

*Received*  
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⑦

May 1991  
Vol. 9 No. 1 & 2

⑧

Journal  
of  
Bangladesh College  
of  
Physicians  
and Surgeons

*Mr. Singh 6/2*

*26/9/98*

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Official Journal of the  
Bangladesh College of Physicians  
and Surgeons

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# JOURNAL OF BANGLADESH COLLEGE OF PHYSICIANS AND SURGEONS

Vol. 9. No. 1&2. May, 1991

Official Publication of the Bangladesh College of Physicians and Surgeons  
Mohakhali, Dhaka-1212

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**Published by** : Dr. Shafiqul Hoque, on behalf of the Bangladesh College of Physicians & Surgeons

**Printed at** : ASIAN COLOUR PRINTING, 130, DIT Extension Road, (Fokirapool), Dhaka-1000, Bangladesh.  
Phone : 40 76 56

**Address for Correspondence:** Editor-in-Chief, Journal of Bangladesh College of Physicians & Surgeons,  
BCPS Bhavan, Mohakhali, Dhaka-1212 Tel: 600454, 882836

**Subscription** : TK 300/- for Local and US \$ 30 for overseas subscribers.

Journal of Bangladesh College of Physicians and Surgeons  
Vol. 9, No. 1&2, May 1991

## ROLE OF SPIRITUAL INFLUENCE IN THE TREATMENT OF INFERTILITY

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Infertility  
Sociology, Medical  
Pregnancy

## ROLE OF SPIRITUAL INFLUENCE IN THE TREATMENT OF SOCIO-MEDICAL PROBLEM OF INFERTILITY IN BANGLADESH

Shamima Sultana, Jahan Ara Begum, Khadiza Begum

### Key words:

Infertility, Spiritual Influence, Pregnancy.

### Summary :

This study presents the profile of women seeking relief from infertility attending the Pir-shaheb of Chistia Syedia Darbar Sharif. Information of their husbands were also collected from the women attending. The mean age of the women, the average duration of marriage and infertility, were recorded.

There were cases of primary and secondary infertility. The secondary infertility accounted for 12.8% of the total with a mean age 30.2 years. The mean duration of marriage and infertility were 8.4 years and 5.3 years respectively.

Out of 226 treated cases 92.9% received medical and/or surgical treatment. Women attended the Pir-shaheb on spiritual and/or religious belief, 93% due to failure of previous treatment, 9.9% due to its less expensiveness, 8.2% by influence of others and 7.8% due to other causes completed their attendance up to the prescribed time limit (ranging from 3-12 months) of which 20 (25%) became pregnant.

### Introduction :

Infertility is defined as failure to conceive after one year of regular coitus without contraception<sup>1</sup>. Infertility is a disease and as such has to be treated. But in Bangladesh as the treatment facilities are very poor, infertility has turned into a bigger medical and social problem<sup>2</sup>. Infertile

women are pressurised by their family members and social section as well as they have their own desire for a child.

To overcome this crisis the infertile women attend the gynaecological experts, Kabirajes, Homeopathic doctors, spiritual leaders etc.<sup>10</sup>. Chistia Darbar Sarif is an example of spiritual treatment centre.

In Bangladesh, where most of the people not knowing the exact causes of infertility always blame the women for this disgrace and is regarded as a ground for divorce and even for compulsory suicide<sup>11</sup>. In Bangladesh very little studies were conducted on infertility to determine the functional and gynaecological causes and to find its treatment. Only in IPGMR infertility clinic and tubal reanastomosis centre has been established for studying infertility on scientific basis and rendering help to such couples, which is very much insufficient for the whole country<sup>3</sup>.

In Chistia Darbar Sharif, Syedabad, Dhaka<sup>6</sup>, a large number of infertile women are attending regularly seeking relief from infertility. The "Pir Shaheb" of Darbar sharif use to treat the women by divine, spiritual and religious blessings<sup>6</sup>.

This study was carried out with an objective of elucidating the extent and nature of the problem of infertility in Bangladesh as well as to find the total number of women attending the Pir-shaheb seeking relief from infertility. Evaluation of infertility is a threat to each patients emotional, physical

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Received: Feb. 4, 1991, Accepted : April 25, 1991.

and sexual self-image, satisfaction and function with mental conflicts<sup>2</sup>.

There is no available documents or informations about the infertile couples of Bangladesh. Studies were conducted on infertility in countries like USA, UK, Japan, Africa, Kenya and India for finding out the causes, effects, medical and gynaecological treatments and for developing facilities for treatments of infertile cases<sup>9</sup>.

A cross section of the infertile women may insist for further research in this field and ultimately which may struck the Govt. of Bangladesh to include matters of infertile couples practically in family planning for making it more successful.

#### Materials and Methods :

This study was conducted over a period of 3 months from 1st February to 30th April 1989. It was carried out at the female unit of the "Chistia Syedia Darbar Sharif" where a considerable number of women attend the Pir-shaheb daily from Dhaka and out side Dhaka for relief from infertility. The darbar sharif has a good road communication.

The data were collected by face to face interview with a structured questionnaire. No medical examination or test was done but the previous investigation reports and prescriptions regarding infertility were checked wherever available. Information of the husbands of the attending women were also collected.

#### Results :

A total of 243 infertile women were studied in Darbar Sharif. 162 (66.7%) of them were in age group of 20-29 years, 80 (33%) were in age group of 30-39 years and only 1 (0.4%) was in age group of 40 and above (Table -I).

**Table - 1 : Infertile women by age**

Age in years	Number	Percentage
20-29	162	66.7
30-39	80	33.0
40+	1	0.4
Total	243	100
Mean=28.4	S.D =4.8	

Among the total 69.5 percent were primary, 12.8% were secondary and 17.7 percent were relative infertility cases (Table-II).

**Table -II : Infertile women by type of infertility**

Type of infertility	Number	percentage
Primary	169	69.5
Secondary	31	12.8
Relative	43	17.7
Total	243	100.0

Among 169 primary infertility cases the majority (67.5%) were below 30 years of age. Out of 31 secondary infertility cases 51.6% were above 30 years of age. Among 43 relative infertility 76.7% were below 30 years age (Table III).

On an average the infertile women had been married for 9.3 years. Of them 151 (62.1%) had been married for less than 10 years. The other 92 (37.9%) were married for more than 10 years. Of the 92 women 11 (4.5%) were married for more than 20 years (Table IV).

The mean duration of infertility for primary, secondary and relative infertility cases were 8.1 years, 6.4 years and 5.2 years respectively.

**Table - III : Age distribution of infertile women by type of infertility**

Age in Years	Type of infertility							
	Primary		Secondary		Relative		Total	
	No.	%	No.	%	No.	%	No.	%
20-29	114	67.5	15	48.4	33	76.7	162	66.7
30-39	54	32.0	16	51.5	10	23.3	80	33.0
40-49	1	0.6	-	-	-	-	1	0.4
Total	169	100	31	100	43	100	243	100
Mean± S.D.	28.3 ± 4.3		30.2 ± 5.1		27.3± 4.3		28.4 ± 4.8	

**Table -IV : Distribution of infertile women by duration of marriage and type of infertility**

Duration of marriage in years.	Type of infertility							
	Primary		Secondary		Relative		Total	
	No.	%	No.	%	No.	%	No.	%
Below 5	36	21.3	-	-	11	25.6	47	19.3
5-9	78	46.2	7	22.6	19	44.2	104	42.8
10-14	38	22.5	13	42.0	9	20.9	60	24.7
15-19	12	7.1	7	22.6	2	4.7	21	8.6
20+	5	3.0	4	12.9	2	4.7	11	4.5
Total	169	100	31	100	43	100	243	100
Mean =	8.7		13.8		8.4		9.3	
S.D. =	4.8		4.8		5.1		5.2	

Out of 243 infertile women 93% reported to have previous treatment. Of them 65% consulted the gynaecologists, 31 general physician and 11.1% consulted pallickitshak, homeopaths and traditional consultants.

Regarding treatment of the husbands 162 (66.7%) were treated of which 155 (95.7%) had medical/surgical treatment.

All the 243 (100%) attended the Pir-shaheb on belief, 226 (93%) due to failure in previous treatment, 24 (9.9%) due to less expensiveness, 20 (8.2%) being influenced by others, 19 (7.8%) due

to fear about treatment (surgical).

The prescribed time limit of treatment of Pir-shaheb was 3-12 months for pregnancy to occur. Among 243 patients 80 (100%) completed their attendance upto the prescribed time limit, of them 20(25%) had become pregnant (pregnancy test positive). Among those 12 (60%) from primary infertility group 3 (15%) from secondary infertility group and 5 (25%) from relative infertility group.

There was no significant relationship between pir-shaheb's treatment and pregnancy (P<0.05) (Table V).

**Table - V :** *Pregnancy status among the women who had completed their attendance upto the prescribed time limit (completed the course of Pir-Shaheb's treatment) by type of infertility.*

Pregnancy	Women completed the course of Pir-Shaheb's treatment by type of infertility.							
	Primary		Secondary		Relative		Total	
	No.	%	No.	%	No.	%	No.	%
Pregnant	12	23.1	3	25.0	5	31.3	20	25
Not Pregnant	40	77.0	9	75.0	11	68.7	60	75
Total	52	100	12	100	16	100	80	100

$X^2 = 0.436$ ,  $df = 2$ ,  $P > 0.05$  ; Insignificant.

### Discussion:

The study was conducted with 243 infertile women over a period of 3 months attending the Pir-shaheb of Chistia Syedia Darbar Sharif seeking relief from infertility. Information about their husbands were also collected. All the women gave history of failure to conceive after more than one year of regular coitus without contraception.

69.5% were primarily infertile, with an average age of 28.3 years with 8.7 years of mean duration of infertility. 31 (12.8%) belong to secondary type with mean durations of age and infertility of 30.2 years and 6.4 years respectively. 43 (17.7%) belongs to the relative infertility group with mean age of period of infertility of 27.3 years and 5.3 years respectively. The results of chowdhury TA<sup>3</sup> et al showed almost similar percentage of primary groups but dissimilar percentage of secondary groups (35.3%) may be due to involvement of relative groups with it. The Pir-shaheb treated the infertile women with herbal medicine and blessings supported by some rules and regulations by the women.

Chowdhury TA<sup>3</sup> et al treated the infertile women with D & C, laparoscopy, and various operations on ovarian tubes, vagina or combination. The successful results were in a few women. It may be due to the fact that after discharge from hospital only a few women kept connection with the centre and there was no proper feed back available in majority of cases. On the present study 25% of the women (who had completed their treatments upto time limit) became pregnant but they were not followed up for the whole term due to limitation of time.

The literature by Khattab AA<sup>7</sup> showed 20.5% and literature by Vaidya PR and Ranavive S<sup>12</sup> showed 25% pregnancies with modern medical treatments.

Again Collins JA<sup>4</sup> et al concluded in their study that potential for spontaneous cure of infertility was high and almost equal to cure by treatment.

Thus from the above points of view the pregnancies occurred by the Pir-shaheb's treatment might be spontaneous or might be due to some potentials of Pir-shaheb's traditional treatment as recognised by WHO in context of traditional treatment<sup>5</sup>.





However spiritual treatments cannot be fully explained by medical scientists with causes and effects but still women and couples go for such treatments in spite of modern medical treatments. Here all the patients are followed up till the end. So this is a reliable source of setting data and information. The gradual increase in number of infertile patients to Darbar-Sharif revealed that the infertility problems in Bangladesh is high.

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## DRUG ADDICTION PROBLEM IN VEHICLE DRIVERS A PROFILE

Anwara Begum

### Key Words:

Drug addiction, vehicle drivers.

### Summary:

A profile of drug taking habit, the type of vehicle driven on the street, history of involvement with law enforcing agencies (police, prison, arrest, fine etc.) due to drug related antisocial activity and record of road traffic accidents (RTA) in one hundred and five drug addict vehicle drivers (73 automobile drivers and 32 rickshaw-pullers) was done.

The collection was done in Drug Addiction Treatment Centre, Tejgaon, Dhaka from April '90 to March 1991.

Another collection of six hundred sixty-four general addicts (non-drivers) was also done during the same period (April'90-March'91) to compare the forensic history (involvement with law enforcement agencies) due to drug related antisocial activity (e.g. police, prison, arrest, fine etc.) and RTA with the study group.

Involvement with law enforcing agencies appeared to be the same in both groups (drug addict vehicle drivers 40% and general drug addicts 39.31%), whereas RTA was significantly high in vehicle addicts than the general addicts (vehicle addicts 35.24%, general addicts 17.17%).

### Introduction:

Our society at present is beset with a broad range of social problems which includes accidents, crime, drug abuse and poverty.

Accidents on the roads and untimely death following road traffic accidents have now become a common phenomenon in our

daily existence creating innumerable distress and anxiety in personal and social life.

This is probably the first study in Bangladesh where a collection of drug addict vehicle drivers has been done to find out their drug taking habit, involvement with law enforcing agencies due to drugs of abuse and drug related antisocial activity and their involvement with RTA while driving under the influence of drugs of abuse.

It was apparent to other workers that not only these drivers were prone to have more RTA because of the influence of drugs of abuse they consumed but also due to addict's inherent destructive or suicidal attitude toward life which may be considered as cause or consequence of their drug taking behaviour<sup>1</sup>.

It was also apparent that there was a common history of cannabis, alcohol, minor tranquilizers and other opiates (e.g. crude opium, pethidine) abuse before and during their present (primary) drugs of abuse, which correlate with the general pattern of drug taking behaviour among the addicts of other countries<sup>2</sup>.

### Materials and Methods:

A random collection of one hundred five male drug-addict vehicle drivers was done in Drug Addiction Treatment Centre, Tejgaon, whose age ranged from 18 to 55 years.

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Received : April 10, 1991. Accepted : April 25, 1991

The maximum number of addict (80%) was found to be in between the age range of 21 to 35 years. Average age noted was 32.34 years.

Their educational level was low. About half of the addicts (51.43%) remained illiterate and two addicts (1.90%) qualified upto SSC (Secondary School Certificate).

Majority of the addicts (81.90%) were married with one to few children.

Almost all of the addicts (95.24%) belonged to Dhaka city. About half of them (54.27%) lived in Mohammadpur, Mirpur, Lalbagh and Tejgaon areas. About ten addicts (9.52%) came from Greater Dhaka (Uttara, Tangi, Savar, Fatullah, Narayanganj). The rest (26.21%) was scattered all over Dhaka city.

The earning capacity of rickshaw-pullers was less than the automobile drivers. The average earning capacity of the addict vehicle drivers was about Taka 2820.00 per month.

Interview was done by medical officers, social welfare officers and occupation therapists on various occasions when the addicts were either in-patient or attending as out-patient of the hospital.

Families of the addicts were also interviewed when required. Road traffic accidents or RTA was defined as the injury to himself (addict) or others (public) and or causing damage to vehicle or properties while driving under the influence of addictive drugs.

#### Results:

**Type of addiction :** Majority of the addicts (96.20%) were abusing heroin whereas only two (1.90%) were abusing alcohol and another two (1.90%) were abusing cannabis (ganja) (Table - I).

**Table-I :** Type of addiction (Present drug habit)

Type	Number of Vehicle addicts	Percentage
Heroin	101	96.20
Alcohol	2	1.90
Cannabis(ganja)	2	1.90
Total	105	100.00

**History of taking associated drugs apart from primary drugs of abuse :** Fifteen addict vehicle drivers (14.29%) denied any history of associated drugs of abuse apart from their present (primary) drugs (Table-II).

**Table-II :** List of Associated Drugs taken apart from present drug of addiction

Associated Drugs	Number of Vehicle addicts	Percentage
Alcohol, cannabis (ganja) & minor tranquillizers	42	40.00
Cannabis only	19	18.09
Alcohol only	15	14.29
Alcohol, cannabis & other opiates (crude opium, codeine, pethidine)	11	10.48
Other opiates only	3	2.85
Denied associated drug taking	15	14.29
Total	105	100.00

Forty-two addicts (40%) had a history of taking associated drugs like alcohol, cannabis (ganja, charas), minor tranquillizers (diazepam/nitrazepam etc.) before and during the use of present-drugs of abuse. Nineteen addicts (18.09%) only abused cannabis before and during the abuse of present drugs. Fifteen addicts (14.29%)

abused alcohol only apart from present drugs. Eleven addicts (10.48%) abused alcohol, cannabis and other opiates (e.g. crude opium, inj. pethidine, codeine) before and during the present drugs of abuse. Three addicts (2.85%) abused other opiates only. It is to be noted that almost all the addicts smoked cigarette from 20 to 30 sticks a day.

Their history of associated drug taking habit extended from six months to thirty years.

**Type of vehicle :** Out of the hundred five addict vehicle drivers 32 (30.48%) were rickshaw-pullers, 19 (18.09%) were truck drivers, 14 (13.33%) were driving auto-rickshaws ( baby taxi and mishuk), same percentage (13.33%) of addicts were driving minibus/ coaster, 10 (9.52%) were drivers of private cars, 9 (8.57%) were tempo (large auto-rickshaw) drivers, 4 (3.81%) were driving taxi for rental and 3 addicts (2.86%) were driving bus (Table - III).

**Table-III : Type of vehicle they drove**

Type	Number of Vehicle addicts	Percentage
Rickshaw	32	30.48
truck	19	18.09
Auto-rickshaw (baby taxi & Mishuk carrying 2/3 passengers at a time)	14	13.33
Minibus/Coaster	14	13.33
Private cars driven by drivers	10	9.53
Tempo (large auto-rickshaw carrying 8/10 passengers at a time)	9	8.5
Taxi for rental	4	3.81
Bus	3	2.86
Total	105	100.00

**Involvement with law enforcing agencies :**

Fourty two addict vehicle drivers (40%) had a history of involvement with police. It included fine, arrest, warning and imprisonment. Sixty three addicts (60%) denied such involvement. These findings correlated with the history of the general addicts (non-drivers). Two hundred sixty one general addicts (39.31%) admitted history of involvement with law enforcing agencies.

**Table-IV : Involvement with law enforcing agencies**

Involvement	Number of addicts & percentage	Number of addicts & percentage
Present	42 (40.00%)	261 (39.31%)
Absent	63 (60.00%)	403 (60.69%)
Total	105 (100%)	664 (100%)

**Record of road traffic accidents:**

Thirty seven addict vehicle drivers (35.24%) admitted involvement with road traffic accidents causing injury to himself, others or both, and/or causing damage to property. Sixty eight drivers (64.76%) denied such involvement. On the other-hand, 114 (17.17%) general addicts admitted having involvement with road traffic accidents. Five hundred fifty general addicts (82.83%) denied such involvement.

**Table-V : Record of Road Traffic accidents**

Record	Number of addicts & percentage	Number of addicts & percentage
Present	37 (35.24%)	114 (17.17%)
Absent	68 (64.76%)	550 (82.83%)
Total	105(100%)	664(100%)

**Discussion:**

One of the drawbacks of this study was the difficulty in gathering reliable data from the addicts.

Reluctance to admit RTA and involvement with law enforcing agencies was the most difficult part for this study. Honest submission was not always made for fear of law, harassment and punishment. Denial was strong in some vehicle addicts and also in some general addicts.

Random selection of the sample involved vehicle addicts of all ages but the peak age was significantly high (80%) among young group of drivers between age 21 to 35 years. The same findings has been supported by other workers<sup>3,4</sup>.

Most of the addicts (81.90%) were married and having one to few children. Majority of them were the main earning members of their families. The rickshaw-pullers earned less than the other vehicle addicts. However the average earning capacity of all the vehicle addicts were not less than Taka 2820/-per month.

As for type of addiction, heroin appeared to be the drug of choice at present for the majority of vehicle addicts (96.230%) which correlates with other study among general population.<sup>5</sup>

The associated drug taking habit of the vehicle addicts also correlated with other study among the general population and is to be categorised as polydrug abusers<sup>6</sup>.

Involvement with law enforcing was found similar among the vehicle addicts and general addicts in our study (vehicle addicts 40%, general addicts 39.31%)

Record of RTA was found more in vehicle addicts (35.24%) than the general addicts (17.17). This finding was statistically significant.

The present study is a short profile of the vehicle addicts who attended the drug addiction centre for treatment. It reflects not only the seriousness of addiction and pervasive addictive characteristics in the vehicle addicts, but also their involvement with antisocial activity (selling, buying, theft, rows and fighting in the peer group during

drug taking; bribery to law enforcing agencies etc.) and RTA (due to high speed, uncontrollable desire to overtake other vehicles, disregard for maintaining distance between two running vehicles, overconfidence about one's own ability to manage with speed, disregard for law) related to drugs.

This study probably only reflects the tip of the iceberg, the greater body of which may be lying hidden underneath and needs to be explored in future.

**Acknowledgement:**

I would like to thank Miss Mahbuba Bagum, Occupation Therapist & Dr. Golam Rabbani, Assistant professor of Psychiatry, of Drug Addiction Treatment centre, Tejgaon, Dhaka, A K Azad Khan, Professor and Director of Research and Development, BIRDEM, Dhaka and Sadequa Tahera Khanam, Professor of NIPSON, Dhaka for their active help and valuable advice.

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## AGE AND SEX TRENDS OF PHOBIC AND ANXIETY SYMPTOMS IN ADOLESCENTS

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### Key words:

Phobia; Anxiety

### Summary:

The prevalence of phobic and anxiety symptoms was investigated in school and college students aged 13-20 years by semi-structured self reporting questionnaire.

Phobic symptoms were found more prevalent in girls except for fear of being looked at, which showed no persistent sex difference. Fear of talking was more prevalent in boys. Among anxiety symptoms, frequency of micturition was more prevalent in boys, remaining symptoms showed no persistent sex difference except tremulousness of hands and feeling of impending death, which more prevalent in girls. Symptoms which peaked in adolescence (fear of blushing, fear of being looked at, and some of the anxiety symptoms) occurred at an earlier age in girls than in boys.

### Introduction:

Neurotic ways of dealing with experience can begin early in life and neurotic symptom pictures can be identified in young people after the age of five or six<sup>1</sup>. Nevertheless, for varying reasons clinicians have been somewhat reluctant to diagnose neurotic in children and adolescents.

Phobias are unrealistic, disruptive fears of relatively harmless objects or events. They are typically out of proportion to any danger and persist despite explanations or reassurances that there is nothing to fear. From early life certain kind of fear commonly

appear and disappear at various ages. During the pre-school years, many children develop fears of spook, imaginary creatures being alone and the dark. From six to twelve years, these particular fears steadily decrease and replaced by fears of physical injury, illness, school related events and social anxieties variably expressed as shyness, fear of blushing in public and fear of talking. Some of these later fears may continue to adolescence and adulthood. With these developmental pattern in mind phobias are defined to include not only exaggerated fears but also fears that continue beyond the age when they would be expected to diminish or disappear<sup>7</sup>.

Pre-school boys and girls who are anxious or physically timid are specially disposed to phobic disorders<sup>12</sup>. Under certain circumstances phobia can be learned from frightening experiences that produce a generalized fear reaction to similar situation. Much more commonly, however, phobic children come to have their excessive fears as a result of modelling, specially the children of parents, who are themselves extremely fearful of one nothing or the other. Phobias may also arise as the result of young people displacing fears from some real source to previously neutral objects or situation, which then become unrealistic source of fear.

Like normal childhood fears, phobias in young people tend to be short lived. Ninety percent of phobic children are likely to get over their excessive fear completely in contrast only 20 to 30 percent of adults doing so. This compete get over of excessive fear seems to exist through adolescence<sup>5</sup>.

The prevalence of childhood behaviour characteristics as observed by mothers e. g. enuresis, tics, restlessness have been

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Received: March 18, 1991. Accepted: April 25, 1991.

investigated in relation to age (10). But age sex trends of subjective psychological experiences and symptoms such as anxiety, phobic or obsessive compulsion experiences by children or adolescents themselves have been less explored<sup>3</sup>.

Generally studies were done in the past to see prevalences of phobic and anxiety symptoms in general population, only a few epidemiological studies separated phobic from the other neuroses.

The natural history and prevalence of common fears and phobias were extensively studied by Stewart Agras<sup>5</sup>. In this study revealed that the total prevalence of phobia was estimated at 76.9 per 1000 population. Of the 74.7 per 1000 were considered to be mild disabling and 2.2 per 1000 were severely disabling. The study included common fears such as that of snakes, height storms, flying, dentist, injury, illness, death enclosure, journey alone and being alone.

In 1968, a list of 49 items which included those for anxiety, depression and depersonalization but not definite schizophrenia was compiled. Subsequent clinical use of the questionnaire showed that it disclosed symptoms which might otherwise been overlooked and was valuable aid in diagnosis and management of co-operative patients<sup>1</sup>.

I.M. Marks and N.D. Gelder<sup>8</sup> did a study on different ages of onset of varieties of phobia. The study revealed that specific situational phobia (height, darkness, thunderstorms) showed a wide variation of onset of age, some started before the age of five and most began in adult life. Social anxiety expressed variably as shyness and fear a blushing in public started mostly after puberty.

In our country no study has ever been attempted to reveal prevalence of age & sex trends of phobic or anxiety symptoms in

adolescence. The objective of this study was to see the prevalence of phobic and anxiety symptoms ( Listed in Table-I) in normal adolescents in our country and their relation with the age and sex of the subjects.

Although the present study included small number of adolescents (664) in a very limited cross section of urban population, it would hopefully act as a useful guideline to find out the actual situation in our country .

#### **Materials and Methods:**

The prevalence of phobic and anxiety symptoms (Table-I) were investigated among school and college student aged from 13 years to 20 years by semi-structured self reporting questionnaire to find out the presence of these symptoms and their relationship to the age and sex of the subjects.

Three secondary schools in Dhaka city (one boy's school, one girl's school and one with co-education) was selected for the purpose to include younger adolescents in the study. To find out the relevant information among elderly adolescents two more higher secondary college (one boy's and one girl's college) and the first year students of Dhaka Medical college were chosen for the purpose.

Attempt was made to cover at least 500 students and care was taken so that both the sexes were adequately represented. An easily understandable semi-structured self-reporting questionnaire with minimum parametric items related to symptoms listed in Table-II was prepared in English which was later translated to Bangla for distribution among the subjects. The questionnaire was translated back to English again before finalising to see whether the Bangla version carried the meaning of the objectives. The questionnaire was distributed among the students in the class room situation.

The author himself was present in the class room to help understanding the

questionnaire, if needed. The symptoms expressed was taken to be positive if it happened during preceding six months. Effort was taken to maintain anonymity so that a tendency to hide the positive symptoms could be minimized. Each item in the questionnaire was qualified only for its presence or absence. The findings were compiled in to a master sheet and were transcribed into table later on. The number of the subjects were divided according to sex and age and are shown in Table II.

The following statistical procedures were employed:

1. Sex difference in age specific prevalences: The significance of the difference between the prevalence in boys and that in girls is tested for each four group by chi-square test. Significant difference is calculated at 0.01 and 0.05 level.
2. Sex difference in the age showing maximum prevalence: The difference in prevalence between younger age group (13-14 years) and older age group (19-20 years) were tested by chisquare test.

**Results:**

Age trends of prevalences for item 1 to 11 (Table-I) are shown in (Table-IV and V). Main findings on sex differences are summarized in (Table -III).

**Table I:** List of symptoms investigated

1. Marked fear of lightning.
2. Fear of going out of doors alone.
3. Fear of blushing.
4. Fear of being looked at.
5. Fear of talking.
6. Psychogenic frequency of Micturition.
7. Tremulousness of hands.
8. Often suspicious of some physical disorder. Hypochondrical preoccupation with disease, (hypochondriasis).
9. Fainting spells or faintness.
10. Constriction or a lump in the throat (globus hystericus)
11. Feeling of impending death.

**Table II :** Age and Sex wise distribution of the subjects (n= 664)

Age in year	Boys	Girls	Total
13-14	119	110	229
15-16	103	70	173
17-18	75	135	210
19-20	32	20	52
Total	329	335	664

**Sex difference in Prevalence :** Psychogenic frequency of micturition and fear of talking are found to be more prevalent in boys. Marked fear of lightning, fear of going out of doors alone, tremulousness of hand and feeling of impending death are more prevalent in girls. The remaining symptoms, show no persistent sex difference.

**Age Trends :** When the extreme age i.e. as early as 13-14 years and as late as 19-20 years ever compared, no significant difference was found except in one of the symptoms. Fear of going out of doors decreased with age and the maximum prevalence was in younger age groups. All other symptoms showed maximum prevalence in middle age group, i. e. of 15-18 years.

**Sex difference in the age showing maximum prevalence :** In items 1,3,4 and 8 girls reach the maximum prevalence earlier than boy. In all of these symptoms ( shown by F and M in Table -III). The same tendency is more clearly seen (Table-IV & V) which shows the proportion of individuals who have one or more of the symptoms.



**Table-III : Sex difference in the prevalence and in the age showing maximum prevalence.**

Symptoms	Sex difference		
	Prevalence	Age with prevalence	Maximal Significance
1. Marked fear of lightning	F M	F, M	S
2. Fear of going out doors alone	F M		S
3. Fear of blushing	-	F, M	NS
4. Fear of being looked at	-	F, M	NS
5. Fear of talking	M F		S
6. Psycogenic frequency of Micturition	M F		S
7. Tremulousness of hands	F M		S
8. Hypochondriasis	-	F, M	NS
9. Fainting spells or faintness	-		NS
10. Globus hystericus	-		NS
11. Feeling of impending death	F M		S

M F : Higher prevalence in boy

F M : Higher prevalence in girls

- : No persistent sex difference in prevalence

F, M : Girls reach the maximal prevalence at an earlier age than boys

S : Significant

NS : Not significant

**TABLE -IV : Age and sex wise distribution of subjects according to the presence of phobic symptoms**

Age Group (Years)	Number of subjects with phobic symptoms									
	A		B		C		D		E	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
13-14	20 (16.80%)	48 (43.63%)	19 (15.95%)	62 (56.36%)	18 (15.12%)	13 (11.81%)	27 (22.68%)	29 (26.36%)	34 (28.57%)	20 (18.18%)
15-16	18 (17.47%)	33 (47.14%)	16 (15.55%)	37 (52.85%)	21 (20.3%)	17 (24.20%)	33 (32.03%)	26 (37.14%)	35 (33.98%)	20 (21.57%)
17-18	16 (21.33%)	61 (45.18%)	09 (12.00%)	71 (52.59%)	16 (21.33%)	29 (21.48%)	22 (31.42%)	45 (33.30%)	29 (38.86%)	30 (22.20%)
19-20	06 (18.75%)	08 (40.00%)	03 (09.37%)	07 (35.00%)	04 (12.55%)	02 (10.00%)	06 (18.75%)	08 (30.00%)	06 (18.75%)	02 (10.00%)
TOTAL	60 (18.23%)	150 (44.77%)	47 (14.28%)	177 (52.83%)	59 (17.93%)	61 (18.20%)	88 (26.74%)	106 (31.64%)	104 (31.61%)	72 (21.49%)

A. Marked fear of lighting B. Fear of going out door alone C. Fear of blushing D. Fear of being looked at E. Fear of talking.

Table - V: Age and sexwise distribution of subjects according to the presence of anxiety symptoms

Age Group (Years)	Number of Subjects with Anxiety Symptoms											
	A		B		C		D		E		F	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
13-14	38 (31.93%)	22 (20%)	27 (22.69%)	36 (32.72%)	32 (26.89%)	27 (24.54%)	8 (6.72%)	9 (8.18%)	27 (22.68%)	21 (19.09%)	35 (29.41%)	38 (34.54%)
15-16	43 (41.74%)	11 (15.71%)	20 (19.41%)	12 (17.14%)	37 (35.92%)	22 (31.41%)	16 (15.53%)	2 (2.85%)	28 (27.18%)	13 (18.57%)	26 (25.24%)	23 (32.8%)
17-18	18 (24%)	29 (21.48%)	17 (22.66%)	45 (33.3%)	30 (40%)	39 (28.8%)	7 (9.33%)	10 (7.4%)	17 (22.66%)	45 (33.3%)	27 (36%)	68 (50.37%)
19-20	7 (21.87%)	4 (20%)	5 (15.62%)	3 (15%)	7 (21.87%)	5 (25%)	1 (3.12%)	1 (5%)	8 (25%)	2 (10%)	9 (28.12%)	5 (25%)
TOTAL	106 (32.21%)	62 (18.5%)	69 (20.97%)	96 (28.65%)	106 (32.21%)	93 (27.76%)	32 (9.72%)	22 (6.56%)	80 (24.31%)	81 (24.17%)	97 (29.98%)	134 (40%)

A. Psychogenic frequency of micturition. B. Tremulousness of hands. C. Hypochondriasis D. Fainting spells E. Globus hystericus F. Feeling of impending death.

**Discussion :**

Anxiety and phobic symptoms (Table I) were investigated among boys and girls aged 13 to 20 years by semi-structured self reporting questionnaire. This type of investigation in our country has some limitations. Young people of our country is not well acquainted with the self reporting questionnaires because this type of works are not very frequently done. There are chances of question being wrongly interpreted even after adequate explanation. There may be some tendency of hiding the fact or answering in a socially acceptable way. Present study could not fully overcome these limitations.

Symptoms which were found more prevalent in boys are fear of talking and psychogenic frequency of micturition. These finding is consistent with the study done by K. Abe and T. Masui<sup>3</sup> (1981) in Japan. The function related to these symptoms i.e. speech and bladder control, show a difference in sex in infancy; development of speech and bladder control being slower in boys. These functions may be less well

controlled in boys than in girls and poorly controlled physiological function might be one of the factors causing the symptoms<sup>2</sup>.

Phobic symptoms like marked fear of the lighting and going out of doors alone were more prevalent in girls. Fear of talking was more prevalent in boys. Reports of the most studies showed that most phobias are more common in women<sup>8</sup>. This relative fearfulness of girls is already apparent in early childhood.

Marked anxiety is more common in girls<sup>3</sup>. Three year old girls were found significantly more fearful than boys<sup>9</sup>. But fear of blushing and fear of being looked at showed no persistent sex difference in this study. This may be due to fact that the subjects could not properly perceive or interpret subjective feeling related to blushing or being looked at.

Prevalence of most anxiety symptoms except item seven and eleven demonstrated no persistent sex difference, a finding consistent with reports in the literature that anxiety states occur with equal frequency



in both sexes<sup>8</sup>. Tremulousness of hand and feeling of impending death was more prevalent in girls in this study. This may be the reflection of the fact that the girls as a whole feel more insecure than boys in our society.

There are symptoms which peak in adolescence i.e. fear of blushing, fear of being looked at and most of the anxiety symptoms. These symptoms peaked in girls in average about two years earlier than in boys. This finding is consistent with the study by K. Abe and T. Masui<sup>3</sup> (1981). The onset of anxiety symptoms may be related to some physiological changes occurring in adolescence.

The velocity of physical growth at adolescence increase sharply at an average age of 11 years for girls and 13 years for boys with considerable variation in both group<sup>11</sup>. The difference in timing of these changes is similar to these symptoms which peak in adolescence.

From early childhood to adolescence various common fears and phobias appear and disappear with age in normal life process. But minority young people fail to lose their fear. The incidence drops sharply at age 13-14 but the drop is greater for boys than girls, thus leaving more girls than boys, fearful after this age<sup>8</sup>.

Many changes take place during adolescence we can but speculate which of many possibilities from social learning to physiological mechanism, cause the reduction or persistence of such fear at this period.

The difference in prevalence and that in the time of prevalence peak suggests that some physiological or developmental factor may be responsible for the development of these symptoms.

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## CLINICAL COURSE IN 24 UNSELECTED PATIENTS OF APLASTIC ANAEMIA TREATED WITH NANDROLONE DECANOATE AND PREDNISOLONE

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### Key words:

Aplastic Anaemia; Nandrolone, Prednisolone.

### Summary :

Clinical and haematological features and response to nandrolone decanoate and prednisolone were studied in 24 cases of aplastic anaemia. 79.2% patients were under 40 years of age; male: female=2.4:1. In 3 cases there was previous history of exposure to potentially myelotoxic agents—chloramphenicol<sup>2</sup>, insecticide<sup>1</sup>. Notable clinical manifestations were anaemia (95.8%), bleeding manifestations (75%), pyrexia (50%). Anaemia, neutropenia, thrombocytopenia, raised ESR and consistent bone marrow findings were present. Blood transfusion, nandrolone decanoate and prednisolone combination and antibiotic therapy constituted the mainstay in conservative treatment. 4 patients died in hospital and 2 patients showed improvement during follow up.

### Introduction:

Aplastic anaemia is a group of disorders characterized by peripheral pancytopenia, variable bone-marrow hypocellularity, and in absence of under lying malignant or myeloproliferative disease<sup>1</sup>. It is a terrifying disease<sup>2</sup>, more common in the orient than in Europe and in the United States<sup>3,4</sup>. Due to centralization of the modern medical facilities, physicians see aggregation of cases of aplastic anaemia in Medical College Hospitals and Postgraduate Hospitals in Bangladesh. Bone marrow transplantation, immuno suppression with anti-lymphocyte globulin

or high dose methyl prednisolone are used as treatment of choice in aplastic anaemia in developed countries<sup>2,5,6</sup>. In Bangladesh oral anabolic steroids were used in recent years which are out of market now. Anabolic steroids including Nandrolone decanoate and prednisolone combination are used in bone-marrow failure with variable success<sup>5,6</sup>.

We describe here, 24 cases of aplastic anaemia treated with Nandrolone decanoate and prednisolone combination in the Institute of Postgraduate Medicine and Research, Dhaka, Bangladesh.

### Materials and Methods:

The material consisted of 24 patients with aplastic anaemia diagnosed in the Medicine unit of the Institute of Postgraduate Medicine and Research, Dhaka during the period July 1987 through December 1989. The diagnosis of aplastic anaemia was made depending on finding peripheral pancytopenia with replacement of haematopoietic marrow by fat cells in the absence of other diseases of the marrow<sup>4</sup>. All peripheral blood films and bone marrow had been treated by standard haematological techniques<sup>7</sup>. Bone marrow study included examination of aspiration smears in all the cases and trephine biopsy in some of them. Malignancy, storage and metabolic diseases, infiltrative diseases, myelofibrosis, hypersplenism, cytotoxic drug therapy and folic acid and vit-B<sub>12</sub> deficiency were excluded.

Clinical and haematological parameters of the patients were noted. The patients were treated with prednisolone tablet 10mg per day for 3 months and Nandrolone decanoate injection 100mg every 15 days for 6 doses. Supportive care consisted of

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Received : Jan. 24, 1991. Accepted : April 25, 1991

blood transfusions and antibacterial therapy when indicated. Because of limited facilities for isolation most patients were treated in general wards. No attempt was made to sustain a particular haemoglobin level. If transfusions were needed fresh whole blood were given. In some cases platelet concentrations were administered. Haematinics and vitamins were routinely given.

At the end of the therapy haematological parameters including bone marrow examination were repeated.

#### Results:

Table-I shows the age distribution of the patients. Mean age of the patients were 27.3 years. 79.2% patients are between 11-40 years of age. The male: female ratio was 2.4:1.

**Table I :** Age distribution of patients of aplastic anaemia (n=24)

Age range	Numbers	Percentage
11-20	7	29.2
21-30	9	37.5
31-40	3	12.5
41-50	3	12.5
+50	2	8.3

The prominent symptoms were weakness/lassitude (79.2%), bleeding manifestations (75%), fever (50%), weight loss (29.2%); while at examination anaemia (95.8%) was the main finding (Table-II). The duration of symptoms before presentation was about 12 weeks (in 83% patients). The aetiological factors could not be established though 2 patients had history of taking chloramphenicol and 1 patient had exposure to insecticide.

Haematological data are shown in the Table-III. Anaemia, neutropenia due to granulocytopenia, raised ESR were present. The bone marrow or trephine biopsy performed in all the cases were consistent with the criteria for the diagnosis of aplastic anaemia<sup>4</sup>.

**Table -II :** Clinical profile in patients of bone marrow failure (n=24)

Presenting features	Number	Percentage
Fever	12	50.00
Weight loss	7	29.20
Bone pain	2	8.30
Weakness/ Lassitude	19	79.20
Bleeding manifestations	18	75.00
Anaemia	23	95.80
Lymphadenopathy	1	4.10
Sore throat	6	25.00
Palpable Liver/ Spleen	3	12.50

**Table -III :** Haematological profile in patients of bone marrow failure (n=24)

	Mean	S.E.
Haemoglobin%	38.1	2.3
ESR (mm 1st hour)	82.9	9.4
TC of WBC (x103cmm)	4.10	.4
Differential Count of WBC:		
Poly	30.6	3.8
Lympho	64.2	4.1
Platelet ( x103mm)	76.9	14.6

All the patients were conservatively managed with the combination of Prednisolone and Nandrolone Decanoate in doses as mentioned. The haematological data of the patients before and after treatment were compared (Table IV). Evaluation at the end of the study revealed that 4 patients had died, 2 patients had been lost to follow up and presumed dead, and only 2 patients showed improvement. The patients in whom follow up examination was completed did not show significant difference in response as compared to before therapy.

**Table -IV :** Comparison of haematological profile in patients of bone marrow failure before and after treatment with prednisolone and nandrolone decanoate.

Criteria	Before treatment	After treatment
Haemoglobin (%)	38.1(±2.3)	41.3(±4.5)
ESR(mm 1st hour)	82.9 (±9.4)	70.7 (±10.6)
TC of WBC (±103cmm)	4.1(±0.4)	4.3(±0.6)
Differential Count of WBC% :		
Poly	30.6 (±3.8)	31.3 (±4.8)
Lympho	64.2 (±4.1)	63.8 (±4.6)
Platelet count (x103cmm)	76.9 (±14.6)	78.5(± 15.3)

**Discussion:**

The exact incidence of aplastic anaemia in Bangladesh is not known. From this study and situations in medical institutions it is evident that aplastic anaemia is not a rare disorder.

The disease is common in the first four decades of life (79.2%) which was found in other similar studies in different parts of the world<sup>4,8,9,10,11</sup>. Male: Female=2.4:1 in this study. In the eastern countries male patients predominate as compared to near equal sex ratio in the western studies and more patients in this countries are young adults then in the west<sup>4,10,11</sup>.

It is difficult to determine the aetiological factors responsible for the development of bone marrow hypoplasia<sup>10</sup>. In this series, it was not possible to draw conclusion regarding the causative factor of the aplastic anaemia though 2 cases had history of intake of chloramphenicol and 1 had H/O exposure to insecticide. Antecedent drug and chemical exposure are important aetiological factors of the aplastic anaemia<sup>12</sup>. The

short duration of symptoms before the diagnosis and the early age of onset in the orient points to the environmental factors -drugs, toxins exposure or indigenous viruses seem the most likely explanation<sup>4</sup>. Extensive and chronic exposure of a population to the insecticide may introduce a broad based predisposition to marrow failure<sup>4</sup>. What should precipitate the sudden loss of function of bone marrow in the tropical regions remains a mystery<sup>13</sup>.

The presenting features of the aplastic anaemia are related to the severity of the anaemia, thrombocytopenia or neutropenia in this series like other similar studies<sup>5,13,14</sup>.

The response to the various androgens and anabolic steroids in the aplastic anaemia is variable. In this series only 2 patients responded to combined prednisolone and Nandrolone decanoate at the end of three months. Significant haematologic response to various androgen preparations have been reported from Japan (35-67%)<sup>15</sup>, Korea (34%)<sup>16</sup>, Thailand (20%)<sup>14</sup>, Hongkong (42%)<sup>17</sup>, and China (28-65%)<sup>4</sup>, which are comparable to the favourable results obtained with the androgens in Europe<sup>18</sup> but contrast to their ineffectiveness in an American study<sup>19</sup>. Difference in androgen responsiveness most likely reflect patient selection, especially of patients with moderate disease with residual bone marrow function<sup>20</sup>. The duration of treatment with steroid should be continued for 6 months or more before the assessment of the improvement<sup>2</sup>.

From this study we feel that bone marrow transplantation and immunosuppressant therapy should be available in Bangladesh for the treatment of aplastic anaemia which is a potentially fatal condition in young age.

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## DAY CARE SURGERY IN BANGLADESH A SIX YEAR STUDY

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### Key Words :

Surgery, day care. Ambulatory surgery, out patient surgery.

### Summary :

Over the past six years ( May 1985 to Dec 1990) surgery on day care basis were performed on 566 cases in the Department of Paediatric Surgery at the Institute of Post-Graduate Medicine and Research (IPGMR) Dhaka . As there is no separate operating theatre for this Day Care Surgery (DCS) at this hospital these were done in the inpatient surgery theatre (IPS). This study was undertaken to assess the feasibility of such service in the hospitals of Bangladesh. The procedures included General Paediatric Surgery and Paediatric Urology excluding trauma cases. A set system for selection of patient and their preparation for surgery was used. This had full cooperation and consent of the parents /guardians. There were no anaesthetic complications requiring hospitalisation and there was no death in this group. Four (4) cases needed hospitalisation for problems not anticipated before surgery. The DCS cases constituted 35.00 percent of the total surgery load (IPS and combined ). The age of patients in this group varied from two months to fifteen years . This type of service delivery is safe, economic and acceptable to parents /guardian, profession and Health Authority alike. Obviously the load on the IPS beds were reduced. It is recommended for the tertiary hospitals of Bangladesh.

### Introduction :

Day care surgery probably started around 1880<sup>5</sup>. The first reported series of DCS was by Nicoll where he describes 9000 cases of DCS<sup>11</sup>. Prior to introduction of General Anaesthesia and construction of modern

hospitals all but the indigent recovered at home after surgery<sup>10</sup>. This procedure was given a further boost up by Herzfeld<sup>6</sup>. Rex Lawrie<sup>9</sup> and J D Atwell<sup>1</sup> published their work which paved the way for DCS as a safe and efficient mode of service delivery which was accepted all over the developed countries of the world. DCS is however not a substitute for IPS. This form of surgery is less costly<sup>3,8</sup>. It is accepted by parents<sup>2,7</sup>, medical profession<sup>12</sup> and health authority alike<sup>13</sup>. This has become the most efficient method of service delivery system in the developed countries of the world.

### Materials and Method :

The following criteria were used for random selection of patient for DCS.

#### a) Surgical :

1. Procedures should not be simple office procedures done under local anaesthesia.
2. Procedures proposed did not involve exploration of major body cavities.
3. Procedures did not involve any post operative drain or tubes or need repeated dressing changes.

#### b) Patient :

4. Patient should not have any other medical condition that may complicate the safe administration of Anaesthesia on ASA 1 guide- lines .
5. Procedures should not involve prolong anaesthesia time (more than 45 min).

#### c) others :

6. Full and written consent of parents/ guardians following full agreement for the procedure must be obtained.
7. The distance of home to hospital should be such that patient went home before nightfall (sporadic transport facility after nightfall).

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On these above criteria patients were selected by the consultant at out patient visit. The parents/guardians were explained fully the programme and only with their full agreement an operation date was fixed. Full and thorough history taking and clinical examination were done on the same visit. Few routine preoperative investigations like Hb%, WBC count, stool and urine routine examination and a chest x-ray were asked for they were seen again on the day before operation with the results of the investigations and when found fit on the basis of the result and any new information/ development of patient, were sent for fitness check by the anaesthesiologist. The parents were given full instruction regarding the care after operation and advised to bring the patient next morning fasting for at least 4 hours before operation. Those not found fit were given appropriate advice. All DCS were performed in the early part of the day to allow time to reach home before nightfall. No patient received any premedication except prophylactic antibiotics orally 2 hours before with small amount of water. The operations were performed by senior experienced member of the team. Patients were allowed home after complete recovery in the recovery room and clearance given by member of surgical and anesthetic team involved in the operation. Again advice regarding operative medication and care were given to parents/ guardian. Parents were advised to bring patient within 7 days for review/ removal of sutures. In the event of unusual problems, provision for overnight stay was kept available.

#### Anaesthesia :

1. Pre-operative anaesthetic check was done by experienced anaesthesiologist on ASA I grading.
2. No premedications were used.
3. Anaesthesia was administered by a senior experienced anaesthesiologist.
4. Choice of anaesthesia varied according to age of patient.

Under 5 years of age either general

anaesthesia using gas  $O_2$  and halothane or intramuscular ketamine hydrochloride was used. Five to 8 years age group were given general anaesthesia with gas  $O_2$  and halothane. 9 to 15 years age group had the choice of general anaesthesia/ local field block anaesthesia.

#### Results :

566 cases were included in this study as compared to 1051 IPS, representing 00.88% of the total surgical load. The type of procedure performed are listed below in Table- 1.

**Table - I : Type of procedures**

Surgery performed	No. of cases.	% of total DCS.
Circumcision	125	22.08
Inguinal Hernia	88	15.54
Hydrocoele	39	6.89
Juvenile Rectal polyp	48	8.48
Lymph Node biopsy	67	11.83
Other excision biopsy	35	6.18
Urethral Dilatation	32	5.65
Sclerotherapy for Haemangioma	27	4.77
Anal Dilatation	30	5.30
Undescended testis	20	3.53
Cystoscopy	21	3.71
Foreign body removal	20	3.53
Others	22	3.88

There were no anaesthetic complication requiring hospitalization and no death in this group. Four cases (0.7%) were kept overnight for longer than anticipated surgery time in case of three and bleeding following rectal polypectomy in the remaining one. There were sixteen cases (2.8%) of minor stitch abscess. There were no overt cases of wound infection in this group.

Year wise data of DCS as against IPS is shown in Fig - I.

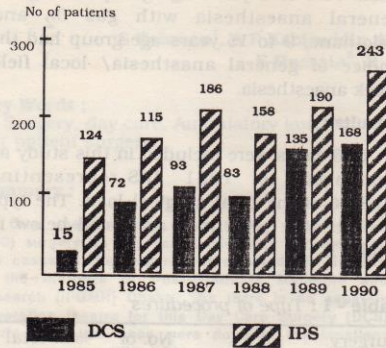


Fig. 1 : Yearwise data of DCS Vs. IPS.

**Discussion :**

This service was started to ease the pressure on the IPS beds which stands at 15 paediatric surgical beds for the whole country at the government hospital (IPGMR). It was also intended to assess the feasibility of DCS in this country. There is no published data for DCS in Bangladesh save a pilot study by A F Kabiruddin Ahmed as a part of his post graduate thesis for his FCPS<sup>8</sup>. There is a higher male sex ratio for DCS which is also seen with the IPS. This is in conformity with other studies abroad. Inguinal hernia has shown a lower trend as a percentage of inguinoscrotal swellings as compared to other workers<sup>10</sup>. This is probably due to higher no of circumcissions in this group and not all the inguinoscrotal swellings being taken within the perview of this study.

The complication rate was low compared to other workers probably due to strict adherence to the plan and careful evaluation of patients. All possible precautions were

taken to minimise the surgical complications. The acceptance of the system is shown by the yearly increase in the DCS rates. This type of service delivery is recommended for the tertiary hospitals of the country. The ideal should be, to establish a day surgery unit in each of the above hospitals with a modern operating theatre with 4 beds for this purpose. In the IPGMR this service has been managed in the once-a-week theatre facility of this department along with the IPS. The hospitalization cost in 1987 stood at Tk 190 (Taka one hundred and ninty ) per diem for IPS<sup>4</sup> which is a obvious saving in this type of surgery.

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The aim and objective of this study was to evaluate the pattern of day care surgery in a tertiary care hospital in a developing country.

**Statistical and Methods**

During the period between June 1987 to June 1990, 43 cases of genital tuberculous were studied in the private practice of an urologist in each case detail history was taken which included age, past medical history, socio-economic status and living conditions. All patients were examined and evidence of systemic tuberculosis and other genitourinary tuberculosis was documented. Mantoux test and chest X-ray chest radiograph were also performed.

**Results**

Genital tuberculous is less common below the age of 20 years. The age and parity distribution of the patient were compared. This study is shown in Table 1. This shows that this is a disease of young women of reproductive age group of 20-40 years and most patients are being multiparous or have one or two children. Of 43 patients, 13 patients had solitary and one patient had chronic tubal infection and one patient had carcinoma cervix (Table 1b) of which Mantoux test was done in all cases which was strongly positive in 20 cases and mildly positive in 13 and 4 cases respectively. Very rarely, genital tuberculous was found in 6 cases. Histopathology compatible with tuberculous was found in all cases.

A clinical history of 17 cases of genital tuberculous were done in this study. The maximum number of patients were in the age group of 21-30 years. The majority were multiparous. The majority of patients were from the lower socio-economic class. The majority of patients were from the rural areas. The majority of patients were from the lower socio-economic class. The majority of patients were from the rural areas.

**Introduction**

Tuberculosis of the female genital tract is common in all communities where pulmonary or other forms of extrapulmonary tuberculosis are prevalent and this disease early recognition and effectiveness of such lesions. Genital tuberculosis is nearly always secondary to a focus elsewhere in the body but the spread takes place at a very early stage of the disease, usually in adolescence or early maturity. The tubercle bacilli reach the genital tract by way of the lymphatics.

**(a) Blood stream in 60% cases from the**

large lymph node, usually the iliac nodes and the tubercle bacilli are disseminated to the genital tract by way of the lymphatics. The tubercle bacilli reach the genital tract by way of the lymphatics. The tubercle bacilli reach the genital tract by way of the lymphatics.

## TUBERCULOSIS OF THE FEMALE GENITAL TRACT —ANALYSIS OF 42 PATIENTS

Mahmuda Khatun<sup>1</sup>, Sameena Chowdhury<sup>2</sup>

### Key Word:

Genital tuberculosis.

### Summary:

A clinical analysis of 42 cases of genital tuberculosis were done in this study. The maximum number of patients were in the age group of 21-40 years. Malaise, weight loss, pelvic pain, infertility and menstrual irregularity were the important features observed. Less common presentation was pelvic mass. Moderate rise of ESR and positive Mantoux test were important laboratory findings. Medical treatment was done in all cases though 19 patients required total abdominal hysterectomy. Diagnostic dilatation and curettage of endometrium was done in 13 cases. The remainder of the cases required other surgical procedures.

### Introduction:

Tuberculosis of the female genital tract is common in all communities where pulmonary or other forms of extragenital tuberculosis are prevalent and this despite early recognition and effective treatment of such lesions. Genital tuberculosis is nearly always secondary to a focus elsewhere in the body but the spread takes place at a very early stage of the disease usually in adolescence or early maturity. The tubercle bacilli reach the genital tract by—

a) Blood stream in 90% cases from the lungs, lymph node, urinary tract, bones and joints.

b) Direct or lymphatic spread from the infected adjacent organs such as peritoneum, bowel and mesenteric nodes.

The aim and objective of this study is to make an early diagnosis of genital and extragenital tuberculosis from clinical finding so that permanent damage does not occur in the pelvic organs and as such do not remain infertile or suffer from chronic illness.

### Materials and Methods

During the period between June 1987 to June 1990, 42 cases of genital tuberculosis were studied in the private practice of authors. In each case detail history was taken which included age, parity, menstrual pattern, socio-economic status and living condition. All patients were examined for evidence of anaemia, lymphadenopathy and pelvic mass. Investigations included total and differential count of WBC, erythrocytes sedimentation rate, haemoglobin estimation, urine examination, Mantoux test and x-ray chest.

### Results:

Pelvic tuberculosis is less common below the age of 20 years. The age and parity distribution of the patient which constituted this study is shown in Table-I. This shows that this is a disease of young women of reproductive age group of 20-40 years and most patients are being nulliparous or have one or two children. Of 42 patients, 13 patients had infertility. 12 patients had chronic tubal infection and one patient had carcinoma cervix (Table - II).

Mantoux test was done in all cases which was strongly positive in 20 cases. Moderately and mildly positive in 12 and 4 cases respectively. X-ray chest was done in all cases but active pulmonary lesion was found in 6 cases. Histopathology compatible with tuberculosis was found in all cases.

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**Table-I: Age incidence**

Parity	Age				Total
	<20	21-30	31-40	>40	
0	3	9	3	1	16
1-2	2	5	6	2	15
3+	0	5	3	3	11

**Table II: Clinical features associated with pelvic tuberculosis**

Symptoms	Clinical finding	H/O Tuberculosis	No. of patient
1. Irregular bleeding and pain		+	2
2. Oligomenorrhoea, pain			3
3. Secondary amenorrhoea, wt. loss, malaise		+	4
4. Infertility pain			7
5. Menorrhagia	pelvic mass		3
6. Infertility pain	chronic tubal infection		6
7. Epimenorrhagia	pelvic mass		2
8. Pain	chronic tubal infection		6
9. Mass pain	fibroid uterus chronic tubal infection		5
10. Infrequent scanty loss			3
11. Post menopausal carcinoma cervix bleeding pain			1

either in the endometrial tissue or specimen from resected tubes and ovary (Table -III). Medical treatment was given in all cases, though hysterectomy with bilateral salpingo-oophorectomy was done in 19 cases because of pelvic mass and chronic pelvic

**Table-III: Tuberculin Sensitivity**

	No. of patient
1. Tuberculin test	
Strongly positive	20
Moderately positive	12
Mildly positive	4
Negative	6
2. X-ray chest	
Active pulmonary lesion	6

infection. Dilatation and curettage was done in 13 cases for infertility. Unilateral salpingo-oophorectomy was done in 6 cases having unilateral Tubo-ovarian mass and 3 patients required Tuboplasty for infertility. Werthiem Hysterectomy was done in one case for carcinoma cervix stage Ia (Table IV).

**Table -IV: Treatment**

Type of operation	No. of patient
1. D & C	13
2. Total abdominal Hysterectomy with Bilateral salpingo-oophorectomy	19
3. Unilateral salpingo-Oophorectomy	6
4. Tuboplasty	3
5. Werthiem's Hysterectomy	1

#### Discussion :

Tuberculosis of the female genital tract is not an uncommon condition in developing countries like Bangladesh where pulmonary tuberculosis is rampant. The first case of female genital tract tuberculosis was described by Morgan's in the year 1744 following a postmortem examination on a 20 year old woman who died of tuberculosis and whose uterus and tubes were found to be filled with caseous material<sup>1</sup>.

The actual incidence of pelvic tuberculosis is very difficult to determine accurately in any population, since it is estimated that significant number of patients are asymptomatic and the disease is discovered incidentally. Schaefer<sup>2</sup> in a review published in 1976 estimated that 5-10% of infertile females all over the world have genital tuberculosis but it varies from less than 1% in the United States<sup>2</sup> and 13% in India<sup>3</sup>. In this study the incidence is 2% (Total patient 2098). Hutchins<sup>4</sup> in a study of 21 patients of female genital tuberculosis in National Women's Hospital, Auckland from 1969-1976 found the incidence to be 0.05% of all gynaecological admissions.

Pelvic tuberculosis is uncommon below the age of 20 years. Classically it is described by Schaefer<sup>2</sup> as a disease of the young women of reproductive age group of 20-40 years. About 80-90% of patient were first diagnosed at this age. This study shows that, about 74% cases are diagnosed at this period of reproductive life. Sutherland<sup>5</sup> in a series of 704 patients encountered from 1951 to 1980, found the average age at diagnosis to increase from 28.2 in the first decade of that time period to 38.9 in the last decade. For diagnosis of genital tuberculosis suspicion is important. Mild systemic symptoms are in the form of malaise, weight loss. Persistent evening rise of temperature were present in a few cases. Majority of the cases were asymptomatic. Menstrual irregularity in the form of oligomenorrhoea, secondary amenorrhoea, menorrhagia and epimenorrhagia with pelvic pain was the presenting symptom in 40.4% cases. In Dewhurst<sup>6</sup> and Sutherland<sup>7</sup> series this symptoms were present in 25-50% cases. In study by Sutherland<sup>7</sup> and Howard et al<sup>1</sup> the infertility was the presenting symptom in 40-50% patients and in this study, infertility is the presenting complaints in 30.9% patient, very few patients presented

with the complaints of adenexal masses.

Routine laboratory tests are of little help. Most of the patient had normal WBC count. In the differential count there is a tendency to lymphocytosis. Mantoux test as done in all cases and found to be positive in 85.4% cases.

X-ray chest showed active tuberculosis in 14.2% cases.

Definitive diagnosis of tuberculosis requires isolation of tubercle bacillus, although most authorities today accept a diagnosis based on histopathological characteristic granuloma<sup>1,4</sup>. Histopathological study of endometrium and adenexal mass showed tuberculous granuloma in all cases.

Tuberculous focus is seen in 30.9% cases in the histopathology of endometrium in this study. The study by Schaefer<sup>8</sup> (1970) showed the endometrial involvement in 50-60% of genital tuberculosis but the study of infertile women done by Chowdhury and Chowdhury in IPGMR (1988) showed the endometrial involvement in only 0.25% cases. In this study it is 64.4% which is comparable to Joffecoate<sup>12</sup>, where it is 50-60%.

Medical treatment of pelvic tuberculosis not associated with abnormal clinical sign is well accepted and successful<sup>8,9,10</sup>. In the presence of gross abnormalities of the pelvic organs surgical treatment with or without antituberculous cover is recommended.

All patients were subjected to Medical treatment for 9 months by Rifampicin, Isoniazide and Ethambutal. Surgical clearance in the form of total abdominal Hysterectomy and Bilateral salpingoophorectomy was done in 45.2% caess for fibroid uterus and adenexal masses and for chronic tubal infection, 14.4% cases (6 patient) had unilateral salpingoophorectomy as the patients were young and subfertile and 3 patient had tuboplasty because of infertility. One patient had

undergone Werthiem's hysterectomy for stage la carcinoma cervix. Tuberculosis was diagnosed in this patient after laparotomy by finding the characteristic tubercle which later on proved by histopathology of the tubercle and endometrial tissue. 13 patients had diagnostic D& C for infertility. All the patients were subjected to surgical treatment after the histological report but 6 patients got medical treatment before surgery because of the presence of active pulmonary tuberculosis. Though the usual rule is to treat the patient of genital tuberculosis by antituberculous drugs first and if persistence of symptoms then surgical treatment is indicated. In this study 85.7% patients were subjected to medical treatment after surgical intervention. This is because definitive diagnosis was done on the basis of histopathological report compatible with tuberculosis. All the patients were followed up for upto 9 months to one year after surgery but there was no evidence of fistula formation in any case in this series. Still the follow up is inadequate and the patient should be followed up for consecutive three years to detect any evidence of persistence of the disease or recurrence.

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## MEASLES ANTIBODY IN MATERNAL AND CORD BLOOD: A BASELINE STUDY

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### Key words :

Measles, Antibody.

### Suunmary:

In order to have an idea on the prevalence of measles virus in the community and to determine the state of transplacentally transmitted maternal antibody to measles virus in the newborn, a total of 96 maternal and corresponding cord blood samples were studied. Protective measles antibody determined by haemagglutination inhibition (HAI) test was found in 92 (95.3%) mothers and 90 (93.8%) newborns. The mean geometric antibody titre in maternal and cord blood were 1:14.1 and 1:14.8 respectively. Two or more fold concentration of antibody was seen in 17.8% of cord blood.

### Introduction:

Measles is a common infectious disease of childhood, having worldwide distribution, high morbidity and mortality, and seriously affects the growth and nutrition of the children<sup>1</sup>. Measles associated complications are a common phenomenon in developing countries like Bangladesh shrouded with problems of overcrowding, poverty, malnutrition, inadequate medical facilities, etc<sup>2</sup>.

Measles and associated complications make it one of the major killer diseases among infants and children. In Matlab<sup>3</sup> and Companiganj<sup>4</sup>, Bangladesh studies, it was observed to be the third and fifth leading causes of child mortality respectively. Case fatality rates of measles in developing countries show a wide variations from 1% to as high as 25.5%<sup>2</sup>. An epidemiological study<sup>5</sup> from Bangladesh reported a case fatality rate

of 3.7%. Measles occurs in a relatively younger age group in the developing countries (peak age incidence 1-2 years) as compared with developed ones (peak age incidence 4-9 years)<sup>2</sup>. A study from Matlab, Bangladesh<sup>6</sup> reported 24% of the measles cases in children under one year of age and 36% in under two years. In general, the younger the age of onset of measles the more is the likelihood of complications to develop<sup>2</sup>.

Despite being a leading cause of mortality and morbidity no serological study has been carried out to describe the seroepidemiology of the disease in Bangladesh. The present study was carried out to have an idea on the prevalence of measles virus in the community and to determine the state of transplacentally transmitted maternal antibody against measles virus in the newborns.

### Materials and Methods:

Ninety-six pair of maternal and corresponding cord blood of the babies delivered in Dhaka Medical College Hospital between the period from September 1985 and July 1986 were studied. The serum was separated and preserved at -80°C until tested. On the day of test the serum was inactivated at 56°C for 30 minutes and the nonspecific agglutinins were absorbed with rhesus monkey erythrocytes in a final concentration of 10% cells. Serum dilution of 1:8, 1:16, 1:32, 1:64 and 1:128 were made and haemagglutination Inhibition (HAI) test was performed in microtitre plates with the paired samples of maternal and corresponding cord blood as per method described by

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Gersan and Krugman<sup>7</sup>. Four units of haemagglutinating measles antigen were added to serum samples in each well of microtitre plate that was kept at room temperature for one hour. Rhesus monkey erythrocyte suspension (0.5%) were then added to each well, kept for one hour at 37°C and the results were read. The complete inhibition of measles haemagglutination was taken as evidence of the presence of antibody. Antibody titre of 1:8 was taken as the minimum protective level of measles antibody in the serum.

#### Results:

The mean age of mothers under study was  $25.5 \pm 4.2$  months. Fifty-six (58%) of the new borns were male and 40 (42%) were female. The mean weight of the newborns was  $5.3 \pm 2.1$  lbs.

The HAI antibody titre of the cord blood against maternal blood is shown in Table -I. Protective measles antibody (titre >1:8) was present in 92 of 96 (95.3%) mothers. The most commonly observed titres were 1:8 and 1:16 (51% and 34% respectively). The mean geometric antibody titre in maternal blood was 1:14.1.

Among the newborns, protective measles antibody was present in 90 of 96 (93.8%) cord blood samples. In this case also 1:8 and 1:16 were the most commonly observed titre (45% and 34% respectively). The mean geometric antibody titre in the cord blood was 1:14.8. Three (3%) of the cord blood samples possessing antibody titre lower than 1:8 had higher antibody titre (1:8) in their corresponding maternal blood. In 17.8% cases of cord blood two or more fold concentration of antibody was seen.

**Table - 1 :** Distribution of HAI antibody titre in Maternal and cord blood

HAI Antibody titre in maternal blood*	HAI Antibody titre in cor blood**					
	<1:8	1:8	1:16	1:32	1:64	Total
<1:8	03	01	—	—	—	04(4.16)
1:8	03	38	07	01	—	49(51.0)
1:16	—	04	21	08	—	33(34.4)
1:32	—	—	04	03	—	07(7.3)
1:64	—	—	—	01	02	03(3.1)
Total	06(6.2)	43(44.7)	32(33.3)	13(13.5)	02(2.1)	96(100)
			(93.8)			

HAI= Haemagglutination Inhibition / Figures within Parentheses Indicate Percentages.

\* Mean Geometric Titre 1:14.1/ \*\*Mean Geometric Titre 1:14.8

### Discussion:

The study shows a prevalence of protective measles antibody in 95.8% mothers having a mean age of  $25.5 \pm 4.2$  years. This high prevalence suggests the ubiquitous distribution of the virus in the community. The geometric mean titre of maternal measles antibody was 1:14.1. This is much lower than the titre reported in Haitian mothers (1:44)<sup>9</sup> and compares with reports from Chandigarh, India<sup>10</sup> showing measles antibody titres 1:20 - 1:26 in age groups beyond 14 years.

Most of the newborns (93.8%) received protective measles antibody from their mothers. The geometric mean titre of the antibody in the cord blood was 1:14.8. This matched closely with the maternal geometric mean titre. Three cord blood samples whose mothers possessed antibody titre 1:8 failed to show antibody at that level. Similar observations have been made in other studies.<sup>8,10</sup> Seventeen cord blood samples (18%) showed two or more fold rise in antibody titre than their corresponding maternal blood. The concentration of antibody in the cord blood has also been reported by other authors<sup>8,11,12</sup>. The exact explanation behind the concentration effect is not known.

Measles virus thus shows an ubiquitous distribution in the community. Majority of the maternal and cord blood samples possessed protective measles antibody. Only 6.7% of cord blood samples lacked the antibody. And with increasing age upto the beginning of measles vaccination i.e. nine months of age, this number is likely to rise further and make a larger proportion of children susceptible to measles infection. A vaccine, effective before nine months of age, this number is likely to rise further and make a larger proportion of children susceptible to measles infection. A vaccine,

effective before nine months of age, is therefore needed to take care of these children.

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## MANAGEMENT OF GUILLAIN-BARRE SYNDROME WITH PROLONGED ARTIFICIAL VENTILATION — A CASE REPORT

M A Habib<sup>1</sup>, S M F Rahman<sup>2</sup>, K Ibrahim<sup>3</sup>,  
M A Mannan<sup>4</sup>, A B Siddique<sup>5</sup>, S N S Chowdhury<sup>6</sup>

### Key Words :

Guillain-Barre Syndrome; artificial ventilation.

### Summary :

A patient aged 47 years with Guillain-Barre-Syndrome (GBS) admitted in the Medical unit of Dhaka Medical College Hospital (DMCH) and later on shifted to Intensive Care Unit (ICU) as the patient developed respiratory insufficiency due to progressive motor weakness. In the ICU patient was managed with the artificial ventilation with other supportive and symptomatic treatments. Ventilation was necessary for about 3 months and the patient was discharged from ICU after 4th month with improved motor function and adequate ventilation.

### Introduction :

A fairly good number of cases diagnosed as Guillain Barre Syndrome have been reported in our country. The disease is characterised by predominant motor involvement with muscular weakness which may be profound and rapidly progressive and ascending in nature. The most striking finding on examination are diffuse weakness and wide spread loss of reflexes. The fatal outcome is usually due to respiratory failure. These patients need artificial ventilation for respiratory support in the ICU. Tracheostomy may be required if ventilation to be continued for a longer period. Other supportive and symptomatic treatment should also be provided. About 30 percent of patients require mechanical ventilatory supports. Most

patients recover within a week or so, but rarely it may take months<sup>1</sup>.

### Case Report :

A 47 year old lady diagnosed as Guillain-Barre-Syndrome (GBS) transferred from Medical Unit to ICU for respiratory support. History of illness was 12 days long. She had been suffering from respiratory tract infection which was not responding to any antibiotic. The patient gradually recovered from respiratory tract infection. From 13th day she developed weakness of the lower limbs below the knee, which gradually involved the right hand the whole of the lower limbs, left hand and ultimately whole of the upper limbs in that order. Finally she developed paralysis of the respiratory muscles with respiratory distress.

In the ICU the patient was found cyanosed with respiratory distress, tachycardia and raised blood pressure. The patient immediately put on ventilator for IPPV. Arterial blood sample was immediately drawn and sent for blood gas analysis which showed evidence of respiratory failure. On examination of the nervous system her sensory function was intact. There was complete loss of muscle tone and muscle power of both upper and lower limbs. All deep reflexes were abolished. There was evidence of autonomic dysfunction in the form of labile cardiovascular function.

**Investigation :** Investigations done in the ICU were Haematological (TC, DC, Hb%, ESR), Biochemical (Blood for random sugar, Urea, Creatinine), Blood gas analysis (PaO<sub>2</sub>, PCO<sub>2</sub>, HCO<sub>3</sub>, acid base status), Serum electrolytes (Na<sup>+</sup>, K<sup>+</sup>, Cl<sup>-</sup>), Bacteriological (Culture and Sensitivity of throat swab and urine for C/S) and Radiological (X-ray chest).

1. Md Ahsanul Habib, FCPS, Medical Officer, 2. S M Fazlur Rahman, DA, FCPS, Assistant Professor, 3. Kamal Ibrahim, FCPS, Medical Officer, 4. M A Mannan, MCPS, Assistant Professor, 5. Abu Bakar Siddique, FFARCS, Associate Professor, 6. S N S Chowdhury, DA, FCPS, Professor, Department of Anaesthesiology, Dhaka Medical College & Hospital, Dhaka, Bangladesh.  
Address for Correspondance : Dr. M A Mannan  
Received : April 10, 1991, Accepted : April 25, 1991.

Haematological, Biochemical investigations, blood gas analysis and serum electrolyte estimations were done initially twice a week later on once in a week. Other investigations i.e bacteriological and radiological were done as required. There was little variation from normal values throughout the period. Slight variation from normal in regards to electrolytes, blood gas analysis, acid base status and C/S report were corrected.

**Management in the ICU :** On admission in the ICU the patient was managed with supportive and symptomatic treatments as well as artificial ventilatory support. As there was no sign of improvement tracheostomy done on 11th day and ventilation continued through tracheostomy tube. Total period of ventilation was about three and half months. During this period attempts were made to wean her off from the ventilator. She was allowed to breath spontaneously several times a day after disconnecting the ventilator. During this trial her ventilatory function was assessed by a pulse oximeter (to see  $S_aO_2$ ), wrights respirometer (to see tidal volume) and by observing her pulse rate and blood pressure. Initially she could maintain spontaneous respiration for a few minutes than there developed fall of  $S_aO_2$ , low tidal volume, raised pulse and blood pressure due to  $CO_2$  retention. Time interval and frequency of wean off from the ventilator was gradually increased with improvement of motor function. Especially during the last 15 days of  $3\frac{1}{2}$  months she was allowed to breath most of the day spontaneously and intermittently with room air, oxygen supplementation as was only given when there was fall in  $S_aO_2$  or as indicated by the pulse oximetry. At the end of  $3\frac{1}{2}$  months she was able to maintain adequate ventilation and the tracheostomy was closed. The patient was observed for further 10 days and then allowed to go home.

The other part of the management was nutritional support through Ryles tube with balanced diet which contained protein, fat,

carbohydrates, vitamins and minerals, general nursing care, antibiotic, steroid, electrolytes and vitamins as required. We took help from physiotherapist for chest, skeletal muscle and joint physiotherapy. Psychological support was given by reassurance, sedation, and audio visual aids (television, VCR, music and radio programmes), visitors allowed to communicate with her for better feeling.

#### Discussion :

Guillain - Barre - Syndrome synonyms Landry- Guillain - Barre - Strohl syndrome, acute post infective polyneuritis or post infective poly radiculopathy is an acute diffuse disorder of the nervous system involving the spinal roots, peripheral nerves and sometimes cranial nerves<sup>2</sup>.

GBS is thought to be a lymphocyte mediated hypersensitivity reaction to peripheral nervous system antigen result in demyelination<sup>3</sup>. The precise mechanism yet to be clarified. Sensitization may occur by antecedent infection or vaccination<sup>4</sup>. Infection are usually viral and involve the respiratory or gastrointestinal tract. Clinical diagnosis is supported by increased protein in the CSF with concurrent absence of cellular responses (protein cell dissociation). Pathologically the syndrome is characterised by segmental demyelination of peripheral nerves. The fatal outcome is usually due to respiratory failure.

The prognosis is good provided respiration is maintained. Approximately 90% of patients will recover completely within 3-8 weeks, 5% will die and 5% will left with residual paralysis.

Quite a good number of cases diagnosed as GBS have been admitted in the ICU of DMCH for respiratory support for the last few years since its functioning. Majority of the cases were recovered successfully. Some of them died. But no such case of prolonged ventilation have been reported in our country previously which prompted us to report the case. One case reported at IPGM&R<sup>5</sup>

needed tracheostomy and artificial ventilation for about one month and recovered successfully. In our case recovery was very much delayed. However due to proper supportive and symptomatic treatments and good nursing care in the ICU of DMCH this patient recovered successfully.

Incidence of GBS is not infrequent and unknown in our country. Many peoples are dying due to lack of respiratory support in many peripheral areas.

Proper respiratory care alongwith other intensive care management may save the life of patients suffering from Guillain-Barre-Syndrome.

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## COLLEGE NEWS

### Continuing Medical Education Programme :

Dr. Samina Chowdhury, Asstt. Prof. Obst. & Gynae., IPGMR, Dhaka delivered a Lecture on Technique of In-Vitro Fertilization at the College Auditorium on 30th May, 1991.

### List of Councilors:

Following is the 20 member list of the Councilors.

(For the session 1989-93 )

1. Dr. A.H.M. Ahsanullah
2. Dr. Md. Tahir
3. Dr. Md. Abdul Hadi
4. Dr. K.M.H.S. Sirajul Haque
5. Dr. Mazhar Ali Quaderi
6. Dr. Latifa Shamsuddin
7. Dr. S.A.M. Golam Kibria
8. Dr. A.K.M. Anowarul Azim

(For the session 1991-95)

9. Dr. Mahmud Hasan
10. Dr. A.H.M. Towhidul Anwar Chowdhury
11. Dr. Golam Rasul
12. Dr. Nazmun Nahar
13. Dr. Rashid-e-Mahbub
14. Dr. Shahjahan Nurus Samad Chowdhury
15. Dr. A.K.M. Mahbubur Rahman
16. Dr. Abdul Bayes Bhuiyan

Councilors Nominated by Government of People's Republic of Bangladesh (1989-93).

- |                     |                                    |
|---------------------|------------------------------------|
| 17. Dr. Nurul Islam | 19. Dr. (Maj. Gen.) M.R. Chowdhury |
| 18. Dr. M. A. Majed | 20. Dr. M. R. Khan                 |

### Executive Committee:

The Election Commission of the Bangladesh College of Physicians and Surgeons has declared the members of new executive committee for 2 years from March, 1991 as follows:

President	:	Dr. A. H. M. Towhidul Anwar Chowdhury
Senior Vice-President	:	Dr. A. H. M. Ahsanullah
Vice President	:	Dr. Md. Tahir
Treasurer	:	Dr. Mahmud Hasan
Members	:	Dr. K. M. H. S. Sirajul Haque Dr. Nazmun Nahar.

Dr. M.A. Hadi has been appointed as Honorary Secretary of the College with effect from 7th March, 1991.

### Various Committees & Faculties of the Bangladesh College of Physicians and Surgeons:

The council of members of Bangladesh College of Physicians and Surgeons has formed the following committees and Faculties of the College for 2 years with effect from March, 1991:-

**EXAMINATION COMMITTEE :**

- |                                 |   |          |
|---------------------------------|---|----------|
| 1. Dr. A. H. M. Ahsanullah      | - | Chairman |
| 2. Dr. M. R. Khan               | - | Member   |
| 3. Dr. K. M. Nazrul Islam       | - | "        |
| 4. Dr. Md. Tahir                | - | "        |
| 5. Dr. Md. Humayun Kabir        | - | "        |
| 6. Dr. A. K. M. Anowarul Azim   | - | "        |
| 7. Dr. A. K. M. Mahbubur Rahman | - | "        |

**REFERENCE COMMITTEE:**

- |   |   |          |
|---|---|----------|
| 1. Dr. A. H. M. Towhidul Anowar Chowdhury | - | Chairman |
| 2. Dr. S. A. Ashraf                       | - | Member   |
| 3. Dr. Mahmud Hasan                       | - | "        |
| 4. Dr. Latifa Shamsuddin                  | - | "        |
| 5. Dr. S. A. M. Golan Kibria              | - | "        |
| 6. Dr. Md. Haruner Rashid                 | - | "        |

**STUDENTS ADVISORY COMMITTEE:**

- |                                |   |          |
|--------------------------------|---|----------|
| 1. Dr. Golam Rasul             | - | Chairman |
| 2. Dr. M. A. Majed             | - | Member   |
| 3. Dr. Hajera Mahtab           | - | "        |
| 4. Dr. Md. Jalaluddin          | - | "        |
| 5. Dr. A. K. M. Shariful Islam | - | "        |

**CONTINUING MEDICAL EDUCATION COMMITTEE:**

- |                                |   |          |
|--------------------------------|---|----------|
| 1. Dr. M. R. Khan              | - | Chairman |
| 2. Dr. Abdus Shakur            | - | Member   |
| 3. Dr. Md. Taiabur Rahman      | - | "        |
| 4. Dr. Naseem Akhtar Chowdhury | - | "        |

**MUSEUM COMMITTEE:**

- |                               |   |          |
|-------------------------------|---|----------|
| 1. Dr. A. N. M. Atai Rabbi    | - | Chairman |
| 2. Dr. F. A. Azim             | - | Member   |
| 3. Dr. Syed Mukarram Ali      | - | "        |
| 4. Dr. Ava Hossain            | - | "        |
| 5. Dr. Sameena Chowdhury      | - | "        |
| 6. Dr. A. K. M. Khorshed Alam | - | "        |
| 7. Dr. A. N. M. Zia-ur-Rahman | - | "        |

**FELLOWS WELFARE COMMITTEE:**

- |                                  |   |          |
|----------------------------------|---|----------|
| 1. Dr. Rashid-E-Mahbud           | - | Chairman |
| 2. Dr. A. K. M. Mahbubur Rahman  | - | Member   |
| 3. Dr. Abdul Mannan Miah         | - | "        |
| 4. Dr. Quazi Deen Mohammad       | - | "        |
| 5. Dr. Emran Bin Yunus           | - | "        |
| 6. Dr. Kanak Kanti Barua         | - | "        |
| 7. Dr. A. P. M. Sohrabuzzaman    | - | "        |
| 8. Dr. Shafquat Hussain Khundker | - | "        |

**FINANCE COMMITTEE:**

- |                              |   |          |
|------------------------------|---|----------|
| 1. Dr. Md. Tahir             | - | Chairman |
| 2. Dr. Shamsuddin Ahmed      | - | Member   |
| 3. Dr. Md. Abdul Mobin Khan  | - | "        |
| 4. Dr. Mahmud Hasan          | - | "        |
| 5. Dr. Satyendra Nath Aditya | - | "        |

**LIBRARY COMMITTEE:**

- |                         |   |          |
|-------------------------|---|----------|
| 1. Dr. M. A. Jalil      | - | Chairman |
| 2. Dr. Abdul Hadi       | - | Member   |
| 3. Dr. Manimul Huq      | - | "        |
| 4. Dr. Anwara Begum     | - | "        |
| 5. Dr. Rowsan Ara Begum | - | "        |
| 6. Dr. Khokan Kanti Das | - | "        |

**JOURNAL COMMITTEE:**

- |                                  |   |                 |
|----------------------------------|---|-----------------|
| 1. Dr. Matiur Rahman             | - | Chairman        |
| 2. Dr. Shfiqul Hoque             | - | Editor-in-Chief |
| 3. Dr. K. M. H. S. Strajul Haque | - | Member          |
| 4. Dr. Md. Nazrul Islam          | - | "               |
| 5. Dr. U.H. Shahera Khatun       | - | "               |
| 6. Dr. Moazzem Hossain           | - | "               |
| 7. Dr. Sadiqa Tahera Khanam      | - | "               |
| 8. Dr. A. K. M. Anisul Haque     | - | "               |

**TENDER COMMITTEE:**

- |                           |   |          |
|---------------------------|---|----------|
| 1. Dr. Md. Nurul Islam    | - | Chairman |
| 2. Dr. Mahmud Hasan       | - | Member   |
| 3. Dr. Md. Abdul Hadi     | - | "        |
| 4. Dr. Tofayel Ahmed      | - | "        |
| 5. Dr. Md. Margub Hussain | - | "        |

**FACULTY OF MEDICINE:**

- |                              |   |          |
|------------------------------|---|----------|
| 1. Dr. M. A. Quaderi         | - | Chairman |
| 2. Dr. A. K. M. N. Chowdhury | - | Member   |
| 3. Dr. S. G. M. Chowdhury    | - | "        |
| 4. Dr. Nazmun Nahar          | - | "        |
| 5. Dr. A. K. Azad Khan       | - | "        |
| 6. Dr. Nurul Islam           | - | "        |
| 7. Dr. Probhakar Purkayastha | - | "        |
| 8. Dr. Sadequzzaman          | - | "        |

**FACULTY OF SURGERY:**

- |                              |   |          |
|------------------------------|---|----------|
| 1. Dr. S.A. Ashraf           | - | Chairman |
| 2. Dr. M. A. Awal            | - | Member   |
| 3. Dr. S. N. Samad Chowdhury | - | "        |
| 4. Dr. Md. Nurul Amin        | - | "        |
| 5. Dr. Md. Humayun Kabir     | - | "        |
| 6. Dr. A. K. Badruddoza      | - | "        |
| 7. Dr. M. N. Huda            | - | "        |
| 8. Dr. S. A. Sobhan          | - | "        |



**FACULTY OF OBSTETRICS & GYNAECOLOGY:**

- |                             |   |          |
|-----------------------------|---|----------|
| 1. Dr. S.F. Begum           | - | Chairman |
| 2. Dr. Abdul Bayes Bhuiyan  | - | Member   |
| 3. DR. Anowara Begum        | - | "        |
| 4. Dr. A. K. M. Shahabuddin | - | "        |
| 5. Dr. Sultana Jahan        | - | "        |
| 6. Dr. Sultana Razia Begum  | - | "        |

**FACULTY OF BASIC SCIENCE:**

- |                           |   |          |
|---------------------------|---|----------|
| 1. Dr. K. M. Nazrul Islam | - | Chairman |
| 2. Dr. K. M. Fariduddin   | - | Member   |
| 3. Dr M. A. Bari          | - | "        |
| 4. Dr. S. A. R. Chowdhury | - | "        |
| 5. Dr. M. A. Hal          | - | "        |
| 6. Dr. Md. Nazrul Islam   | - | "        |
| 7. Dr. Syed Mokarram Ali  | - | "        |
| 8. Dr M. A. Rashid        | - | "        |
| 9. Dr. Tahmina Hossain    | - | "        |

**JOURNAL COMMITTEE MEETINGS:**

The combined meeting of the old & new Journal Committee was held on 25th March, 1991 with Dr. Matur Rahman in the chair.

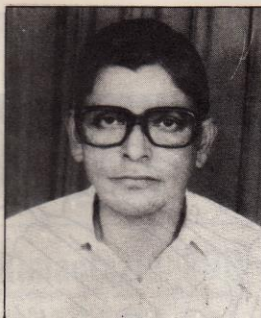
Following important decisions have been taken:

1. All the members present agreed to switch over to modified Vancouver style.
2. Committee considered for publication of 3 issues instead of 2 each year in January, May and September. The next issue will be published as Vol. 9. No. 1&2, May 1991 and from now onwards there will be year wise volume.
3. The Committee has decided to change the cover design and get-up of the Journal.

## LIST OF CURRENT PERIODICALS AVAILABLE IN THE LIBRARY OF BANGLADESH COLLEGE OF PHYSICIANS AND SURGEONS

1. American Heart Journal
2. American Journal of Cardiology
3. American Journal of Medicine
4. American Journal of Obstetrics and Gynaecology
5. American Journal of Ophthalmology
6. American Journal of Otolaryngology
7. American Journal of Pathology
8. American Journal of Psychiatry
9. American Journal of Surgery
10. Anaesthesia
11. Annals of Internal Medicine
12. Annals of Surgery
13. Archives of Dermatology
14. Archives of Disease in Childhood
15. Archives of Internal Medicine
16. Archives of Surgery
17. Australian and Newzeland Journal of Medicine
18. Australian and Newzeland Journal of Obstetrics and Gynae
19. Australian and Newzeland Journal of Ophthalmology
20. Australian Paediatric Journal
21. Bangladesh Armed Forces Medical Journal
22. Bangladesh Journal of Child Health
23. Bangladesh Journal of Neuroscience
24. Bangladesh Medical Journal
25. Bangladesh Medical Research Council Bulletin
26. Bangladesh Renal Journal
27. Brain
28. British Heart Journal
29. British Journal of Cancer
30. British Journal of Dermatology
31. British Journal of Haematology
32. British Journal of Obstetrics and Gynaecology
33. British Journal of Ophthalmology
34. British Journal of Surgery
35. British Journal of Urology
36. British Medical Journal
37. Bulletin of the World Health Organization (Irregular)
38. Chest and Heart Bulletin
39. Clinical Radiology
40. Dhaka Shishu Hospital Journal
41. GUT
42. Indian Heart Journal
43. Indian Journal of Anaesthesia
44. Indian Journal of Cancer
45. Indian Journal of Chest Diseases and Allied Science
46. Indian Journal of Dermatology
47. Indian Journal of Medical Research
48. Indian Journal of Medical Sciences
49. Indian Journal of Ophthalmology
50. Indian Journal of Orthopaedics
51. Indian Journal of Otolaryngology
52. Indian Journal of Paediatrics
53. Indian Journal of Radiology and Imaging
54. Indian Journal of Surgery
55. Japanese Heart Journal
56. Japanese Journal of Clinical Oncology
57. Japanese Journal of Experimental Medicine
58. Japanese Journal of Medicine
59. Japanese Journal of Ophthalmology
60. Journal of the American Medical Association
61. Journal of Bangladesh College of Physicians and Surgeons
62. Journal of Bone and Joint Surgery (American Volume)
63. Journal of Diarrhoeal Diseases Research
64. Journal of Obstetrics and Gynaecology of India
65. Journal of Otolaryngology
66. Journal of Postgraduate Medicine
67. The Lancet
68. Medical Journal of Australia
69. Medical Journal of Malaysia
70. Surgery, Gynaecology and Obstetrics

## OBITUARY



DR. ABDUR RAUF BHUIYAN (1934-1991)

Professor Abdur Rauf Bhuiyan was born on 1st February 1934 at Bejura under Brahmonpara Upazilla in the district of Comilla.

Allthrough a meritorious student Dr. Rauf, completed his schooling in 1951 from Devider High School, Comilla and Intermediate in 1953 from Comilla Victoira College and admitted to Dhaka Medical College in 1953. He graduated in 1958 as a regular student from Dhaka Medical College. Thereafter, he served as SDHO in Pabna. MO in Comilla and SDMO in Bandarban. Then he joined Dhaka Medical College Hospital as MO and continued as Clinical Assistant in Medicine in DMCH & PG Hospital till 1966 when he was deputed for Fellowship in Medicine to Institute of Post-Graduate Medicine Research (IPGMR) in the first batch. He became Fellow of the 1st batch of this College in 1968. He served in Dhaka Medical College Hospital as Resident Physician from Feb. 1968 to July 1969 and at Barisal Sadar Hospital July 1969 to November 1970 as Junior Consultant. He became Associate Professor of Medicine in November 1970 and served at Barisal Medical College, Mymensingh Medical

College and Institute of Diseases of Chest & hospital till 1977 and joined Mymensingh Medical College as Professor of Medicine. He was also Professor of Medicine in Rangpur Medical College, Institute of Diseases of Chest & Hospital, Dhaka Medical College & Institute of Post-Graduate Medicine Research. He was also Director of the Institute of Diseases of Chest & Hospital (IDCH). He has been specially trained in Neuro-medicine in West Gernay from April 1974 to April 1976. He also obtained DPH (Panjab Univ.) in 1961.

He went on leave from active service on January 30, 1991 preparatory to retirement.

He died on April, 10, 1991 from Cirrhosis of Liver with a suspected Malignancy.

He left behind his wife, one son, four daughters and a large number of well wishers to mourn his death.

The College expresses its deep grief on the untimely demise of its 1st batch product Professor Abdur Rouf Bhuiyan and heartfelt sympathy to the members of the bereaved family.

## UNIFORM REQUIREMENTS FOR MANUSCRIPTS SUBMITTED TO BIOMEDICAL JOURNALS

INTERNATIONAL COMMITTEE OF MEDICAL JOURNAL EDITORS \*

In the 12 years since it was first published, the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (the Vancouver style), developed by the International Committee of Medical Journal Editors, had been widely accepted by both authors and editors; over 400 journals have stated that they will consider manuscripts that conform to its requirements. This is the fourth edition of the Uniform Requirements, the first to be published in the Journal, which now serves as coordinator of the ICMJE in North America.

In January 1978 a group of editors from some major biomedical journals published in English met in Vancouver, British Columbia, and decided on uniform technical requirements for manuscripts to be submitted to their journals. These requirements, including formats for bibliographic references developed for the Vancouver group by the National Library of Medicine, were published in three of the journals early in 1979. The Vancouver group evolved into the International Committee of Medical Journal Editors. Over the years, the group has revised the requirements slightly; this is the fourth edition.

Over 400 journals have agreed to receive manuscripts prepared in accordance with the requirements. It is important to emphasize what these requirements imply and what they do not.

\* Members of the committee are Suzanne and Robert Fletcher (*Annals of Internal Medicine*), Laurel Thomas (*Medical Journal of Australia*), Stephen Lock (*British Medical Journal*), George D. Lundberg (*Journal of the American Medical Association*), Robin Fox (*Lancet*), Magne Nylenna (*Tidsskrift for den Norske Laegeforening*), Lois Ann Colaianni (*Index Medicus*), Arnold S. Relman and Marcia Angel (*New England Journal of Medicine*), Povl Riis (*Journal of the Danish Medical Association, Danish Medical Bulletin*), Richard G. Robinson (*New Zealand Medical Journal*), Bruce P. Squires (*Canadian Medical Association Journal*), and Linda Clever (*Western Journal of Medicine*). Address correspondence to Editor, the New England Journal of Medicine, or Editor, British Medical Journal.

First, the requirements are instructions to authors on how to prepare manuscripts, not to editors on publication style. (But many journals have drawn on these requirements for elements of their manuscripts in the style.)

Second, if authors prepare their manuscripts in the style specified in these requirements, editors of the participating journals will not return manuscripts for changes in these details of style. Even so, manuscripts may be altered by journals to conform with details of their own publication styles.

Third, authors sending manuscripts to a participating journal should not try to prepare them in accordance with the publication style of that journal but should follow the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals."

Nevertheless, authors must also follow the instructions to authors in the journal as to what topics are suitable for that journal and the types of papers that may be submitted - for example, original articles, instructions are likely to contain other requirements unique to that journal, such as number of copies of manuscripts, acceptable languages, length of articles, and approved abbreviations.

Participating journals are expected to state in their instruction to authors that their requirements are in accordance with the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" and to cite a published version.

This document will be revised at intervals. Inquiries and comments from Central and North America about these requirements should be sent to Editor, the New England Journal of Medicine, 10 Shattuck St., Boston, MA 02115; those from other regions should be sent to Editor, British Medical Journal, British Medical Association, Tavistock Sq., London WC1H 9JR, United Kingdom. Note that these two journals provide secretariat services for the International Committee of Medical Journal Editors; they do not handle manuscripts intended for other

intended for other journals. Papers intended for other journals should be sent directly to the offices of those journals.

### SUMMARY OF REQUIREMENTS

Type the manuscript double-spaced, including title page, abstract, text acknowledgements, references, tables and legends.

Each manuscript component should begin on a new page, in the following sequence: title page; abstract and key words; text; acknowledgments; references; tables (each table complete with title and footnotes on a separate page); and legends for illustrations.

Illustrations must be good-quality, unmounted glossy prints, usually 127 x 173 mm (5 x 7 in.), but no larger than 203 x 254 mm (8 x 10 in.).

Submit the required number of copies of manuscript and figures (see journal's instructions) in a heavy paper envelope. The submitted manuscript should be accompanied by a covering letter, as described under Submission of Manuscripts, and permissions to reproduce previously published material or to use illustrations that may identify human subjects.

Follow the journal's instructions for transfer of copyright. Authors should keep copies of everything submitted.

### PRIOR AND DUPLICATE PUBLICATION

Most journals do not wish to consider for publication a paper on work that has already been reported in a published paper or is described in a paper submitted or accepted for publication elsewhere. This policy does not usually preclude consideration of a paper that has been rejected by another journal or of a complete report that follows publication of a preliminary report, usually in the form of an abstract. Nor does it prevent consideration of a paper that has been presented at a scientific meeting if not published in full in a proceedings or similar publication. Press reports of the meeting will not usually be considered as breaches of this rule, but such reports should not be amplified by additional data or copies of tables and illustrations. When submitting a paper an author should always make a full statement to the editor about all submissions and previous reports that might be regarded as prior or duplicate publication of the same or very similar work. Copies of such material should be included

with the submitted paper to help the editor decide how to deal with the matter.

Multiple publication - that is, the publication more than once of the same study, irrespective of whether the wording is the same - is rarely justified. Secondary publication in another language is one possible justification, provided the following conditions are met.

- (1) The editors of journals concerned are fully informed; the editor concerned with secondary publication should have a photocopy, reprint, or manuscript of the primary version.
- (2) The priority of the primary publication is respected by a publication interval of at least two weeks.
- (3) The paper for secondary publication is written for a different group of readers and is not simply a translated version of the primary paper; an abbreviated version will often be sufficient.
- (4) The secondary version reflects faithfully the data and interpretations of the primary version.
- (5) A footnote on the title page of the secondary version informs readers, peers, and documenting agencies that the paper was edited and is being published, for a national audience in parallel with a primary version based on the same data and interpretations. A suitable footnote might read as follows: "This article is based on a study first reported in the [title of journal, with full reference]."

Multiple publication other than as defined above is not acceptable to editors. If authors violate this rule they may expect appropriate editorial action to be taken.

Preliminary release, usually to public media, of scientific information described in paper that has been accepted but not yet published is a violation of the policies of many journals. In a few cases, and only by arrangement with the editor, preliminary release of data may be acceptable - for example, to warn the public of health hazards.

### PREPARATION OF MANUSCRIPT

Type the manuscript on white bond paper, 216 x 279 mm (8 1/2 x 11 in.) or ISO A4 (210 x 297 mm), with margins of at least 25 mm (1 in.). Type only on one side of the paper. Use double-spacing throughout, including title page,



abstract, text, acknowledgments, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract and key words, text, acknowledgments, references, individual tables, and legends. Number pages consecutively, beginning with the title page. Type the page number in the upper or lower right-hand corner of each page.

#### **Title Page**

The title page should carry (a) the title of the article, which should be concise but informative; (b) first name, middle initial, and last name of each author, with highest academic degree (s) and institutional affiliation; (c) name of department (s) and institution (s) to which the work should be attributed; (d) disclaimers, if any; (e) name and address of author responsible for correspondence about the manuscript; (f) name and address of author to whom requests for reprints should be addressed or statement that reprints will not be available from the author; (g) source (s) of support in the form of grants, equipment, drugs, or all of these; and (h) a short running head or foot line of no more than 40 characters (count letters and spaces) placed at the foot of the title page and identified.

#### **Authorship**

All persons designated as authors should qualify for authorship. The order of authorship should be a joint decision of the coauthors. Each author should have participated sufficiently in the work to take public responsibility for the content.

Authorship credit should be based only on substantial contributions to (a) conception and design, or analysis and interpretation of data; and to (b) drafting the article or revising it critically for important intellectual content; and on (c) final approval of the version to be published. Conditions (a), (b), and (c) must all be met. Participation solely in the acquisition of funding or the collection of data does not justify authorship. General supervision of the research group is also not sufficient for authorship. Any part of an article critical to its main conclusions must be the responsibility of at least one author.

A paper with corporate (collective) authorship must specify the key persons responsible for the article; others contributing to the work should be recognized separately (see Acknowledgments).

Editors may require authors to justify the assignment of authorship.

#### **Abstract and Key Words**

The second page should carry an abstract (of no more than 150 words for unstructured abstracts or 250 words for structured abstracts). The abstract should state the purposes of the study or investigation, basic procedures (selection of study subjects or laboratory animals; observational and analytical methods), main findings (give specific data and their statistical significance, if possible), and the principal conclusions. Emphasize new and important aspects of the study or observations.

Below the abstract provide, and identify as such, 3 to 10 key words or short phrases that will assist indexers in crossindexing the article and may be published with the abstract. Use terms from the medical subject headings (MeSH) list of *Index Medicus*; if suitable MeSH terms are not yet available for recently introduced terms, present terms may be used.

#### **Text**

The text of observational and experimental articles is usually - but not necessarily - divided into sections with the headings Introduction, Methods, Results, and Discussion. Long articles may need subheadings within some sections to clarify their content, especially the Results and Discussion sections. Other types of articles such as case reports, reviews, and editorials are likely to need other formats. Authors should consult individual journals for further guidance.

#### **Introduction**

State the purpose of the article. Summarize the rationale for the study or observation. Give only strictly pertinent references, and do not review the subject extensively. Do not include data or conclusions from the work being reported.

#### **Methods**

Describe your selection of the observational or experimental subjects (patients or laboratory animals, including controls) clearly. Identify the methods, apparatus (manufacturer's name and address in parentheses), and procedures in sufficient detail to allow other workers to reproduce the results. Give references to established methods, including statistical methods (see below); provide



references and brief descriptions for methods that have been published but are not well known; describe new or substantially modified methods, give reasons for using them, and evaluate their limitations. Identify precisely all drugs and chemicals used, including generic name (s), dose (s) and route (s) of administration.

#### *Ethics*

When reporting experiments on human subjects indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) or with the Helsinki Declaration of 1975, as revised in 1983. Do not use patients' names, initials, or hospital numbers, especially in any illustrative material. When reporting experiments on animals indicate whether the institution's or the National Research Council's guide for, or any national law on, the care and use of laboratory animals was followed.

#### *Statistics*

Describe statistical methods with enough detail to enable a knowledgeable reader with access to the original data to verify the reported results. When possible, quantify findings and present them with appropriate indicators of measurement error or uncertainty (such as confidence intervals). Avoid sole reliance on statistical hypothesis testing, such as the use of P values, which fails to convey important quantitative information. Discuss eligibility of experimental subjects. Give details about randomization. Describe the methods for and success of any blinding of observations. Report treatment complications. Give numbers of observations. Report losses to observation (such as dropouts from a clinical trial). References for study design and statistical methods should be to standard works (with pages stated) when possible rather than to papers in which the designs or methods were originally reported. Specify any general-use computer programs used.

Put general descriptions of methods in the Methods section. When data are summarized in the Results section specify the statistical methods used to analyze them. Restrict tables and figures to those needed to explain the argument of the paper and to assess its support. Use graphs as an alternative to tables with many entries; do not duplicate data in graphs and tables. Avoid nontechnical uses of technical

terms in statistics, such as "random" (which implies a randomizing device), "normal," "significant," "correlations," and "sample." Define statistical terms, abbreviations, and most symbols.

#### *Results*

Present your results in logical sequence in the text, tables, and illustration. Do not repeat in the text all the data in the tables or illustrations; emphasize or summarize only important observations.

#### *Discussion*

Emphasize the new important aspects of the study and the conclusions that follow from them. Do not repeat in detail data or other material given in the Introduction or the Results section. Include in the Discussion section the implications of the findings and their limitations, including implications for future research. Relate the observations to other relevant studies. Link the conclusions with the goals of the study but avoid unqualified statements and conclusion not completely supported by your data. Avoid claiming privity and alluding to work that has not been completed. State new hypotheses when warranted, but clearly label them as such. Recommendations, when appropriate, may be included.

#### *Acknowledgements*

At an appropriate place in the article (title-page, footnote or appendix to the text; see the journal's requirement) one or more statements should specify (a) contributions that need acknowledging but do not justify authorship, such as general support by a departmental chairman, (b) acknowledgements of technical help; (c) acknowledgements of financial and material support, specifying the nature of the support; (d) financial relationships that may pose a conflict of interest.

Persons who have contributed intellectually to the paper but whose contributions do not justify authorship may be named and their function or contribution described- for example, "scientific adviser," "critical review of study proposal," "data collection," or "participation in clinical trial". Such persons must have given their permission to be named. Authors are responsible for obtaining written permission from persons acknowledged by name, because readers



may infer their endorsement of the data and conclusions.

Technical help should be acknowledged in a paragraph separate from those acknowledging other contributions.

### References

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by Arabic numerals in parentheses. Reference cited only in tables or in legends to figures should be numbered in accordance with a sequence established by the first identification in the text of the particular table or illustration.

Use the style of the example below, which are based with slight modifications on the formats used by the U.S National Library of Medicine in *Index Medicus*. The titles of journals should be abbreviated according to the style used in *Index Medicus*. Consult *list of Journals Indexed in Index Medicus*, published annually as a separate publication by the library and as a list in the January issued of *Index Medicus*.

Try to avoid using abstracts as reference; "unpublished observations" and "personal communications" may not be used as references, although references to written, not oral, communications may be inserted (in parentheses) in the text. Include among the references papers accepted but not yet published; designate the journal and add "In press." Information from manuscripts submitted but not yet accepted be cited in the text as "unpublished observations" (in parentheses).

The references must be verified by the author(s) against the original documents.

Examples of correct forms of references are given below.

#### Articles in Journals

(1) *Standard journal article* (List all authors, but if the number exceeds six give six followed by et al).

You CH, Lee KY, Chey RY, Menguy R. Electrogastrographic study of patients with unexplained nausea, bloating and vomiting. *Gastroenterology* 1980 Aug;79 (2):311-4.

As an option, if a journal carries continuous pagination throughout a volume, the month and issue number may be omitted.

You CH, Lee KY, Chey RY, Menguy R. Electrogastrographic study of patients with unexplained nausea, bloating and vomiting. *Gastroenterology* 1980;79:311-4.

Goate AM, Haynes AR, Owen MJ, Farrall M, James LA, Lai LY, et al. Predisposing locus for Alzheimer's disease on chromosome 21. *Lancet* 1989;1:352-5.

#### (2) Organization as author

The Royal Marsden Hospital Bone-Marrow Transplantation Team. Failure of syngeneic bone-marrow graft without preconditioning in post-hepatitis marrow aplasia. *Lancet* 1977;2:742-4.

#### (3) No author given

Coffee drinking and cancer of the pancreas [editorial]. *BMJ* 1981;293:628.

#### (4) Article in a foreign language

Massone L, Borghi S, Pesarino A, Piccini R, Gambini C. Localisations palmaires purpuriques de la dermatite herpétiforme. *Ann Dermatol Venerol* 1987;114:1545-7.

#### (5) Volume with supplement

Magni F, Rossoni G, Berti F. BN-52021 protects guinea-pig from heart anaphylaxis. *Pharmacol Res Commun* 1988;20 Suppl 5:75-8.

#### (6) Issue with supplement

Gardos G, Cole JO, Haskell D, Marby D, Paine SS, Moore P. The natural history of tardive dyskinesia. *J Clin Psychopharmacol* 1988;8(4 Suppl):31S-37S.

#### (7) Volume with part

Hanly C. Metaphysics and innatecess: a psychoanalytic perspective. *Int J. Psychoanal* 1988;69(Pt 3):398-99.

#### (8) Issue with part

Edwards L, Meyskens F, Levine N. Effect of oral isotretinoin on dysplastic nevi. *J Am Acad Dermatol* 1989;20(2 Pt 1):257-60.

#### (9) Issue with no volume

Baumeister AA. Origins and control of stereotyped movements. *Monogr Am Assoc Ment Defic* 1978;(3):353-84.

#### (10) Not issue or volume

Danoek K. Skiing in and through the history of medicine. *Nord Medicinhist Arsb* 1982:86-100.

#### (11) Pagination in Roman numerals

Ronne Y. Ansvarsfall. Blodtransfusion till fel patient. *Vardfacket* 1989;13:XXVI-XXVII.





(12) *Type of article indicated as needed*

Spargo PM, Manners JM. DDAVP and open heart surgery [letter]. *Anaesthesia* 1989;44:363-4.

Fuhrman SA, Joiner KA. Binding of the third component of complement C3 by *Toxoplasma gondii* [abstract]. *Clin Res* 1987;35:475A.

(13) *Article containing retraction*

Shishido A. Retraction notice: Effect of platinum compounds on murine lymphocyte mitogenesis [Retraction of Alsabti EA, Ghalib ON, Salem MH. In: *Jpn J Med Sci Biol* 1979;32:53-65]. *Jpn J Med Sci Biol* 1980;33:235-7.

(14) *Article retracted*

Alsabti EA, Ghalib ON, Salem MH. Effect of platinum compounds on murine lymphocyte mitogenesis [Retracted by Shishido A. In: *Jpn J Med Sci Biol* 1980;33:235-7]. *Jpn J Med Sci Biol* 1979;32:53-65.

(15) *Article containing comment*

Piccoli A, Bossatti A. Early steroid therapy in IgA neuropathy: still an open question [comment]. *Nephron* 1989;51:289-91. Comment on: *Nephron* 1988;48:12-7.

(16) *Article commented on*

Kobayashi Y, Fujii K, Hiki Y, Teteno S, Kurokawa A, Kamiyama M. Steroid therapy in IgA nephropathy: a retrospective study in heavy proteinuric cases [see comments]. *Nephron* 1988;48:12-7. Comment in: *Nephron* 1989;51:289-91.

(17) *Article with published erratum*

Schofield A. The CAGE questionnaire and psychological health [published erratum appears in *Br J Addict* 1989;84:701]. *Br J Addict* 1988;83:761-4.

**Books and Other Monographs**

(18) *Personal author(s)*

Colson JH, Armour WJ. Sports injuries and their treatment. 2nd rev. ed. London: S. Paul, 1986.

(19) *Editor(s), compiler as author*

Diener HC, Wilkinson M, editors. Drug-induced headache. New York: Springer-Verlag, 1988.

(20) *Organization as author and publisher*

Virginia Law Foundation. The medical and legal implication of AIDS. Charlottesville: The Foundin, 1987.

(21) *Chapters in a book*

Weinstein L, Swartz MN. Pathologic properties invading microorganisms. In: Sodeman WA Jr. Sodeman WA, editors. *Pathologic physiology: mechanisms of disease*. Philadelphia, 1974: 457-72.

(22) *Conference proceedings*

Vivian VL, editor. Child abuse and neglect: a medical community response. Proceedings of the First AMA National Conference on Child Abuse and Neglect; 1984 Mar 30-31; Chicago. Chicago: American Medical Association, 1985.

(23) *Conference paper*

Harley NH. Comparing radon daughter dosimetric and risk models. In: Gammage RB, Kaye SV, editors. *Indoor air and human health. Proceedings of the Seventh Life Sciences Symposium*, 1984 Oct 29-31; Knoxville (TN). Chelsea (MI): Lewis, 1985:69-78.

(24) *Scientific and technical report*

Akutsu T. Total heart replacement device. Bethesda (MD): National Institutes of Health, National Heart and Lung Institute; 1974 Apr. Report No.:NIH-NHLI-69-2185-4.

(25) *Dissertation*

Youssef NM. School adjustment of children with congenital heart disease [dissertation]. Pittsburgh (PA): Univ. of Pittsburgh, 1988.

(26) *Patent*

Harred JF, Knight AR, McIntyre JS, inventors. Dow Chemical Company, assignee. Epoxidation process. US patent 3,654,317. 1972 Apr 4.

**Other Published Material**

(27) *Newspaper article*

Rensberger B, Specter B. CFCs may be destroyed by natural process. *The Washington Post* 1989 Aug 7;Sect A:2 (col.5).

(28) *Audiovisual*

AIDS epidemic: the physician's role [videorecording]. Cleveland (OH): Academy of Medicine of Cleveland, 1987.

(29) *Computer file*

Renal system [computer program]. MS-DOS version. Edwardsville (KS): Medi-Sim, 1988.

(30) *Legal material*

Toxic Substances Control Act: Hearing on S.776 Before the Subcomm. on the Environment of the



Senate Comm. on Commerce. 94th Cong. 1st Sess. 343 (1975).

(31) *Map*

Scotland [topographic map]. Washington: National Geographic Society (US). 1981.

(32) *Book of the Bible*

Ruth 3:1-18. The Holy Bible. Authorized King James version. New York: Oxford Univ. Press, 1972.

(3) *Dictionary and similar references*

Etasia. Dorland's illustrated medical dictionary. 7th ed. Philadelphia: Saunders, 1988 : 527.

(4) *Classical material*

The Winter's Tale: act 5, scene 1, lines 13-16. The complete works of William Shakespeare. London: Rex, 1973.

**Unpublished Material**

(35) *In press*

Lillywhite HB, Donald JA. Pulmonary blood flow regulation in an aquatic snake. Science. In press.

**Tables**

Type each table double-spaced on a separate sheet. Do not submit tables as photographs. Number tables consecutively in the order of their first citation in the text and supply a brief title for each. Give each column a short or abbreviated heading. Place explanatory matter in footnotes, not in the heading. Explain in footnotes all nonstandard abbreviations that are used in each table. For footnotes use the following symbols, in this sequence: \*, †, §, ||, ¶, \*\*, ††, . . . . .

Identify statistical measures of variations such as standard deviation and standard error of the mean.

Do not use internal horizontal and vertical rules.

Be sure that each table is cited in the text.

If you use data from another published or unpublished source obtain permission and acknowledge fully.

The use of too many tables in relation to the length of the text may produce difficulties in the layout of pages. Examine issues of the journal to which you plan to submit your paper to estimate how many tables can be used per 1000 words of text.

The editor, on accepting a paper, may recommend that additional tables containing important backup data too extensive to publish be deposited with an archival service, such as the National Auxiliary Publication Service in the United States, or make available by the authors. In that event an appropriate statement will be added to the text. Submit such table for consideration with the paper.

**Illustrations**

Submit the required number of complete sets of figures. Figures should be professionally drawn and photographed; freehand or typewritten lettering is unacceptable. Instead of original drawings, reontgenograms and other material send sharp, glossy black-and-white photographic prints, usually 127x173mm(5x7 in.) but no larger than 203x254 mm (8x10 in.). Letters, numbers, and symbols should be clear and even throughout and of sufficient size that when reduced for publication each item will still be legible. Titles and detailed explanations belong in the legends for illustrations, not on the illustrations themselves.

Each figure should have a label pasted on its back indicating the number of the figure, author's name, and top of the figure. Do not write on the back of figures or scratch or mark them by using paper clips. Do not bend figures or mount them on cardboard.

Photomicrographs must have internal scale markers. Symbols, arrows, or letters used in the photomicrographs should contrast with the background.

If photographs of persons are used, either the subjects must not be identifiable or their pictures must be accompanied by written permission to use the photograph.

Figures should be numbered consecutively according to the order in which they have been first cited in the text. If a figure has been published acknowledge the original source and submit written permission from the copyright holder to reproduce the material. Permission is required irrespective of authorship or publisher, except for documents in the public domain.

For illustrations in color, ascertain whether the journal requires color negatives, positive transparencies, or color prints. Accompanying drawings marked to indicate the region to be reproduced may be useful to the



editor. Some journals publish illustrations in color only if the author pays for the extra cost.

### Legnds for Illustrations

Type legends for illustrations double-spaced, starting on a separate page, with Arabic numerals corresponding to the illustrations. When symbols, arrows, numbers, or letters are used to identify parts of the illustrations, identify and explain each one clearly in the legend. Explain the internal scale and identify method of staining in photomicrographs.

### UNITS OF MEASUREMENT

Measurements of length, height, weight, and volume should be reported in metric units (meter, kilogram, or liter) or their decimal multiples.

Temperatures should be given in degrees Celsius. Blood pressures should be given in millimeters of mercury.

All hematologic and clinical-chemistry measurements should be reported in the metric system in terms of the International System of Units (SI). Editors may request that alternative or non-SI units be added by the authors before publication.

### ABBREVIATIONS AND SYMBOLS

Use only standard abbreviations. Avoid abbreviations in the title and abstract. The full term for which an abbreviations stands should precede its first use in the text unless it is a standard unit of measure; t.

### SUBMISSION OF MANUSCRIPTS

Mail the required number of manuscript copies in a heavy paper envelope, enclosing the manuscript copies and figures in cardboard, if necessary, to prevent bending of photographs during mail handling. Place photographs and transparencies in a separate heavy paper envelope.

Manuscripts must be accompanied by a covering letter signed by all coauthors. This must include (a) information on prior or duplicate publication or submission elsewhere of any part of the work as defined earlier in this

documents; (b) a statement of financial or other relationship that might lead to a conflict of interest; (c) a statement that the manuscript has been read and approved by all authors, that the requirements for authorship as previously stated in this document have been met, and furthermore, that each coauthor believes that the manuscript represents honest work and (d) the name, address, and telephone number of the corresponding author, who is responsible for communicating with the other authors about revision and final approval of the proofs. The letter should give any additional information that may be helpful to the editor, such as the type of article in the particular journal the manuscript represents and whether the author (s) will be willing to meet the cost of reproducing color illustrations.

The manuscript must be accompanied by copies of any pemissions to reproduce published material, to use illustrations or report sensitive personal information of identifiable persons, or to name persons for their contributions.

### PARTICIPATING JOURNALS

Journals that have notified the International Committee of Medical Journal Editors of their willingness to consider for publication manuscripts prepared in accordance with earlier versions of the committee's uniform requirements identify themselves as such in their information for authors. A full list is available on request from the New England Journal of Medicine or the British Medical Journal. Citations of this document should be to one of the sources listed below.

International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *N Engl J Med* 1991; 324 : 424-8

International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *BMJ* 1991 Feb 9;302 (6772).

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