0.16% of these infants develop extreme hyperbilirubinaemia[1]. Bilirubin is a known antioxidant at low concentration but a potent neurotoxin at high concentration[2]. Incase of hyperbilirubinemia yellow discoloration becomes evident first in face, chest, abdomen, palm and sole. In maximum cases it resolves spontaneously, but in some cases neonatal hyperbilirubinaemia need phototherapy and in some cases it needs exchange transfusion.

The main indication of exchange transfusion in neonatal hyperbilirubinaemia is due to blood group incompatibility, such as Rh or ABO incompatibility and neonatal septicemia, DIC etc.

The idea of exchange transfusion in Rh-incompatibility is to-

1. To reduce hyperbilirubinaemia
2. To remove damaged and antibody coated RBC from the circulation
3. To remove unfixed antibodies
4. to correct anaemia

The first exchange transfusion in a newborn was performed in 1925 by Hart for the treatment of erythroblastosis foetalis [3]. It was successful, but was ignored for the next two decades. Wiener, Wexler and Gamrin in 1944, again tried to perform an exchange transfusion, but failed[4].

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Two years later, in 1946 Wallerstein reported the successful exchange transfusion of three infants with erythroblastosis fetalis. His technique utilized the saggital sinus for blood withdrawal and a peripheral vein for infusion. Subsequent practitioners for exchange transfusion used the radial artery for exsanguinations and a peripheral vein for infusion, apparently fearing to enter the saggital sinus. Wallerstein, however, had considerable success with his technique and prepared a teaching movie which he took around the country instructing pediatricians in the new method [5]. Within one year, however, Diamond introduced umbilical vein intubation for exchange transfusion, establishing the definitive technique which is still in general use[6].

In Bangladesh exchange transfusion has been introduced first in 1970s and was in practice in BSMMU formerly known as IPGMR. After successful exchange transfusion this procedure had been spread all over the country but was in practice only in teaching institute. Though it is an easy to do procedure, many paediatricians are not fully acquainted with the procedure. Moreover, with advancement in regular practice of antenatal checkup and screening of Rh negative mother and timely administration of Anti-D has reduced the incidence of Rh-incompatibility.

Indication of exchange transfusion-

1. Cord hemoglobin 10gm/dl or less.
2. Cord bilirubin 5 mg/dl or more.
3. Unconjugated serum bilirubin 10 mg/dl or more within 24 hours.
4. Unconjugated serum bilirubin 20 mg/dl in term baby.
5. In preterm low birth weight baby if

bilirubin level >1mg/100 gm of infant weight.

For exchange transfusion materials required:

1. Gauge-6 or 8 French umbilical catheter
2. BP handle with blade
3. Tissue forceps
4. Silk
5. Dressing gauze, bandage
6. Draw sheet, gown, mask, cap and gloves
7. Syringe-10ml and 20 ml
8. Infusion set

Umbilical catheterization is done for exchange transfusion, infusion, i.v medication, blood sampling. It can be done either via venous channel (umbilical vein) or via umbilical artery. During initial practice umbilical catheter was imported from Japan. Because of less demand importers stopped importing the catheter from Japan, as a result a crisis was created and performing exchange transfusion was about to be stopped. In this situation in 1985 polyvinyle feeding tube was used for exchange transfusion[7,8].

After successful exchange transfusion by feeding tube it became acceptable to all pediatricians and still now it is being practiced.

Exchange transfusion is a safe procedure but some complications may arise-

1. Metabolic acidosis
2. Hypothermia
3. Electrolyte imbalance
4. Infection
5. Hypoglycaemia
6. Circulatory overload

Though the introduction of improved method of phototherapy by optimization of the spectrums of blue light, delivery of optimal light energy, improving the skin penetration by light, concentrating the focusing area, all these improved the efficiency of phototherapy in rapid reduction of bilirubin level and reduced the necessity of exchange transfusion, however, it is still a gold standard in treating rapidly raised bilirubin beyond the toxic level. So, in spite of the improvement of the efficacy of phototherapy, exchange transfusion should always be considered in impending neurotoxicity in neonatal hyperbilirubinaemia. All paediatricians in all secondary and tertiary level should remain prepared to do exchange transfusion when it is indicated as per the guideline of APP (American Academy of Paediatrics). Phototherapy should not be considered as an alternative for exchange transfusion when it is absolutely indicated.

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Case report

Tuberculosis of the cervix.

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ABSTRACT

Tuberculosis of cervix is a rare but common disease in adult female. It occurs about 5-10% of cases in female genital tract tuberculosis. However, in almost all cases it is secondary to extra genital tuberculosis. A 40-yreas old female attended in Department of Obstetrics and Gynaecology of Rangpur Medical College Hospital with vaginal discharge, dysfunctional uterine bleeding (DUB) and something coming out per vagina. On examination she had an abnormal cervix, with ulceration and a friable papillary growth covering almost the entire ectocervix. A cervical punch biopsy was taken and histopathology revealed severe chronic active inflammation. It also showed granuloma and numerous multinucleated giant cells. But no malignant cell was seen. Therefore, it was diagnosed as cervical Tuberculosis. Anti-tuberculous quadruple therapy was started and continued for 6 months. On clinical follow up after twelve months she was completely cured.

KEYWORDS: Tuberculosis, Cervical, Biopsy.

INTRODUCTION:

Chronic cervicitis is an extremely common condition in adult females. Specific forms of chronic cervicitis that may be seen include tuberculous cervicitis[1] .Tuberculosis (TB) of cervix is a rare disease[2,3]. The cervix is involved in 5-10% of cases in female genital tract tuberculosis[4]. The common sites in female are fallopian tubes and endometrium[2,5,6]. Cervical tuberculosis in almost all cases is secondary to extra genital tuberculosis. A high index of suspicion of Tuberculosis in female with abnormal cervical presentation required of screening of cervical smears, especially from areas where Tuberculosis is common[5].

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CASE REPORT

A 40-yreas old female attended in out pateint Department of Obstetrics and Gynaecology of Rangpur medical college Hospital on April 2011 with vaginal discharge, dysfunctional uterine bleeding (DUB) and something coming out per vagina. On examination she had an abnormal cervix, with ulceration and a friable papillary growth covering almost the entire ectocervix. A cervical punch biopsy was taken

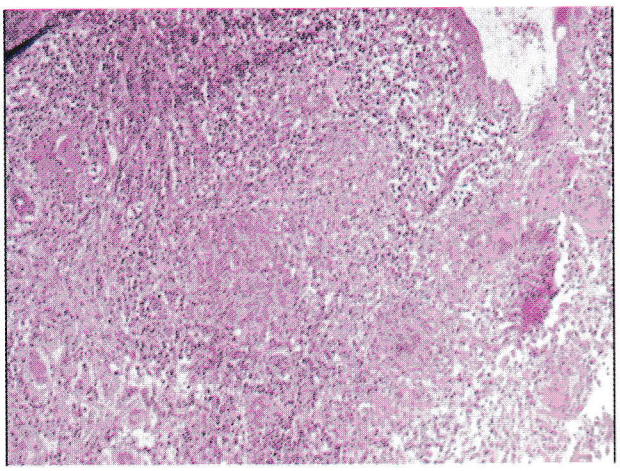

Fig 1: Histopathology of Tuberculosis of cervix (H & E stain).

Histopathology revealed ulcerated cervix with severe chronic active inflammation. It also showed granuloma and numerous multinucleated giant cells. No malignant cell was seen (Fig: 1). Anti-tuberculous quadruple therapy was started and after 6 months, the cervix had an almost normal colposcopic appearance. On clinical follow up she was completely well after twelve months completion of anti-tuberculous therapy.

DISCUSSION

Our case is 40 years aged women who presented with a proliferative papillary growth which created a feeling of something coming out per vagina making confusion with genital prolapse on clinical presentation. Other features of vaginal discharge and bleeding were normal presentations. Tuberculous cervicitis constitutes about 5-10% of genital tract TB[4]. It is uncommon in developed world, but still prevalent in developing countries like Bangladesh, Africa and India. The age of incidence is variable, but 80% cases are seen in reproductive age, more frequently between second and third decades, of life indicating hormone dependence infection[3,5,6,7,8]. Tuberculous cervicities may be the result of direct extension from the endometrium or abdominal cavity or be related to lymphatic spread from the fallopian tube, or it may be the result of hematogenous spread from lung[4]. Majority of cases are not suspected clinically[2,9]. Many times, it is a histological surprise even in endemic areas[9]. Common presentations are abnormal vaginal discharge/bleeding, menstrual irregularities and infertility[2,5,7,9]. However, 50% of cases remain asymptomatic[3,7]. On examination, 90% cases shows normal cervix and the rest present with proliferative growth, ulcerative/hypertrophic nodular lesions or fistulas/ sinuses[2,5,6,7,9,10,11]. Often, the lesion mimics carcinoma cervix[2]. The diagnosis of cervical Tuberculosis is usually made by histological examination of a cervical biopsy specimen[12,13]. Cervical biopsy shows multiple granulomas, Langhan's giant cells with heavy lymphocytic infiltrate At the rim of tubercles. Isolation of the bacilli is the Gold standard for the diagnosis.

CONCLUSION

Cases of tuberculous cervicitis can mimic cervical cancer, and these cases should be evaluated carefully for accurate diagnosis and proper management especially in developing countries where tuberculosis is endemic.

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Case report

Giant Chondrosarcoma of Right Proximal Humerus in an Adult Male Patient: A Case report.

Haque Md. S[1], Rahman Md. M[2], Rahman Md. A[3], Hasan Md. M[4]

ABSTRACT

Chondrosarcoma is a malignant tumor arising from chondrocytes, which is the third most common primary tumour of the bone, after myeloma and osteosarcoma. Chondrosarcoma grow slowly and rarely metastasize, and usually have an excellent prognosis after surgery. Unfortunately, most of them are chemo or radio-resistant. We report a case of primary chondrosarcoma of proximal humerus in a 56-year-old male who presented with a two years history of right shoulder swelling and restricted range of motion. Biopsy showed a well-differentiated chondrosarcoma. Subsequently, the patient underwent forequarter amputation of right upper limb.

Key words: Chondrosarcoma, Forequarter amputation, Biopsy, primary bone tumour.

INTRODUCTION

Chondrosarcoma is a malignant tumor arising from chondrocytes and is the third most common primary tumour of the bone, after myeloma and osteosarcoma[1]. Chondrosarcoma constitutes a heterogeneous group of neoplasms that have the production of cartilage matrix by tumour cells in common[2]. This primary sarcoma of bone in adults has a male predominance and is well demonstrated between the 3rd and 7th decades of life. Chondrosarcoma is most often separated into three histological grades: Garde 1(Low), Grade (Medium) and Grade 3 (High).

Higher the grade more likely it is to metastasize. Grading is based on tumors histological appearance. Low grade chondrosarcoma has similar appearance to enchondroma and osteochondroma and has occasional binucleated cells. High grade chondrosarcoma has increased cellularity, atypia, and mitoses[3]. Chondrosarcomas can also be categorized as primary (arises de novo) or secondary (arises from a pre-existing benign cartilage lesion which could be an enchondroma, an osteocartilaginous exostosis a chondromyxofibroma, a periosteal chondroma, or even a chondroblastoma), cenral or peripheral. Among these, the single most prognostic subclassification is the histological grade. In addition, there are a few specific histological subtypes of chondrosarcoma: clear-cell, mesenchymal, base of the skull, and soft-parts chondrosarcoma. We are reporting a case of giant chondrosarcoma of the right proximal humerus in a 56-year-old male patient who underwent forequarter amputation.

CASE REPORT

A 56-year-old male patient was admitted to the Department of Orthopadics, Prime medical College Hospital, Rangpur with the complaints

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of progressive enlarging swelling and restricted range of motion of the right shoulder (Figure 1) for about 2 years since year 2013. At the time of admission, he had completely lost

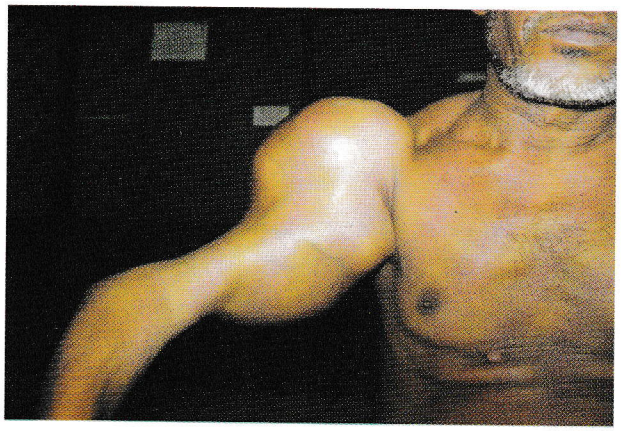

Figure 1: Giant chondrosarcoma of right proximal humerus before surgery.

Physical examination revealed a solid mass over proximal part of right upper limb measuring 254mm x 254 mm with loss of normal contour of the right shoulder. The swelling was bony, hard in consistency but not tender on palpation. Dilated veins were noted on its surface. No lymph nodes were palpable over cervical and axillary regions.

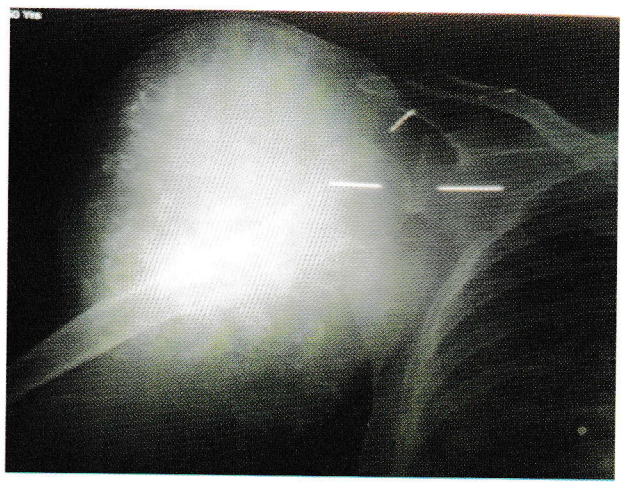

Figure 2: Giant chondrosarcoma of right proximal humerus.

The radiographic appearance of chondrosarcoma frequently is used for diagnostic purpose. Similar to enchondroma, it is a lesion arising in the medullary cavity with irregular matrix calcification. The pattern of calcification has been described as "punctate," "popcorn," or "comma-shaped". Compared with enchondroma, however, chondrosarcoma has a more aggressive appearance with bone destruction, cortical erosions, periosteal reaction, and rarely a soft-tissuemass (Figure 2). Trucut biopsy of the mass was performed previously and the histopathological examination revealed fragments of tumour tissue composed of predominantly cartilaginous tissue with nuclei which were plump and hyperchromatic with occasional two nuclei per lacuna, which is consistent with well differentiated chondrosarcoma. An informed consent was obtained from the patient prior to the operation. A multi-disciplinary intervention by the orthopedics, radiological, anaesthetist and oncology team was adopted for operation. Then he was underwent forequarter amputation of his left upper limb. The tumour tissues were excised with maximum possible surgical safety margins. There was neither excessive bleeding nor development of major complications during operation (Figure 3).

Figure 3: After forequarter amputation. Histopathological findings

The resected mass measured 350 x 315 x 250mm and weighed 16 kg and was submitted for histopathological examination. Later on it was reported as a well differentiated chondrosarcoma. Microscopically, the section showed lobulated tumour composed of chondrocytes with hyperchromatic nuclei.

There was minimal cellularity which exhibited rare small, dark nuclei and multinucleated forms. Mitotic activity was rare. Minimal tumour necrosis was present. Lymph vascular permeation was noted. There was no osteoid formation. The tumour cells involved part of the adjacent bone and its marrow, adjacent soft tissue and adjacent muscle. No joint or neurovascular bundle at margin was involved by tumour cells (Figure 4).

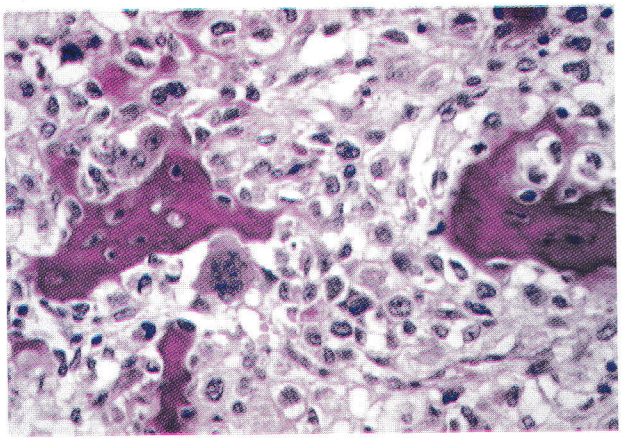

Figure 4: High power magnification of tumour showing malignant chondrocytes with hyperchromatic nuclei.

The patient was discharged 20 days later with a well healed wound. He was advised for regular follow up six monthly to monitor the disease progression.

DISCUSSION

Chondrosarcoma of the proximal humerus is an uncommon malignant bone tumour, and limited information is available about treatment. Preservation of the functional capacities of the involved limb along with a complete removal of the tumour is considered as the most important criterion in the surgical management of tumour of the proximal humerus. Although literatures support wide local excision for Grade I conventional chondrosarcoma rather than amputation, decision of forequarter amputation was made after taking into consideration of the tumour size which was too extensive and it was fungating and ulcerated. Furthermore the neurovascular structures of left upper extremity were severely affected. Therefore forequarter amputation with adequate surgical margin remained the best option procedure. Forequarter amputation of his right upper extremity posed challenges to the surgeon due to the enormous size of the tumour. Pre-operative planning with MRI and CT scan were not possible. It made the resection more challenging as we could not assess the extent of the chondrosarcoma and to delineate the extent of soft tissue involvement for clear resection of the tumour.

Chondrosarcoma of bone generally has a good prognosis when optimally diagnosed at an early stage. Histopathological grading, at present, is the best predictor of clinical behaviour. A series from the 1980s reported a 5-9% risk of metastasis with low grade conventional chondrosarcoma, whereas recent series reported 3% or no risk of metastasis[4]. The prognosis of this patient is good in view of the histopathological findings of the tumour which supports grade I chondrosarcoma. Although patient has done delay in starting treatment for about 6 years, there was no evidence of distant metastasis in solid organs based on CT scan, which was done postoperatively. It is generally believed that chondrosarcoma is relatively chemo- and radiotherapy resistant due to the extracellular

matrix, poor vascularity and low percentage of dividing cells. Currently the patient is on six monthly follow up and he is satisfied with his current condition.

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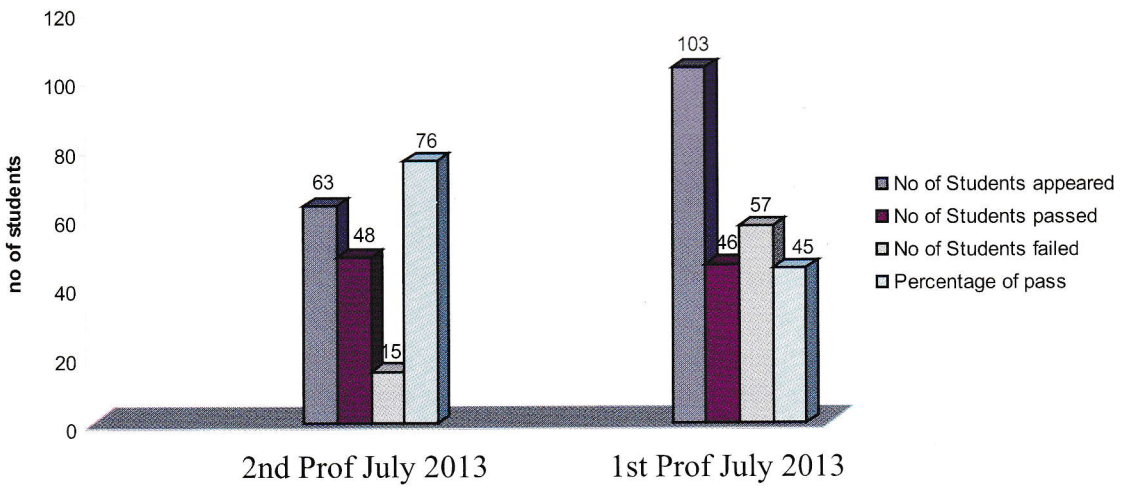
RESULTS OF PROFESSIONAL EXAMINATIONS:

1st and 2nd Professional MBBS Examination was held on July 2013. The percentages of pass in the 1st and 2nd professional exam are shown in the following table and figure (Table I & Figure 1).

Table I: Result of 1st and 2nd Professional MBBS Examination July, 2013.

Exam year	Exam Name	No of Students appeared	No of Students passed	No of Students failed	Percentage of pass
July 2013	2 nd Prof July 2013	63	48	15	76
July 2013	1st Prof. July 2013	103	46	57	45

Fig 1 : Result of 1st and 2nd Professional Examination July, 2013



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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 secitons is to start on a separate page. Wpages 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 confilct of interest (if any).
- Disclosure of source of funding or sponsor.

Abstract :

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

Text:

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

Introducation :

- Statement of the problem with a short discussion of its importance and significance.
- Review of the literatiure 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 cariteria.
- 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 statistcal procedure with enough detail to enable a knowledgeable reder 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
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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 sticy label on the back of each photograph.
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Legend :

- Must be typed in seperate sheet of paper.
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The titles of the journals should be abbreviated as:

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Standard journal artcle:
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. JAm 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 Helth Organization. Building a Collaborative research agenda; drrug abuse and HIV/AIDS in the Caribbean 2002-2004. West Indian Med J. 2004 Nov; 53 suppl 4; 1-78.

Standard book with intitials 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 lukemia virus and other retroviruses. In: Sherding RG, editor . The cat; diseases and clinical management. New york: Churchil Livingstone; 1989. p 229-332

Conference Proceedings :
Pacak K, Aguilera G, Sabban, E, Kvetansky R, editors. Stress: Current neuroendocirne and genetic approaches. 8th Symposium on Catecholamines and Other Neurotansmitters in stress: 2003 Jun 28-July 3; Smolenice Castle (place of confernce), Slovakia. New york (Place of Publication), New York Academy of Sciences (pubilisher) ; 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 legitimacyin headache (title) [dissertation] [Philadelphia] University of Pennsylvania; 2004-271p.
Alam M. Study of Heart Rate Variability in Adolecent Athletes [M Phil Thesis]. [Dhaka] Bangabandhu Sheikh Mujib Medical University; 2008

Part of Dissertation & Thesis:
Makckwski MP. Human factors: aeropace medicine and the origins of manned space flight in the United States [dissertation]. [Tempe (AZ)]: Arizina State University; 2002 May. Part 2, Space medicine ; p. 188-377.
Alam M. heart Tate Variability in Adolescent Athletes [M Phil thesis]. [Dhaka (Bangladesh)]. Bangabandhu Sheikh Mujib Medical University; 2008 July. Appendix (name of the part 4 (number of the part), Classification of physical Activity Intensity (Tit of the Part). p.7 (Location of the Part).

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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

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jacobs JL, Lee MT, Lindberg M, kamin C. Problem based learning, multimedia paucity of behavioral issue learninig Med Educ. Online [Interner]. 2005[cited2005]: [5p]. Available from:http:www.med-ed-online.org/pdf/10000006.pdf.