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INFORMATION FOR CONTRIBUTORS

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Sadiq Tahmina 28/2/86

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SURGICAL SCRUB RE-EXAMINED

G. Rasul 1
Z. Wahid 2

Key Words :

Surgical Scrub, Skin flora.

Summary :

96 sets of skin swabs from surgeons hands were examined bacteriologically by culture. More than 90% of the cultures were positive for Staph. aureus which is a high rate. Sterile cultures were obtained from Junior Surgeons only. Scrubbing with toilet soap in running tap water, without any other antiseptic being used, reduced the positive cultures to 50%. When cultures were taken at the end of the operation after the surgeon took off his gloves, the rate of positive culture rose to 70%.

Introduction :

Before Pasteur's revolutionary studies in bacteriology and Lister's application of them to wounds, a little more than 100 years ago, most – if not all wounds became infected, and the resultant mortality of deep or extensive wounds approached levels of 70–90 percent (Altemeier et al 1976). The present day routine applied in the control of this colossal scourge are – (i) Preparation of the patients skin at the site of operation to prevent organisms from entering into the wound (ii) Surgical scrub, (iii) Stertilisation of all linen, gauze, cotton, instruments and suture materials used in the operation. In a two and half year collaborative study of 15,613 consecutive operative procedures done in five American University centres, an overall infection rate of 7.4 percent for all types of operations was determined under close, energetic and continuing surveillance (Altemeier et al 1976).

In a previous communication, we have reported that patients skin preparation with Tn. iodine followed by surgical spirit, or savlon solution were effective in keeping wound infection rate to 11.4% at the P.G. Hospital (Rahman et al 1985). In the present study, we want to report on the value of surgical scrub used at P.G. Hospital and Dhaka Medical College Hospital.

Methods and materials :

Swabs were collected from the skin of surgeons hands, especially from around the nail folds and interdigital spaces by rubbing sterile cotton wool in a stick moistened with sterile saline. This was then inoculated into a blood–agars plate and McConkey's media within few minuters of collection and incubated aerobically. Readings were taken 24 and 48 hours later on. No anaerobic culture was done. Three swabs were taken from each surgeon on each occassion. Pre–scrub swab was taken before the surgeon started scrubbing up. Post–scrub swab was taken after he finished scrubbing but before he dried the hands with surgical spirit. And the post–operative swab was taken at the end of the operation after the surgeon took off his gloves.

The scrubbing procedure used by all of them were more or less as follows. Scrubbing was done under running tap water, using lux toilet soap and a nail brush. 5–10 minutes were spent at the first scrub, and 2–3 minutes at subsequent scrubs. This was followed by drying up of the hands with surgical spirit.

This material was used by Dr. Z Wahid in his dissertation for FCPS in Surgery.

Prof. of Surgery, IPGMR. Dhaka 1
FCPS Student. IPGMR. Dhaka 2

Antiseptics and detergents like hibitane, chlorhexidine or providone–iodine were not available.

There were seven senior surgeons who were practising surgery for more than 15 years, who provided 21 set of swabs and 27 Junior Assistants who were practising for less than 10 years, provided 75 set of swabs. A record of the nature of operation undergone was kept and any occurance of significant post–operative wound infection was noted.

Results :

There were 96 set of swabs to be read and analysed. Only seven pre–scrub swabs were reported sterile, and they were all from the hands of junior surgeons (assistants). 51 swabs from the second set (post–scrub) were reported sterile of which nine were from the senior group (9 out of 21), and 42 from the junior group (42 out of 75), 26 swabs from the third set (post–operative) were sterile, 5 from the senior group (5 out of 21) and 21 from the junior group (21 out of 75) table. All the positive cultures grew Staph. aureus; rarely B. subtilis and Diptheriods were grown.

Significant wound infection occured in only one case of thyroidectomy with Staphylococcus aureus.

This study shows a high rate of carrier status in the surgeons hands with Staph, aureas, and longer a surgeon is practising surgery, more likely for him to become a carrier. By the routine scrub method used in these two hospitals the hands can not be sterilised in about 50% of cases, which is not acceptable. At the end of the operation, the number of positive cultures rises to 75% indicating that organisms do come up to the surface from within the pores of the skin as time passes on.

Discussion :

The method of washing up, no matter how painstaking and prolonged, will remove only those transient organisms which are picked up inadvertently; it will reduce, but can not eliminate the resident flora (Walter & Israil'79). This has adequately been reconfirmed in our study. It has been recommended that two or three minutes scrubbing with careful attention to the nails before the first operation, and two or three minutes washing without a brush before the subsequent operations of a list should be an adequate routine for a surgeon(Leadig article BMJ, 1970). Disinfection of hands and forearms should prevent contamination by bacteria emerging through holes or tears in

Table 1. *Showing the distribution of sterile and positive cultures between the Senior and Junior Surgeons.*

Total No. of swabs 96	Pre–Scrub swab	Post–Scrub swab	Post–operative swab
Senior Surgeons 21	All positive	9–sterile 12–positive	5–sterile 16–positive
Junior Surgeons 75	7–sterile 68–positive	42–sterile 33–positive	21–sterile 54–positive

gloves, bad also through moist patches on the sleeves of operating gowns (Lowbury, 1973). Antiseptic detergent mixtures containing hexachlorphane or iodine have been found to cause a large reduction in the "resident" skin flora when used repeatedly for washing the hands– and effect which was not obtained by the use of ordinary soap and water (Loubury etal 1964). Similar results were found on the patients skin at operation site by the use of 1% iodine or 1% cetrimide in 70% industrial spirit (Story, 1952, Rahman et al'85). Unfortunately these agents, especially which persits on the skin and act for a long time are not available to us. Inspite of that, we are lucky enough to have a very low incidence of significant wound infection in this series.

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CLINICO–PATHOLOGICAL SPECTRUM OF RENAL DISEASES IN IPGMR

An Analysis of 2000 cases in 11 years

M. Rahman 1
A. C. ROY 2
D.Chowdhury 3
M. Hossain 4

Key words :

Renal Diseases in IPGM and R.

Summary :

Two thousand patients (1535 male and 465 female) age ranging from 13 years two 90 years for the period of 11 years (1973 to 1983) were studied for clinico–pathological spectrum of renal diseases.

Glomerulonephritis comprises 43.7% of all renal diseases; diabetic nephropathy 16.3%, obstructive renal disease 9.2%, hypertensive nephropathy 5.2%, urinary tract infection 10.3%, acute renal failure 8.8%, tuberculosis of renal tract 1.3%, S. L. E. 0.75%, renal artery stenosis 0.25%, miscellenous 1.04% and chronic renal failure (CRF) due to unknown

1, 2, 3, 4,

Department of Nephrology, Institute of Postgraduate Medicine & Research, Dhaka.

cause 3.35%.

Clinical presentation of glomerulonephritis were CRF in 43.5%, nephrotic syndrome in 42%, nephritic in 12.2%, and acute renal failure (ARF) in 2.2% cases.

Eleven percent of diabetic nephroppathy presented with nephrotic syndrome with normal renal function, nephrotic–uraemic was the presentation in 57% and end stage renal failure in 32% cases.

Causes of ARF in adult were prerenal in 82.4%, renal 14.8% and post renal in 2.8%.

Causes of CRF were glomerulonephritis in 39%, diabetic nephropathy in 31%, obstructive renal disease in 12%, hypertension in 11.2%, tuberculosis in 2.9%, chronic pyelonephritis in 1.7% S.L.E. in 1.6% and renal artery stenosis in 0.5% cases.

Obstructive renal diseases were due to calculi in 64%, tumour in 19.3%, neurological deficit in 11.3% and congenital defect in 5.4% cases.

Introduction :

The incidence of renal diseases is well established in western countries. It is not known in our country. Because no such study has been done. The spectrum of diseases in the hospital admission will not give the incidence of the disease in the country but will reflect the disease pattern in the country to some extent. For this purpose the hospital admission during the last 11 years in the nephrology unit of the Institute of Postgraduate Medicine and Research was analysed for the disease pattern.This is the only nephrology unit in the country. Cases of renal diseases are referred from different medical colleges, district hospitals and upazilla health complexes in the country. The knowledge about the pattern of renal disease patients admitted into the hospital will help to gain an idea about the incidence of the disease in the national level and thereafter to plan the nephrology units in the country.

Patients and Methods :

The admission register from 1973 to 1983 was analysed. The diagnosis of the disease was based on clinical examination and laboratory investigation.

Methods :

Initial assessment was done from the history of illness and clinical examination. Hb estimation, erythrocyte sedimentation rate, total and differential count of leukocytes, total count of platelet and blood film was done routinely. Urinalysis like routine and microscopic examination of urine, culture, 24 hrs. urinary protein estimation were also done in all cases. Throat swab culture and ASOT done in all cases of glomerulonephritis and suspected cases.

Serum electrolytes, inorganic phosphate, uric acid, serum calcium, alkaline phosphatase were estimated in all renal failure cases. Urinary calcium, inorganic phosphate, phosphate clearance were also done in selected cases.

Immuno–electrophoresis of serum and ruine, LE cells, antinuclear factor, bone marrow, biopsy of lymph node and skin were done when required.

Liver function tests, thyroid function tests, HBsAg test were done in suspected cases.

Urine and plasma osmolality, urinary electrolyte were done specially in cases of electrolyte imbalance.

ECG. X-ray chest and KUB were done routinely, intravenous pyelogram, infusion pyelogram, cystogram and retrograde pyelogram were done in all required cases Renal tomogram, angiogram were done in only few selective cases, ultrasonogram and renogram were done in almost all the patients.

Skeletal survey was made in cases required.

Cystoscopy, urethroscopy were also done when necessary.

Renal biopsy was done when there was no contra-indication. Autopsy could not be performed. Nephrectomised specimen was examined when nephrectomy was done due to some other reason.

The diagnosis and presentation of the 2000 cases were then analysed. The diagnosis of the patients were then classified and presented in suitable ways.

Results :

Of total 2000 patients 874 had glomerulonephritis (Table 1). The presentations of these patients were nephritis nephrotic, chronic renal failure and acute renal failure. Patients with glomerulonephritis comprises major number (43.7%) in the population with renal diseases. Diabetic nephropathy was the 2nd common disease and comprise 16.3% of the total renal disease. Obstructive renal diseases (ORD) comprised 9.2%, hypertensive nephropathy 5.2%, urinary tract infection (UTI) 10.3%, systemic lupus erythomatosus with renal involvement 0.75%, renal artery stenosis with chronic renal failure 0.25% and chronic renal failure due to unknown etiology comprised 3.35%, Fifty seven (2.85%) patients had miscellenous renal diseases.

Table I *Spectrum of renal diseases in the IPGMR.*

	Number	Percentage
Glomerulonephrtitis	876	43.7
Diabetic nephropathy	326	16.3
Obstructive renal diseases	184	9.2
Hypertensive nephropathy	104	5.2
Urinary tract infection	206	10.3
Acute renal failure	176	8.8
Tuberculosis of renal tract	26	1.3
SLE	15	.75
Renal artery stenosis	5	.25
Miscellenous	21	1.04
CRF with unknown cause	63	3.35
	2000	100

Among 874 cases of glomerulonephritis 380 patients (43.5%) presented with chronic renal failure, 367(42%) presented with nephrotic syndrome, 107 (12.3%) were nephritic and 20 patients (2.2%) presented with acute renal failure (Table 2).

Table II *Clinical presentation of glomerulo-nephritis*

	Number	Percentage
Presentation		
Chronic renal failure	380	43.5
Nephrotic syndrome	367	42
Nephritic	107	12.2
Acute renal failure	20	2.2
	874	100

Among 326 patients with diabetic nephropathy 36 (11%) presented with nephrotic syndrome with normal renal function, 186(57%) were nephrotic uraemic and 104 (32%) cases had end stage renal failure (Table 3).

Table III *Presentation of diabetic nephropathy*

Presentation.	Number	Percentage
Nephrotic with normal renal function	36	11
Nephrotic uraemic	186	57
End stage renal failure	104	32
	326	100

The commonest clinical presentation of the patients with renal diseases was chronic renal failure (Fig. 1). Nine hundred and thirty two patients presented with chronic renal failure. The underlying etiology of CRF were many. Glomerulonephritis was the commonest (39%) cause of chronic renal failure (Fig. 1). Diabetic nephropathy was the 2nd common cause (31%), obstructive renal disease was the cause in 12.1%, hypertensive nephropathy in 11.2%, tuberculosis of the urinary tract in 2.9% cases, chronic pyelonephritis in 1.7%, SLE in 1.6% and renal artery stenosis in 0.5% cases of CRF.

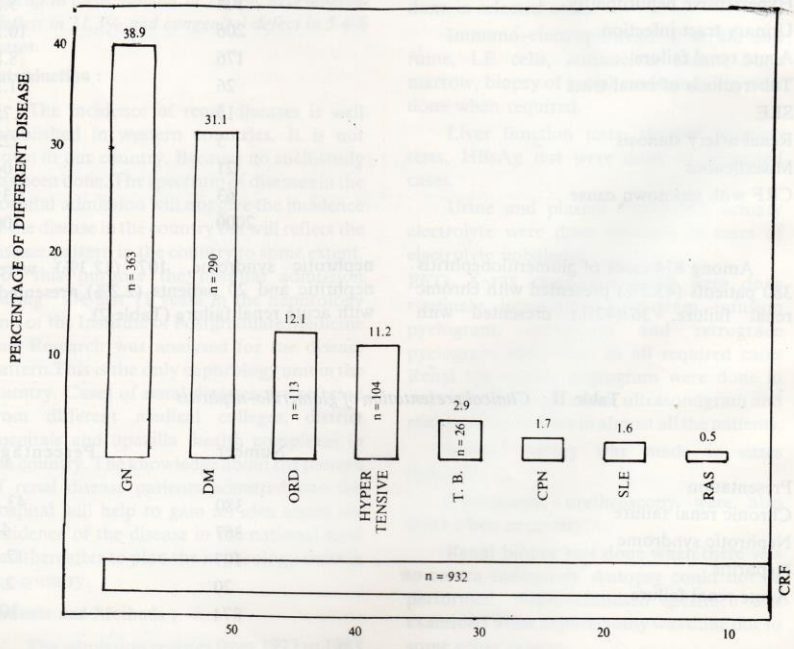
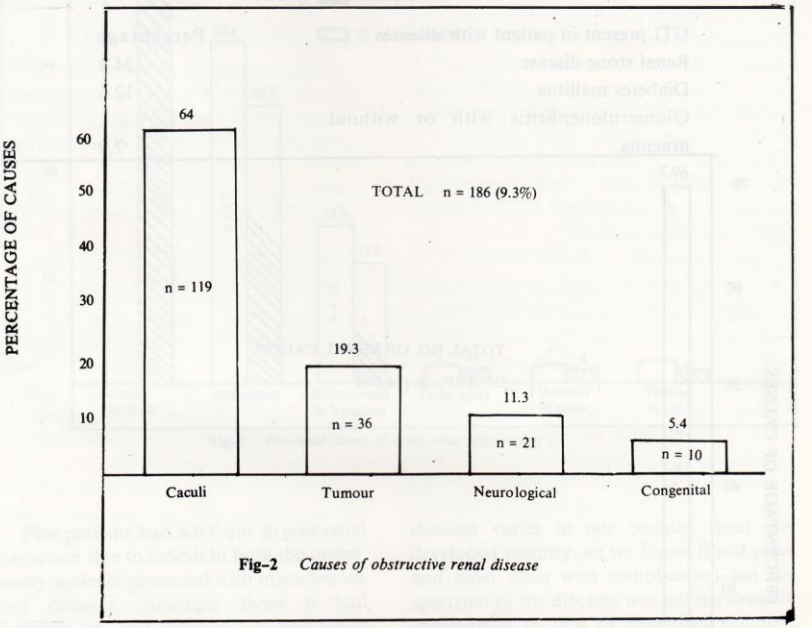


Fig-1 *Causes of chronic renal failure*

Among total 2000 patients 186 presented with obstructive renal diseases (ORD) (Fig. 2.) obstructive renal diseases were the cause of chronic renal failure in 113 cases (12%) (Fig. 1). Regarding the cause of obstructive renal diseases calculi comprised 64%. Tumour in the kidneys and bladder was the cause of obstructive uropathy in 19.3% cases (Fig. 2). Neurological deficit causing bladder dysfunction was the cause in 11.3% cases and congenital malformation of urinary tract in rest 5.4% causes of obstructive uropathy. 206 patients presented with urinary tract infection. It was found that 24.4% of renal stone disease, 12.6% of diabetes mellitus and 7.9% of glomerulonephritis with or without uraemia (Table 5) had urinary tract infection.



Fig–2 *Causes of obstructive renal disease*

Acute renal failure in adult comprised 8.8% of total renal diseases and the number of patient was 176 (Table 4). In majority cases (82.4%) prerenal cause was responsible for

Table IV. *Presentation of diabetic nephropathy*

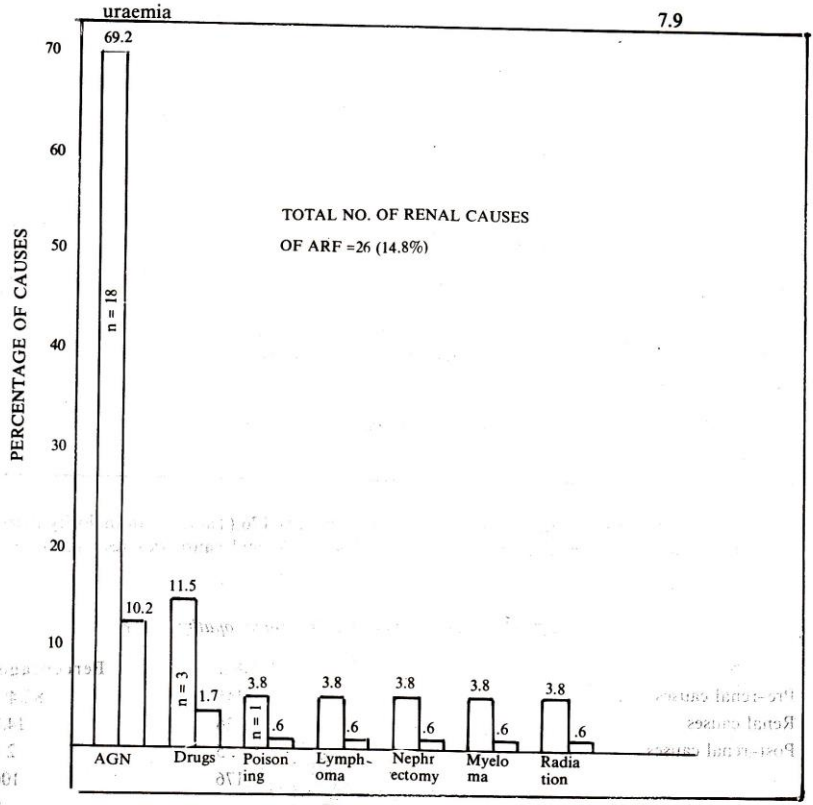
	Number	Percentage
Pre–renal causes	145	82.4%
Renal causes	26	14.8
Post–renal causes	5	2.8
	176	100

acute renal failure (Fig.3). Gastro-enteritis was the commonest (51%) pre renal cause. Other contributing causes were obstetric shock in 32.4% and hyperpyrexia and vomiting in 14.5%, cases of ARF. Crush injury, septicaemia following contaminated infusion and thunder stroke were cause in one in each.

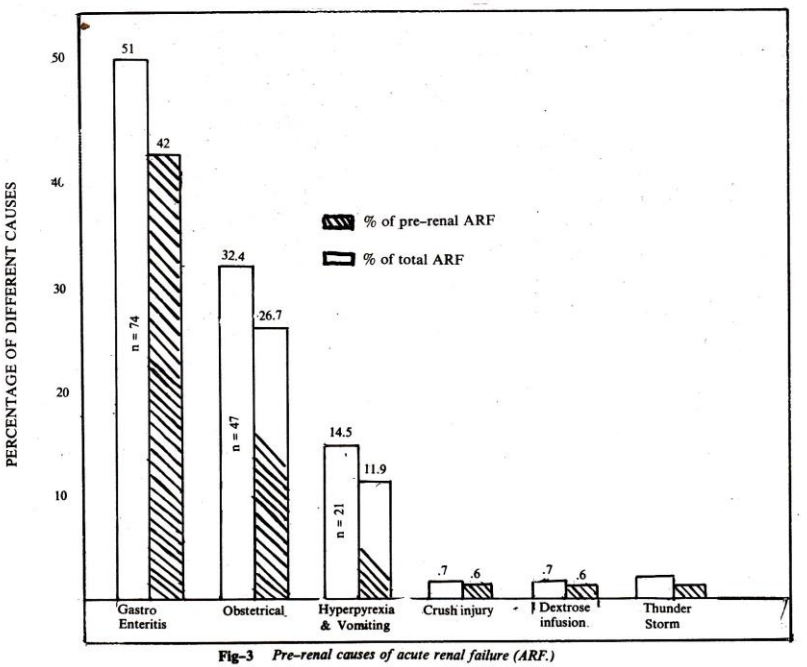
Twenty six (14.8%) of ARF were due to various renal causes. Acute glomerulonephritis was the cause in 69.2%, drugs in 11.5%, poisoning in one case, and lymphoma in one case. Unjustified nephrectomy in a patient with single kidney led to ARF. Myeloma and radiation were the cause of ARF in one in each (Fig. 4).

Table V. *Occuraence of UTI*

UTI present in patient with diseases	Percentage
Renal stone disease	24.4
Diabetes mallitus	12.6
Glomerulonephritis with or without uraemia	7.9



Fig–4 *Renal causes of ARF.*



Fig–3 *Pre–renal causes of acute renal failure (ARF.)*

Five patients had ARF due to post renal obstruction due to calculi in both the ureter. Twenty patients presented with miscellenous renal diseases. Amongst those 6 had prostatitis, 5 had fibrous, 3 had Good-pasteur's syndrome, 3 polycystic kindey, 2 renal cysts, 1 hereditory nephritis and 1 had congenital malformation.

Urinary tract infection was present in 24.4% of renal stone disease, 12.6% of diabetes mellitus and 7.9% cases of glomerulonephritis.

Discussion :

All forms of renal diseases are found in this country, diagnosis of some was probably missed due to inadequate investigating facilities. Clinical presentation of different diseases varies in our country from any developed country, so we found florid cases and most cases with complication but the spectrum of the diseases was not narrower in comparison to that of developed country. Probably climatic socio–economic and geographic features were responsible for the differences in presentation.

Chronic renal failure :

Most of the renal diseases progressively lead to CRF and ignorance, poverty and lack of education accelerated the development of CRF. Most common presentation (46.6%) of renal diseases was CRF. The commonest cause was, however, glomerulonephritis (38.9%) and the second common cause was diabetic nephropathy (31.1%). These figures

were not comparable to western data (Brunner et al 1979) but comparable to the data produced by chowdhury et al '82 in Bangladesh. CPN stands fifth as the cause of CRF (1.7%) as opposed to European literature (Brunner et al'79 and medical service study group of Royal college of Physicians) possibly due to missing of number of cases and autopsy could not be done for the confirmation of diagnosis. Twelve percent causes of CRF were found to be obstructive uropathy. This can be compared with Kimmelstiel et al '61 where 13 cases out of 97 were found to have obstructive uropathy either unilateral or bilateral. Hypertensive nephropathy comes next (11.2%) to obstructive uropathy. Renal tuberculosis was found to be higher in comparison to western peoples (2.9%) even higher than CPN, SLE and renal artery stenosis.

Glomerulonephritis :

43.7% of total renal patients studied had glomerulonephritis, It was the major cause of end stage renal diseases (Lim et al'74)42.1% patient of glomerulonephritis presented with nephrotic syndrome with or without renal failure and 43.5% presented as chronic renal failure. Presentation as chronic renal failure was higher in comparison to Rahman et al'84 and that of nephrotic was lower. However presentation as AGN 14.5% was comparable to Rahman et al '84. ARF was the presentation of 2.2% cases.

Diabetic Nephropathy :

Diabetic nephropathy presented from mild proteinuria to CRF. This occupies 16.3% spaces of the spectrum of renal diseases (table) 290 patients presented with CRF in the renal unit which encountered 31.1% of total CRF patients. 68% had nephrotic presentation of which only 11% had normal renal function and 57% were nephrotic ureaemic. This figure contrast Keen et al, 1964 where 36% of diabetic patients were found to have massive proteinuria.

Urinary tract infection :

Incidence of urinary tract infection was 10.3% of total patients studied. Mc Donald et al. 1957 found the incidence as 15%–20% and Kleeman et al in 1960 published a comparable data. Statistical evaluation based on autopsy finding vary greatly with individual observant and Kimmelstiel et al in 1961 showed only 2.8% incidences in a series of 3,393 cases. Associations of UTI with renal stone disease was highest (24.4%) which was comparable to western literature (Kimmelstiel et al 1961).

Obstructive renal diseases

Renal stone disease constituted major part of the spectrum of obstructive renal diseases (69%), second common cause was neoplastic (19.3%) others were neurological (11.3%) and congenital (5.4%). CRF was the presentation of 39.5% cases which was comparable to Keen et al, 1964.

Acute renal failure :

Gastroenteritis and obstetrical causes were responsible for most of the cases of ARF (pre renal 82.4%) which was comparable to Razzaque et al 83 but opposed the western literature Balslov et al 62. Other important causes were GN and drugs. Hyperpyrexia with vomiting constituted 11.9% cases. All of the post renal causes of ARF were bilateral ureteric obstruction in this series. Other rare causes were crush injury, thunder storm, poisoning lymphoma, myeoma and radiation.

57 cases (2.8%) cases were found to be rare in which 21 cases remained undiagnosed having haematuria. Twelve cases having GN with positive australia antigen, 6 cases with prostatis and 5 with fibrosed prostate. Good pasteur syndrome, polycystic kidney and renal vein thrombosis were found in 3 cases in each. 2 cases of renal cyst were diagnosed and one case with Alport syndrome, one case with congenital malrotation of right kidney. All these are uncommon and rare as compared to western literature. It is probable that we are missing a number of cases as well as there is lack of investigating facilities available.

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SURVEY OF DYSMENORRHOEA IN A GROUP OF COLLEGE GIRLS AT DHAKA CITY

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Key Words :

Primary dysmennorrhoea, college girls.

Summary :

A survey was conducted amongst college girls in a womens' college at Dhaka to find out the prevalence and severity of spasmodic dysmenorrhoea. It was found that 65% of the girls intervewed had varying degrees of dysmenorrhoea and in 18% it was severe enough to interfere with studies or with other activities of the girls. There was no difference in age, age at menarche, the length of menstrual cycle or the duration of menstrual bleeding amongst the dysmenorrhoic and non–dysmenorrhoic girls. In about half of the dysmenorrhoic girls pain lasted for more than 24 hours. Associated symptoms such as nausea and vomiting, headache and muscle cramp was present in a large proportion of girls of which muscle cramp was the most common being present in 69% cases. Analgesies and antispasmodies were used for the relief of pain by 21% of the dysmenorrhoic girls. The aetiology of primary dysmenorrhoea in the light of present knowledge is discussed.

Introduction :

Primary dysmenorrhoea is possibly the most common of all gynaecological conditions and frequently hampers the normal activities of young girls, particularly their school and college attendence. The proportion of girls and young women suffering from dysmenorrhoea is difficult to asses in any comminuty, because not all patients with primary dysmenorrhoea will consult a doctor. Richards (1979)[1] in a survey of women between the ages of 15–50 years showed that 14% had complaints of dysmenorrhoea with a peak incidence between the ages of 15 and 20 years. Widholm (1979)[2] in a questionnaire survey of over 5,000 Finnish girls between the ages of 10–20 years, showed that 13% had primary dysmenorrhoea, the incidence increasing with age from 7% within first year of menarche to 26% after 5 years or later. Jeffcoate (1975)[3] states that not less than 50% of women experience some discomfort in relation to menstruation and 5–10% the girls in their late teens and early twenties are incapacitated for several hours in each month. Estimates,

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however, widely vary because of differences in the criteria used for the diagnosis of dysmenorrhoea and also because most of the observers concentrated on one particular section of the community only.

In Bangladesh, though the incidence of primary dysmenorrhoea in young girls is believed to be high, no organized survey has ever been conducted. It was for this reason, that a survey of dysmenorrhoea was done amongst the intermediate class students in a womens college at Dhaka in order to find out the incidence and severity of primary dysmenorrhoea.

Materials & Methods :

A survey was conducted amongst the intermediate class students at Lalmatia Girl's College, Dhaka in Nov., 1983. The Survey was done on the basis of a questionnaire which was filled up and returned by the respondents. Altogether 200 qestionnaires were distributed and 158 (79%) were received back.

The questionnaire included information from the respondents regarding age, age at menarche, duration and severity of dysmenorrhoea, loss of working hours, need for and type of medication used, pattern of menstruation and the presence and absence of associated symptoms.

The severity of dysmenorrhoea was assesed on the basis of a verbal scoring system, which graded the pain as mild, moderate and severe. The during of pain, whether it lasted less than or more than 24 hours were noted together with the effect of the pain on daily activities.

Results :

Out of the 200 questionnaries distributed 158 (79%) were returned and were available for analysis.

Age :

The mean age of the girls studied was 17.4 years with a range between 15 and 21 years. The mean age of menarche was 12.8 years with a range between 10 and 16 years amongst the dysmenorrhoea group and 12.9 in the non-dysmenorrhoea group with a range between 12–15 years. There was no statistical difference between the two groups.

Prevalence of dysmenorrhoea :

Severity of dysmenorrhoea as assesed by the verbal scoring system and is shown in Table I. It was found that of the 103 girls having dysmenorrhoea, 26 (25.2%) had mild, 63 (61.16%) had moderate and 14 (13.59%) had severe dysmenorrhoea. 19 of the girls (18.44%) mentioned that dysmenorrhoea was severe enough to be the cause for non-attendence to the classes, or hampering study or otherwise limiting their normal activities.

Table I *Prevalence of Dysmenorrhoea*

No. of girls studied.	Dysmenorrhoea present.	Percentage	Dysmenorrhoea absent	Percentage
158	103	65.19%	55	35

Duration of dysmenorrhoea :

The duration of dysmenorrhoea as mentioned by 92 respondents is shown in Table II. It was less than 24 hours in 49 cases, and 24 hours or more in 45 cases.

The amount of menstrual loss was assesed as scanty, average, more than average or heavy on the statements of the patients and by the number of sanitary towels used. This is shown in Table II. There was no significant difference between the dysmenorrhoea & non–dysmenorrhoea groups.

Table II *Severity of dysmenorrhoea*

Severity of dysmenorrhoea	No. of girls	Percentage
Mild	26	25.24%
Moderate	63	61.16%
Severe	14	13.59%
Total	103	100

In general, it was found that the prevalence and severity of dysmenorrhoea was unaffected by the length of menstrual cycle or the duration of menstrual bleeding, though the severity of dysmenorrhoea tended to be more in girls who had excessive menstrual loss.

The presence or absence of associated symptoms, which were also recorded is shown in Table III. Common symptoms were muscle cramps, nausea, vomiting and headache. Of these muscle cramp was the most common.

Table III *Amount of menstrual of loss*

Amount of bleeding	No. of patient	Percentage
Average	64	62.13%
Scanty	15	14.56%
Heavy	13	12.62%
Quite heavy	11	10.67%

Table IV

Associated symptoms and their prevalence in dysmenorrhoea. More than one symptom was present in some patients.

Symptoms	No. of patient	Percentage
Headache	22	21
Muscle cramp	71	69
Nausea and vomitting	31	30

Medical supports in the form of analgesics and antispasmodics were used by 22 girls (21.3%). The remaining denied the use of any drug, though some admitted using local hot compress in the abdomen for the relief of pain.

Discussion :

This limited study shows that the incidence of primary dysmenorrhoea among intermediate class girls in one of our colleges is quite high. Though in many cases the severity of dysmenorrhoea was mild to moderate, in at least 18% of the cases, it interfered with usual activities of the girls including their attendence in classes. This agrees well with a Finnish study made by Widholm,[2] who also noted that racial, climatic or environmental factors are not possibly very important in deciding the prevalence of dysmenorrhoea. If one fifth of young women are incapacitated for several hours each month due to painful menstruation, it may mean a significant loss of days due to absence from studies or work. In addition, may suffer from a great deal of anxiety lest such painful periods coincide with some important events such as examination.

In spite of many investigations done and hypothesis forwarded, the cause of primary dysmenorrhoea is still not known. Though it is said that a faulty out look and education in sex may be an important cause, it does not appear to be more than a contributory factor though Jeffeoate (1975)[3] stated that he thought there had been a reduction in the incidence of incapacitating dysmenorrhoea amongst English girls as a result of changes in education and upbringing.Though it is likely that psychological and social factors as well as education may significantly modify the perception of pain or its response to the individual, most workers now belive that a more likely mechanism is the release of some chemicals substance in the nature of prostaglandins which may lead to excessive uterine contractions producing a condtion of local ischaemia & local collection of painful metabolities. The escape of prostaglandins from the uterus to the systemic circulation could explain the other associated symptoms of dysmenorrhoea such as gastrointestinal disturbances or headache because the same side effects are noted when infusions of prostaglandins were used to induce labour in late pregnancy[4]. Some workers have shown high concentrations of prostaglandins and their metabolities in the endometrium, menstrual blood and peripheral circulation amongst women suffering from primary dysmenorrhoea[4]. Studies by Willaim et al[5]. Lundstrom et al[6] as well as by Chan[7] have shown that women with primary dysmenorrhoea have raised concentration of prostaglandins or prostaglandin metabolites in the endometrium, menstrual fluid as well as in peripheral circulation[4].

The notion that prostaglandins are involved in the aetiology of dysmenorrhoea has gained further support from clinical trials of prostaglandin synthetase inhibiting drugs such as fenmates, naproxane indomethacin, iboprofen etc., all of which have been used in the treatment of primary dysmenorrhoea showing 60–100% relief. These drugs inhibit the formation of a labile intermediate endoperoxides from arachidonic acid by inhibiting the enzyme cyclo-oxygenase and probably not only prevent the synthesis of classical prostaglandins PGF2 & PGE2 but also possibly thrombexane and prostacycline, though the role of the latter two in the causation of dysmenorrhoea has not yet been elucidated. What regulates the intrauterine production of prostaglandins at the time of menstruation is not clear. Since ovulation is a prerequeste for the occurance of spasmodic dysmenorrhoea, ovarian hormones are involved in the mechanism, and some workers (Ylikorakala 1979) suggested that high levels of oestradiol in the second half of menstruation may be the reason for excessive secretion of prostaglandins. In addition, cervical dysfunction may be responsible for giving rise to or for increasing the severity of pain, as the pain is relieved after cervical

dilatation and delivery. Further work is certainly needed to elucidate the exact cause of spasmodic dysmenorrhoea, so that completely effective therapy can be found to provide relief from such a common and painful disorder.

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Three cases of surgical correction of coarctation of the aorta–Anaesthetic Management

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Key word :

Coarctation of the Aorta, Induced hypotension

Summary :

Anaesthetic management of three cases of coarctation of the aorta for surgical correction are described with a view to find out regimen and techniques alternative to those already existing in the literature involving expensive drugs. A combination of mua ganglion–blocking agents like d–tubocurerine and halothane and an alpha–blocking agent like chlorpromazine appears to be satisfactory in a controlling the severe systolic hypertension in patients with coarctation of aorta. This control is effective both in the operative and immediate post operative periods without inducing profound or prolonged hypotension which are both unwanted.

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Introduction :

Anaesthetic managenent of surgical correction of coarctation of aorta is one of the fields in which practical experiences of most of the anaesthesiologists are not at all rich in our country owing to the fact that this corrective procedure had never been performed here in the past. Although first successful surgical correction of this lesion was done way back in 1945, (Gross et al, 1945 and Crafoord et all, 1945) this country's first resection and end to end anastomosis of coarctation of aorta was successfully carried out in the Institute of Cardiovascular Diseases, Dhaka in the month of May 1983. Since then two more cases have been performed successfully. There are procedures in literature (Fisher et al, 1977) describing how successful management of such cases can be brought about by anaesthesiologists. However, most of these procedures involve use of drugs that are expensive or else, not readily available. Therefore, alternative procedures requiring less expensive more readily available drugs must be sought out as far as we are concerned. In order to find out a more practicable regime than what is considered as the standard, we employed different methods to achieve an acceptable level of systolic blood pressure throughout the operative and immediate post operative periods.

Case — 1

Male, 30 years, weighing 66 kg, was proposed for resection and end to end anastomosis of coarctation of aorta. On pre-operative visit, his blood pressure was found to be 210/90mmHg in the right arm in sitting posture. Echocardiography and E.K.G. both showed left ventricular hypertrophy (LVH) and chest X-Ray showed rib notching indicating a good colateral circulation. He did not give any history suggesting cerebrovascular involvement but there was a mild degree of cardiac decompensation evidenced by dyspnoea and cough (Table 1). He was assigned ASA-2. 6 units of blood was kept ready.

TABLE - 1

Major preoperative findings in the three cases.

Case	Blood pressure rt. Arm Upper Sitting Systolic.	Blood pressure rt. Arm Diastolic.	Lower Limb Systolic	Lower Limb Diastolic	LVH in EKG	Rib Notching in Chest X-Ray.	H/0 LVF	H/0 CVA
1	2	3	4	5	6	7	8	9
1	210	90	110	70	+	+	+	-
2	220	110	100	60	+	+	+	-
3	180	110	110	70	+	+	-	-

On the day of operation 22–5–83, he received intramuscular (i.m.) injections of pethidine 100 mg and promethazine HCL 50mg one hour before induction of anaesthesia. Following pure Oxygen inhalation via a plastic mask, anaesthesia was induced by intravenous (i.v.) injection of sodium thiopental 250mg. Orotracheal intubation was facilitated by Suxamethonium 75mg i.v. Long term muscular relaxation was provided by d–tubocurarine (dTC) in incremental doses of 6mg. (total 21mg) while anaesthesia was maintained by halothane in concentrations ranging from 1.0– 2.0 percent in Oxygen (40%) & nitrous Oxide (60%). Continuous E.K.G. and direct blood pressure by cannulating left radial artery were monitored on Oscilloscopes. Besides, urinary output, acid–base status and blood loss were also monitored. To induce hypotension 5 to 10 milligrams of a 0.5 percent solution of Inj. trimetaphan (TMP) i.v. intermittently was used (total–100mg). To prevent cumulative effect, this drug had been stopped just before the Aortic clamps were applied A stable systolic BP level ensued (Fig–1) throughout

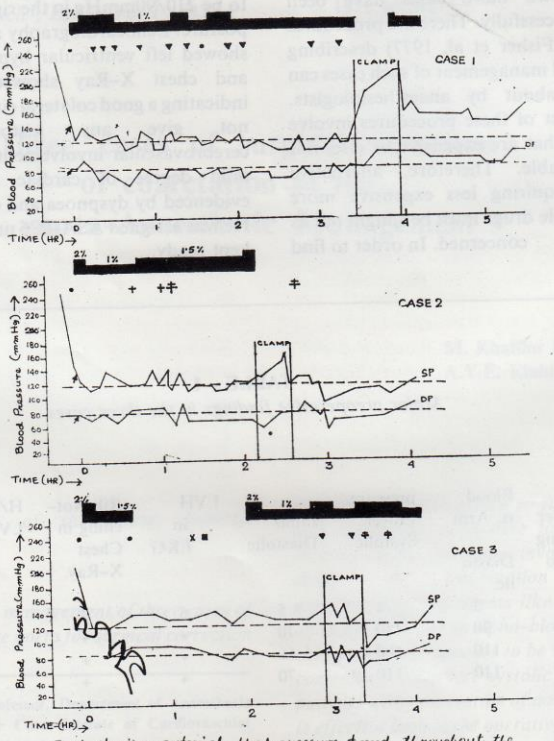

Fig. 1 showing arterial blood pressure trend throughout the whole period of anaestlesia of the three cases.
SP = Systolic Pressure, DP = Diastolic Pressure, ● = dTC, ++ = Phentolamine, X = Morphine, ■ = DZ, ▬ = Halothane, ∓ = CPZ

the operation period. The aortic crossclamp time was 35 minutes and during this period BP gradually rose to around 210 mmHg systolic but came down sharply to about 150 mmHg when the aorta was declamped and remained stable at this level without further use of hypotensive agents. Surgery took just over five hours and blood loss was minimal. Haemostasis was satisfactory.

Postoperatively, BP again rose to 210 mmHg systolic. Pethidine 100 mg. i.m. and repeated small doses of TMP (5mg every 5 minutes, total 25mg) failed to achieve a stable and lower level of BP. Inj. CPZ 25 mg i.m was then used followed by 5mg i.v. doses intermittently. This was successful in bringing the pressure down to 140/80 mmHg and a total of 25 mg of i.v CPZ was required till next morning.

There was no intestinal dysfunction evidenced by the absence of abdominal pain. No urinary retention, paraplegia or undue haemorrhage were recorded during his stay of 68 hours in CCU.

Case — 2

Male, 28 years, weighing 59 Kg. was proposed for surgical correction of coarctation of aorta. Pre-operative visit revealed findings very much like the first case viz, sitting right arm BP 220/110 mmHg, LVH, rib–notching absence of CV complication and mild LVF (Table–I). He too was assigned ASA–2, 6 units of blood was kept ready.

On the morning of 5th June '83 he received pethidine 75 mg. and promethazine HCL 50 mg. i.m. one hour before induction of anaesthesia. Following pre–Oxygenation minutes. anaesthesia was induced with sodium thiopental 250mg i.v. Suxamethonium 75mg i.v. was used to facilitate orotracheal intubation. Like the first case, anaesthesia was maintained by halothane (1.0–0.0 percent) in Oxygen (40 percent) and nitrous oxide (60 percent), while muscle relaxation was maintained by dTC in incremental doses of 6mg i.v. (Total 15mg).

Monitoring was of E.K.G., direct radial arterial BP, urinary output, Arterial blood gas (ABG) acid base status and blood loss.

This time to achieve hypotensive state, phentolamine (PH) in incremental doses of 5mg i.v. was used (total 12mg) but the result was not satisfactory. CPZ in intermittent doses of 5mg i.v. (total 7mg) was then tried. This provided a sustained systolic presssure around 120 mmHg (Fig.1) BP gradually rose to 180 mmHg during the aortic clamping period of 34 minutes, and came down immediately, like, in the first case, to stay around 130 mmHg. Surgery took five hours and there was about two litres of blood loss which was promptly replaced.

Unlike the first case, in the immediate postoperative period, BP was fairly well maintained at 130/80 mmHg. The same regime of CPZ 25mg i.v. followed by 5mg i.v. intermittently (total 25mg) till next morning, provided a satisfactory level of BP, when oral antihypertensives were started.

Abdominal pain, paraplegia, urinary retention, haemorrhage and cerebrovascular complications were all absent and the patient was discharged from ICU after a stay of 92 hours.

Case – 3

Male, 18 years, weighing 51 kg. was scheduled for surgical correction of coarctation of aorta on 25th August'83 on pre-operative visit, his sitting BP was found to be 180/110 mmHg in the right arm. There was LVH but no history of CV complication or LVF. Rib–notching was present in his chest skiagram (Table-1). The same ASA–2 status was assigned to him like the first two cases, and same amount of blood (6 units) was kept ready for him.

One hour prior to induction of anaesthesia he got pethidine 50mg and promethazine HCL 50mg i.m. Pre-Oxygenation, induction, oratracheal intubation, maintenance of muscular relaxation were identical to the two earlier

cases, only maintenance of anaesthesia was provided by i.v. morphine and diazepam in addition to halothane which was the sole agent used in the two earlier cases. Monitoring too, were of the same parameters as the earlier cases.

For hypotension, TMP in 5mg–10mg (total 15mg) plus CPZ in 2.5mg intermittent i.v. doses (total 15mg) were used this time. The control was very satisfactory and systolic BP never went beyond 140 mmHg throughout the whole procedure (Fig–1). 300ml blood was lost which was replaced. Aortic clamp was of 30 minutes duration and that of the surgery was 4 hours and 30 minutes.

The same regime was followed to control BP in postoperative period as in the first two cases with good result. No complications was encountered in the postoperative period and he was discharged from ICU after an uneventful stay of 94 hours.

Discussion :

The answer to the various problems associated with anaesthetic management of surgical corretion of aortic coarctation is inducing hypotension during surgery and continuing exaggerated and prolong hypotension at any stage. But this is not as easily achieved as can be in cases not involving lesions of aorta. The reason is that the mechanical obstruction in the aorta renders it very difficult to achieve a sustained and satisfactory level of systolic BP. Moreover, generous use of vasodilators are dangerous as there may be residual vasodilation in the lower half of the body and as soon as aortic clamps are released, profound and prelong hypotension may ensue. Sodium nitroprusside (SNP) infusion have been described (Didier et al, 1965) as the best and safest method. But SNP is costly and not easily available in our country. TMP is another drug that can be used. But in order to achieve good result, an infusion rather than intermittent dose is necessary, which renders it of dubious value because infusion may produce cumulative vasodilating effect and unwanted hypotension may follow. The same is true of PH as well.

In the three cases described herein, the mild ganglion-blocking effect of dTC –halothane combination has been taken advantage of and used as base upon which addition of mild alpha–blocking effect of CPZ appears to be very effective in providing the desired control of BP. Although there are reports of paradoxical hypertension following the use of halothane (Davis et al, 1961), we have not come across this phenomenon and halothane (1⁄2.5%) did appear to be providing hypotension.

It is questionable as to whether the dTC –halothane–CPZ combination can be regarded as instantly reversible hypotensive regime. The answer may probably be a negative one but if halothane and CPZ is discontinued immediately before aortic cross

TABLE – 2

Total amount of different drugs used for inducing controlled hypotension during Surgery.

Case	dTC	Halothane	TMP	PH	CPZ
1	21	1–2	100	–	–
2	15	1–2	–	12	7
3	20	1–2	15	–	15

dTC = d – tubocurarine, TMP = Trimetaphan, PH = Phentolamine, CPZ = Chlorpromazine.

TABLE-3 *Unit price and local availability of some relevant drugs.*

Drug	Quantity per Amp. or Vial (mg.)	Cost (Tk./amp. or vial)in local	Availability Market.
d- Tubocurarine	30	50	N. A.
Trimetaphan	100	100	N. A.
Phentolamine	5	50	N.A.
Chlorpromazine	50	6	E.A.
Sodium Nitroprusside	100	200	N.E.A.

N. A. - Not available, E. A. - Easily available. N. E. A. — Not easily available.

clamp, the combination may be safe or at least it has proved so in the three cases it was employed.

Immediately after the correction of the coarctation, arterial BP decreases to almost normal level, but shortly after that is rises sometimes to even higher level than in the preoperative period. This occurs in 20% (Chang et al, 1972) to 60% (Sealy et al, 1975) of patients. It has shown that a greatly increased level of plasma catecholamines especially noradrenaline occurs post operatively (owens et al, 1963) and is responsible for this post operative hypertension. Therefore it follows that use of alpha-and-beta-adrenergic blockers will prevent this rise. In the three cases presented here CPZ has been used as alpha-blocker which gave a good result. There was indeed some degree of not used till next morning when it could be given orally. The absence of significant haemodynamic abnormalities indicate that regimes using cheaper and locally available drugs can be used, particularly in uncomplicated cases of post-ductile lesions in adults, where operative mortality is low (4%) (Owens et al, 1963 and Holmes Sellors et al, 1963).

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COMPLICATIONS OF FALCIPARUM MALARIA

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Key Words :

Falciparum Malaria

Summary :

Two hundred and seventy two cases of Malaria were studied in Bangladesh from August 1979 to November 1983. Cerebral Malaria (10.6%) and Malarial haemoglobininuria (2.9%) are two life threatening complications of falciparum malaria. Altered sensorium, signs of meningeal irritation, constricted pupil, brisk tendon jerks with positive Babinski's sign are the predominent findings in cerebral malaria. Mortality in cerebral malaria can be lowered by early diagnosis and treatment.

Introduction :

Malaria is one of the 'six diseases' against which W.H.O. has global eradication campaign. It is a major cause of morbidity and mortality in all age group, world wide. In South East Asia it is deeply entrenched on account of added problems of strain of P. falciparum resistant to chloroquine (W.H.O, 1973). With increase incidence of Malaria in Bangladesh a number of tragic deaths are reported. This provoked us to make a study of complicated falciparum malaria.

Materials and Methods :

This study was carried out in 272 admitted patients in two hospitals in eastern part of Bangladesh from August, 1979 to November, 1983 (Chittaong Medical College Hospital and Cox's Bazar District Hospital). The diagnosis of Malaria was based on demonstration of asexual forms of plasmodium in blood films, in febrile cases in absence of other known cause of fever. Clinical features were noted in each case. Complications were noted as and when found by one of us.

Results :

The major presenting feature is fever with different grades and types. This is shown in Table 1.

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Table I *Presenting symptoms*

Symptoms	Number of patients	Percentage
Fever		
Continous	104	34.2
Intermittent	123	45.2
Remitent	43	15.8
Clinical stages		
absent	145	53.3
present	126	46.3
Headache	167	61.4
Increased thirst	176	64.7
Vomitting	92	33.8
Loose motion	34	12.5
Altered conciousness	37	13.6
Cough	18	6.6
Passage of dark urine	8	2.9

The main presenting signs are shown in table

Table II *Presenting sign*

Presenting sign.	Number of patients	percentage
Anaemia	110	40.4
Hypotension	36	13.2
Jaundice	12	4.4
Herpes Simplex	3	1.1
Splenomegaly alone	18	6.6
Hepatosplenomegaly	34	12.5

The complications that are noted in our study are shown in table 3.

29 cases (10.6%) were admitted with cerebral malaria. 9 cases (2.9%) had blackwater fever, 7 cases (2.6%) were of choleraic malaria.

5 cases (1.8%) were presented with hyperphrexia, 4 cases (1.5%) were presented with acute renal failure and algid form each and 2 cases each (.7%) had dysenteric symptoms and tropical splenomegaly syndrome.

Table III. *Complications of malaria*

Complications	Number of cases	Percentage
Cerebral malaria	29	10.6
+Black water fever	8	2.9
Choleraic malaria	7	2.6
Hyperpyrexia	5	1.8
Acute Renal Failure	4	1.5
Algid form	4	1.5
Dysenteric malaria	2	.7
Tropical splenomegaly syndrome	2	.7
Skin rash	1	.4
Abortion	1	.4
Transient blindness	1	.4
Retinal Haemorrhage	1	.4

+ All haemoglobinuria patients were included; G6 PD deficiency could not be excluded.

Clinical features of cerebral malaria are noted in the table 4.

Table IV *C/F in Cerebral malaria*

Feature	Number of cases	Persentage
Stupor	13	44.8
Coma	11	37.9
Confusion	4	13.8
Muscular twitching	5	17.2
Monoplegia	1	3.4
Positive Babinski's sign	16	55.2
Brisk tendon jerks	14	48.3
Pupillary constriction	18	62.1
Signs of meningeal irritation	20	69.0

Altered sensorium is the predominent feature.

13 cases (44.8%) were stuporous, 11 cases (37.9%) were in coma, 4 cases (13.8%) were in confusion. Brisk tendon Jerks were found in 14 cases (48.3%) constricted pupil in 18 cases (62.1%) and signs of meningeal irritation was found in 20 cases (69.0%) one patient had developed cerebral symptoms in hospital while getting chloroquine therapy. Monoplegia was transient in one patient and reversed after treatment. Those who recovered regained conciousness within 72 hours.

C.S.F. findings in 18 cerebral malaria cases are shown in table 3.

Table V. *CSF findings in cerebral malaria cases*

Case	Colour	Pressure (mm of CSF)	Lymphocyte (/GPF)	Sugar (mg/100ml)	Protein (mg/100ml)
1.	Clear	110	10	45	50
2.	Clear	160	5	70	20
3.	Clear	160	5	60	50
4.	Clear	180	18	40	62
5.	Clear	100	0	42	40
6.	Clear	200	12	48	60
7.	Clear	210	8	40	40
8.	Hazy	170	11	75	85
9.	Clear	165	11	50	40
10.	Clear	160	60	55	30
11.	Clear	170	5	50	48
12.	Clear	155	5	45	52
13.	Hazy	150	12	55	100
14.	Clear	175	2	70	55
15.	Clear	160	10	38	75
16.	Clear	175	60	55	40
17.	Clear	155	10	40	40
18.	Clear	160	6	60	50

+ Lumbar puncture was done in 18 out of 29 cerebral malaria cases.

Colour of the CSF was clear in 16 cases (88.88%), hazy in 2 cases (11.1%) increased pressure upto 210 mm of CSF were noted in 15 cases.

3 patients had normal pressure. Cells in CSF were predominently lymphocytes ranging 0.60/HPF. Sugar concentration was normal in all the cases. Protein concentration was ranged from 500–100 mg/100 ml in 11 cases (61.11%). Bacteriologically all the samples were sterile.

8 cases out of 272 treated malaria patients died as shown in the table 6.

Table VI *Mortality in malaria*

Cause of death	Number
Cerebral Malaria	4
Acute renal failure	2
Black water fever	2
Total	8

Discussion:

Complications that are found in our series are similar to those obtained by others. Cerebral Malaria in this series (10.6%) is higher than that found by Gentilini et al (1978) who found 9% cerebral malaria cases. Mitra and Kunte (1977) found 14 cases out of 86, Schmitz et al (1976) found 3 out of 86 and Daroff (1967) found 2% of cerebral malaria patients; mengistu et al., (1979) found 14% cerebral malaria in Ethiopia.

All the cases admitted with haemoglobinuria and fever are labelled as black water fever. GGPD deficiency could not be excluded in those cases, one of the patients of black water fever has history of taking quinine. All the 8 cases had history of passage of dark urine. They were severely anaemic. One patient was in shock on admission. Colour of the urine returned to normal within 48 hours in all the cases after institution of therapy. 5 cases required blood transfusion 2 units each. 3 cases had no MP in blood film, rest of the 5 had scanty falciparum parasite. 4 of them treated with injection chloroquine followed by tablet chloroquine as per schedule-dose. One patient received pyremethamine-sulfadoxine. No untoward reaction occurred in those patients during blood transfussion. Black water fever (2.9%) in the present series is higher in incidence than found by Sohmitz et al (1976).

Increased incidence of cerebral malaria and black water fever could be due to exposure of non-immune population to endemic area of falciparum malaria. Most of the cases of cerebral malaria and black water fever are from hilly area of Bangladesh who have migrated from other parts of Bangladesh having low immunity.

Black water fever usually occurs in endemic areas, patients are usually non-immune. Scanty parasites are found in blood film. Antigen-antibody reaction triggered by quinine may be resposnible for haemolysis (Wilcocks and Manson Babr, 1972). Renal failure in malaria is usually associated with black water fever or heavy parasitaemia (Stone, W.J., Hanchestt. J.E., Knepshield, J.H. 1912). Stone et al (1972) also described renal failure in malaria (12 out of 42). Schmitz et al (1976) found renal failure 1 case out of 80. Other complications reported in this series and others include skin rash (sail, K.G. 1977) abortion (Woodruff, 1971; Nl. Jordan T. 1981), tropical splenomegaly syndrome (Pitney, W.R. 1968), retinal haemorrhage and transient blindness (Flegal K.M. 1976). Disturbances of conciousness was the most commonly encountered neurological abnormality in this series which correlates with findings of Daroof et al (1967). Muscular twitching found in this series is also noted by Hughes et al (1944).

Mortality in Malaria is mostly due to Cerebral Malaria and renal failure. The mortality in the present series compared in the table with some previous reported series (Mitra, N.K , Kunte A.B., 1977), Schmitz. B., Gelfand M.A. 1976 and Alberto et al 1982).

Authors	Samples	Cerebral Malaria No of case	Death	Mortality
Mitra et all	patients in Military Hospital in Eastern Sector in India.	14	4	28.57
Schmitz et al	Rhodeshia	3	2	66.66
U.S. Troops In Vietnam		19	0	0
Alverio et all San	L Azaro Hospital, Manila	40	8	20.00
Present series	Hospitalised patients in Eastern part of Bangladesh	29	4	13.80

In comparison to previous finding mortality is lower in the present series. This could be due to early diagnosis and meteiculous care of the patients.

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MEDICAL DISSOLUTION OF GALL STONE : A REVIEW

Q.Deen Mohammad

Key word :

Medical dissolution of gall stone.

Summary :

The medical approach to the treatment of cholesterol chlelithiasis is a direct benefit and logical application of the facts of basic research. Chenodeoxycholic acid (Chenodiol) has been proved to be an effective agent with some unwanted side effects but ursodeoxycholic acid with half the dose of chenodiol is more effective having less side effects. But its practice is limited to some centres only because it is too expensive. The overall success rate with chenodiol is about 50% and can only be administered in about 25% cases of gall stone disease. Recurrence rate is around 20–50% in different countries. Although there have been many therapeutic attempts to promote gall stone dissolution the feeding of bile acids has been most successful to date.

Introduction :

Dissolution of cholesterol gall stone by orally administered bile salts promised to be one of the exciting therapeutic advances of the seventies. Until recently the only treatment available for gall stones has been cholecystectomy, an operation whose frequency equals or exceeds that of appendicectomy in many countries (Gardner 1980). As it was certain that bile salt is primarily responsible for solubility of cholesterol and in patients with gall stones cholesterol was found to be insoluble either due to total decrease pool of bile salts or decrease bile salts in gall bladder bile. So the idea came into administration of bile salts to overcome the situation and to prevent formation of gall stone or to dissolve gall stone. In 1937 Rewbridge had reported the first successful dissolution of human gall stone by administering mixed bile salts and olive oil and subsequently in 1971 Thistle and Schoenfiled showed that chenodeoxycholic acid (CDCA) to be as effective agent and on the basis of which the first clinical trial with CDCA was started in 1972 and they found that complete or partial dissolution of cholesterol stones occured in some patients (Gardner 1980). Successful elimination of retained calculi in bileduct also has been reported after infusion of bile salts solution through a T tube placed in bile duct (Bell 1972, Cheung 1974, Earnest 1971, Farrel 1973. Hardie 1977. Schoenfield 1974, Thistale 1973) Ursodeoxycholic acid (UDCA), the 7 B isomer of CDCA, is the most interesting new disolving agent. It is synthesized commercially from CDCA and is therefore more expensive. It was shown to be as effective as CDCA at approximately half the dose and did not cause diarrhoea or any liver

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enzyme abnormality (Gardner 1980).

Mechanism of cholesterol cholelithiasis :

Cholesterol is an obligatory precursor of bile salts. Acetyl Co–A is the precursor of cholesterol and three molecule of acetyle Co–A condenses to form B–hydroxy–B Methyl glutaryl Co–A (HMG–COA) with subsequent non reversible reduction of the later to mevalonic acid by the enzyme HMG–COA reductase. The reaction then proceeds sequentially through several intermediary steps to the formation of cholesterol and liver appears to be the sole organ capable of stepwise transformation of cholesterol into primary bile acids of man, CDCA and CA(cholic acid). Bile salts suppresses the activity of HMG–COA reductase. The rate at which liver sythesize cholesterol and bile acids appears to be controlled by bile salts pool e.g. negative feedback fashion. Bile salts also inhibit intestinal cholesteral synthesis (Lowrence 1976). Normally cholesterol is kept in aqueous solution in bile. It is the ratio of cholesterol to both bile salts and phospholipids rather than absolute values is important in determining the solubility of cholesterol. It is known that cholesterol will precipitate from bile if the ratio of bile salts and phospholipids to cholesterol falls below a critical level. This is usually found in.

i. Patients with gall stone where a state of decreased bile salt pool occurs.

ii. Where excessive loss of bile salts occur due to some factor or disease followed by inability of liver to compensate for the bile salts loss. This greater decrease in bile salts and phospholipids would reduce the cholesterol holding capacity of the bile with consequent formation of cholesterol crystals.

iii. Where there exists an increased secretion of biliary cholesteral (lithogenic bile) without a parallel increase in bile salts and phospholipids secretion (Lawrence 1976). The exact mechanisms for the formation of lithogenic bile are unknown. The evidence in man tends to favour the liver as responsible for lithogenicity by forming lithogenic bile. It is also suggested that gall bladder is essential to the continuous production of lighogenic hepatic bile. The mechanism is thought to involve a defect in the feedback inhibition of hepatic bile salt synthesis that requires the presence of gall bladder.

Mechanism of action of CDCA :

The mechanism of action of CDCA is not simply to increase the excretion of bile acids in the bile. It's main actions are as follows (Gardnar 1980).

i. It reduces the total cholesterol excretion in bile through an inhibitory action on HMG–COA reductase, an enzyme controlling the sythesis of choesterol in liver.

ii. It also reduces cholesterol absorption in small intestine and so reduces cholesterol excretion in bile.

iii. The decrease in biliary cholesterol excretion with CDCA reduces biliary cholesterol saturation and creates favourable conditions for dissolving cholesteral stones.

Indication of CDCA therapy : Arround 25% patients with gall stone disease are suitable for CDCA therapy (Leslie 1982, Lowrence 1976, Pearlman 1979). It is indicated in condition where.

i. The gall bladder is functioning and concentrate bile as proved by oral cholecystography.

ii. The stone is radiolucent e.g. indicative of low calcium content.

iii. The stone size should not be more than 2 cm in diameter.

iv. Therapy is very effective in stones floating in the gal bladder (Lawrance 1976).

v. Small stones in young women after pregnancy or prolonged use of contraceptive pills.

vi. Increased operation risk patients.

Dose: 15 mg/Kg/day for prolonged period (average 6 months to 24 months).

Larger stones may require prolonged therapy with increased doses.

Results :

In USA and UK: Partial dissolution

occured in 22% cases and complete dissolution occures in 25% cases e.g. overall response is 47%. In Australia, the overall response is around 50%.

Side effects: i. Commonest is diarrhoea–about 75% cases (Lawrence 1976)
ii. Raised hepatic transaminase–about 2.5% cases (Leslie 1982 Pearlman 1979).
iii. Obstructive jaundice due to impaction of stone in bile duct.
iv. Hypercholesteraemia Very rare.

Recurrence of stone formation :

50% recurrence in U. K. within one year (Leslie 1982, Pearlman 1979). 20% recurrences in USA within 6–48 months.

Recurrence of stone may be treated sucessfully by a further short course of CDCA. Bile salts also increases colonic absorption of oxalate and so may predispose to the formation of renal oxyalate stones (John 1976). Recurrence of stone fomation may be prevented by appropriate dietic advice (Gardner 1980)

i. Low caloric diet
ii. Low cholesterol diet
iii. High fibre diet.

Conclusion :

Gall stone dissolution is now a reality and both CDCA and UDCA have a small but valuable place in therapy of selected patients with gall stones. UDCA seems an ideal drug to replace CDCA but its cost may limit its clinical use. It is likely that more effective agent will be developed but their range of application will always be limited because gall stone disease presents so commonly when stones are large or calcified and severe pathological changes have occured on the gall bladder wall. Cholecystectomy which is safe, rapid, less expensive and recurrency of stone is unusual is lilely to remain a common operation for foreseeable future. Only future trials will allow us to answer the question whether we are accomplishing a worthwhile goal in substituting lifelong therapy for short lived surgery.

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CAT SCRATCH DISEASE
— A case report

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M. N. Alam 3

Key words :

Cat Scratch, Lymphadenopathy, Conjunctivitis.

Summary :

Cat scratch disease is a benign, self-limiting illness usually following scratch by cats. Generally a papule or pastule develops at the site of the scratch and is followed by regional lymphadenopathy. Systemic symtoms like malaise, fever may be present. The diagnosis is made from the history of contact with cat, characteristic granuloma of the biopsied lymphonode and exclusion of other causes of lymphadenopathy (Emmons, 1984).

The disease is world wide, occuring in all races and in both sexes but the true incidence is unknown (Margileth, 1982). There is no reported case from Bangladesh. We have recently came across one which we are reporting.

Case Report :

A 18-year male college student was admitted in IPGMR Dhaka with 2-week's history of low-grade continued fever and redness of both eyes. Soon after he noticed gradual swelling of both sides of neek, left axilla and supratrochlear region. The fever ranged from 99°F to 101°F and was not associated with chill or rigor. He had no history of cough. On enquiry he stated that he was scratched by a cat over the left hand 6 weeks back and a pastule developed which healed spontaneously within a week. On examination his conjuctivae were congested. He had wide-spread lymphadenoathy involving both cervical, left axillary and supratrochear groups. The nodes were discrete, slightly tender and of different sizes ranging from 1 to 3 cm. Liver and spleen were not palpable. He was otherwise in good health. Investigations revealed normal blood counts and ESR was 45mm in lst hour. X-ray of the chest was normal. The tuberculin test and sputum for acid fast bacilli were negative. Widal test, VDRL and Paul-Bunnel tests were also negative.

Microscopical examination of a biopsy specimen from left supratrochlear lymph node showed granulomatous lymphadenitis which was compatible with Cat-scratch disease Swab taken from the lymph node was cultured aerobically and anaerobically but yielded no growth. Skin test

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for cat scratch disease could not be done as antigen was not available. He was discharged from the hospital and follow-up was done for subsequent 3 months. Gradually conjunctivitis subsided and in a period of 2 weeks the fever disappeared and lymphadenopathy resolved spontaneously in the next month.

(Continued from front inside cover)

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Discussion :

Cat scratch disease is a zoonotic infection characterised by a skin papule at the site of scratch. Ninety three percent patients have primary inoculation site (Carithers, 1983). Most primary lesions persist for 1 to 3 weeks, with a few persisting for 3 months. The typical primary lesion is an erythematous papule or rarely a pastule (Margileth, 1968). Extraregional lymphadenopathy rarely occur. However systemic symptoms like fever, malaise, bodyache may be present.

Our patient had history of a scratch by a cat, developed a pastule which healed spontaneously in 1 week. Six weeks later he developed systemic symptoms and regional and extraregional lymphadenopathy. Unusual clinical menifestation include ocular granuloma or conjunctivitis in cat scratch disease (Carithers, 1978) which was exhibited by our patient.

The clinical diagnosis is made when 3 of 4 criteria are met (Margileth, 1968, Margileth, 1971): i) Cat scratch or primary dermal or eyelesion (ii) Positive skin test (iii) Negative laboratory study results for other causes of lymphadenopathy. (iv) characteristic histopathologic feature of lymph node biopsy specimen. In this case diagnosis of cat – scratch disease was made by the history of cat contact and characteristic granulomatous lesion of the lymponode although other causes of lymphadenopathy could be excluded clinically and by laboratory tests, Skin test is safe, reliable and highly specific (Carithers,1977) but this could not be done due to lack of antigen.

Etiology of this illness is unknown. It is presumed that etiologic agent is a virus. Bacteria (Margileth et al, 1984; Emmons, 1984) Fungi, rickettsiae are also implicated. In our patient swab material from the biopsied lymph node was cultured both aerobically and anaerobically but no growth was obtained. No virus or fungus study was done. Treatment of this condition consists of close observation and assurances that skin lesions, lymphadenopathy, systemic symptoms will subside spontaneously. Complete recovery is the rule which also happened in this case who recovered completely in 6 weeks.

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A SUCCESSFUL ABDOMINAL PREGNANCY

Sultana Jahan

Key word :
Abdominal Pregnancy

Summary :

A full term abdominal pregnancy is reported. A healthy female baby was born by laparatomy. Both baby and mother are well.

Introduction :

Abdominal pregnancy is one of the rare and yet serious form of extra-uterine gestation. The incidence varies among different races, and is probably influenced by sociodemographic factors. In a large series from Charity Hospital in New Orleans the incidence was 1 in 3379 births (Beacham WD, 1962).

Secondary abdominal pregnancy denotes extrauterine pregnancy which is continued in abdominal cavity after primary implantation in tube or the ovary (Jeffcoate, 1972). From all available records and literature it is the only one recorded from Bangladesh in which the baby survived and the mother is in good health. This type of pregnancy may be intraligamentry or intraperitonial (Meclead and Read, 1955).

A full term healthy living baby in extra-uterine environment is extremely rare and to diagnose the condition before operation is a difficult job.

Any case of advanced abdominal pregnancy is potentially hazardous with a maternal mortality in the region of 10 percent (Beacham et, el 1962) and a foetal loss of 70 percent (Tan et, el 1962), pressure deformities may occur in 40 percent of viable infants (Tan et, el, 1969).

Case Report :

The patient, a 35 years old female, gravida-7 Para-6, abortion-nil with 6 living children, all normal home confinement, was hospitalised on 19th February '85 complaining of amenorrhoea, intermittant abdominal pain for about last 40 weeks duration. She also complained of nausea, vomiting and general weakness. There was no vaginal bleeding. At about 2 months gestational period she felt severe abdominal pain with fainting. She recovered and gradually signs & symptoms of pregnancy appeared. The patient could not tell exactly the date of her last menstrual period but her cycle was regular. She was a grand multi-para, she presumed that her expected date of delivery has already passed by some days, and for that reason she came to hospital.

Her past medical and obstetrical histories were unremarkable. She felt painful foetal movements for the last few months.

The shape of the uterus was found to be asymmetrical and different from a normal full term pregnancy. The physical examination was otherwise within normal limits. X-Ray of the abdomen done in both A. P. and lateral view showed superimposition of the shadow of foetal skull bones over the maternal spine

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which was highly suggestive of abdominal pregnancy and the lie of the foetus was transverse.

Ultrasonogram the report was suggestive of ectopic pregnancy the foetal head and body lying transversely with head directed to the left lateral side.

On the 25th February '85 hysterosalping ography was done & existence of a living foetus out side the uterus was confirmed.

Laparatomy was done by routine right paramedian incision and after opening of the peritonium a loose translucent sac covered by omentum was found covering the foetus – that omental sac was continuous with placental membranes.

After incising that sac & membranes one healthy female baby was delivered the cord was trimmed as short as possible and the placenta left in situ as it was covering the great vessels of the posterior abdominal wall.

A drainage tube was brought out through the left fossa which was removed after 48 hours. The uterus was enlarged upto 20 weeks pregnancy size due to decidual reaction & was below the foetus supporting it like a cushion. The abdomen was closed in layers. There was no undue blood loss. And surprisingly there was no pressure deformity of the baby. It was perfectly a normal healthy female baby weighing 6000 grams the biparietal diameter being 9.7 c.m.

Her post operative convalescence was uneventful and there was no discharge through the drainage site.

Discussion :

Most of the abdominal pregnancies are secondary to early tubal abortion or rupture with extension and implantation of the viable placenta on the peritonial surface. Though the condition is rare, it is possible.

One case of abdominal pregnancy following total hysterectomy was delevered by laparatomy after 36 weeks of gestation and was successfully managed by P. Jekson and L.I. Philip in National Women's Hospital, Auckland on 15th May '1979.

The early and accurate diagnosis of an abdominal pregnancy although difficult is important to avoid catastrophic hemorrhage from placental separation. Late in pregnancy painful foetal movement may be felt high in the maternal abdomen.

Negative oxytocin challenge test (OCT), ORR, JW. et. el, 1979) and absence of Braxton Hicks contraction is suggestive but confirmation is done by radiological examination in both A. P. & lateral views, ultrasonogram & lastly by hysterosalpingogram.

The classic findlings of foetal skull shadows overlapping the maternal spines viewed in the lateral position are nearly diagnostic. Hysterography to be done in those cases only where the diagnosis of extrauterine pregnancy is almost confirmed; otherwise there is a risk of injury to the foetus.

If diagnosis could not be done or if the patient did not attend hospital in proper time which is more likely in a developing country like ours the foetus becomes mummified, undergoes fatty transformation or is clacified to form a lithopedion and spontenous discharge of foetal bones may take place the bladder or through the rectum or abdominal wall.

In sumary, recurrent severe abdominal pain in a pregnant patient should alert the physician to the possibility of abdominal pregnancy. Though high maternal morbidity and mortality often occurs this rare condition can best b managed through early diagnosis and prompt surgical intervention. Survival of a viable infant is uncommon and congenital malformations are frequent.

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(See Page 11)

COLLEGE NEWS

March '85 – Formation of Various Committees and Faculties of the College. The Committees are as follows :–

Examination Committee

1. Dr. S. A. Ashraf	Chairman
2. Dr. Nurul Islam	Member
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1. Dr. M. A. Jalil	Chairman
2. Dr. Mahmud Hasan	Member
3. Dr. M. A. Majid	,,

4. Dr. Md. Nurul Islam "
5. Dr. Golam Rasul "

Journal Committee

1. Dr. Golam Rasul Chairman
2. Dr. K. M. H. S. Sirajul Haque Member
3. Dr. A. K. Azad Khan "
4. Dr. Nazmun Nahar "
5. Dr. Mahbub–ul–Alam "

Museum Committee

1. Dr. S. I. M. G. Mannan Chairman
2. Dr. M. H. Mullick Member
3. Dr. Golam Rasul "
4. Dr. K. M. Nazrul Islam "
5. Dr. Shahid Hossain "

The Committee will function for 2 years w. e. from 1. 3. 85.

Continuing Medical Education Programme:
The following lectures were delivered in the College Auditorium.

March'85 –

Dr. Matiur Rahman, Prof. of Nephrology, IPGMR, Dhaka delivered a lecture on "Spectrum of Glomerulonephritis in Bangladesh".

April'85 –

Maj. Gen. A. R. Khan, Director General of Medical Services, Dhaka Cantt; delivered a lecture on "Viral Hepatitis".

May'85 –

D M. Nabi Alam Khan, Associate Prof. of Cardio–thoracic Surgery, ICVD, Dhaka delivered a lecture on "Open Heart Surgery".

June'85

Dr. Moyenul Islam, Consultant Pathologist, ICDDR. B, Dhaka delivered a lecture on "Causes of Death and Pathological Findings in 100 Fatal cases of Invasive Diarrhoea in Bangladesh".

July'85

Dr. Abedur Rahman, MD, FACS, Associate Prof. of Clinical Surgery, Michigan State University, U. S. A. delivered a lecture on "Surgical treatment of cerebrovasular insufficiency"

Examination News

Results of FCPS Part I / Part II and MCPS Examinations held in July, 1985.

170 candidates appeared in FCPS Part I Examination in different subjects. Only 28 candidates came out successful. Subject wise results are as follows :–

	Number appeared	Number passed
Medicine	41	9
Surgery	47	11
Obst. & Gynaecology	30	2
Paediatrics	25	3
Ophthalmology	7	0
Psychiatry	6	2
ENT	3	0
Radiotherapy	1	0
Anaesthesiology	7	1
CL. Pathology	3	0

List of candidates who passed FCPS Part II are as follows:–

Subject : Medicine

Roll No. Name

1. Dr. Md. Abdul Moyeed Siddiqui
2. Dr. Md. Mostafizur Rahman
3. Dr. Quazi Shafiuddin Ahmed
6. Dr. (Capt.) Md. Rabiul Hossain
7. Dr. Chandanendu Bhushan Sarker
19. Dr. Syed Wahidur Rahman

Surgery

22. Dr. Zahid Wahid
26. Dr. Mohammed Afzal Hossain
27. Dr. Mrigen Kumar Das Chowdhury
28. Dr. Jawahar Lal Sen
34. Dr. Md. Ali Akbar

Obst. & Gynaecology

37. Dr. Fatema Begum

Paediatrics

39. Dr. Md. Mobiul Haque Haidary

Ophthalmology

41. Dr. Abdur Rahim Dewan

Psychiatry

43. Dr. Md. Nazmul Ahsan

List of candidates who passed MCPS are as follows :–

Subject : Medicine

Roll No. Name

2. Dr. Mujibur Rahman

Obst. & Gynaecology

11. Dr. Mohammad Abdul Bari

Paediatrics

13. Dr. Mohammad Abdul Bari

Ophthalmology

23. Dr. (Lt. Col.) Md. Mosaheb Hossain

Anaesthesiology

26. Dr. Syed Azhar Ali
27. Dr. Nina Rahman Jamaly

CI. Pathology

30. Dr. Abdul Hai

Orientation Course
June'85 –

A 2 (two) week's Orientation course for FCPS Part II examination was held from 1.6.85 to 13.6.85. The Registration fee for the said course is Tk. 1,000/–

Enhancement of registration fee from Tk. 200/– to Tk. 500/– for 4 weeks' Orientation course for FCPS Part I examination w.e. from Ist Nov.'85.

Formation of New Criteria for election of the Fellows without examination

FELLOWSHIP WITHOUT EXAMINATION

Prerequisite for eligibility to be elected asa Fellow of Bangladesh College of Physicians and Surgeons without examination:

a. Fellowship or Membership of Royal Colleges of U. K. of 10 years standing or doctorate from Universities of 10 years standing or equivalent qualifications recognised by Bangladesh Medical & Dental Council.
b. Diploma in clinical subjects of 15 years standing or Masters degree in basic subjects of 15 years standing.
c. Eminent medical graduates of 20 years standing.

If these criteria are fulfilled the candidate becomes eligiblefor election. No. additional consideration will be given to length of time after postgraduation.

ASSESMENT OF OTHER CRITERIA.

1. Publications.
   (a) Each publication in indexed (Index Medicus) journals (0.5 mark).
   (b) Each publication in journals not indexed but recognised by Bangladesh Medical and Dental Council (0.5 mark.).
   (publications in non–indexed journals which are not recognised by the Bangladesh Medical and Dental Council will not be taken into account.)
2. **Teaching Experience :**
   Each year as Professor (0.5).
   Associate Professor more than 5 years standing will earn the same as that of Professor.
3. **Services to the College :**
   As examiner / teacher in Postgraduate courses (0.25 to 2 marks) organised by the College or any other services rendered subject to the assessment of the Reference Committee.

Without Fellowship Examination

Dr. Md. Muzzammel Hussain Mullick, MBBS, M Sc. Professor of Anatomy, Sir Salimullah Medical College, Dhaka and Dr. Muhammad Abdul Majed. MDDS. D. L.O., FRCS, Professor of ENT Diseases, 152/2B Green Road, Dhaka were also admitted as Fellows (without examination) in November, 1984.

The construction of work of the Fellows Club is in progress.

Journal of Bangladesh College of Physicians and Surgeons indexed in 'Excerpta Medica.'

Excerpta Medica Journal Department of Netherland based in Amsterdam has included the Journal of Bangladesh College of Physicians and Surgeons in the selected list of Journal Abstracted in their computerised bio–medical data.