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Information for Authors

Submission of manuscripts

Papers are accepted for publication with an understanding that they are submitted solely to the journal of Ad-din Women's Medical College, and subject to peer review and editorial revision. Statement and opinion expressed in the papers, communications, letters herein are those of author and not necessarily of the editor or publisher. Three hard copies along with a soft copy should be sent to the Executive Editor of the journal of Ad-din Women's Medical College, 2 Bara Moghbazar, Dhaka-1217.

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Full paper should not be more than 4000 words long. Type or print on only one side of the paper with wide margins of at least 2 cm and using double space throughout, the preferred font is Times New Roman and size is 12. Numbering of the pages should be consecutive, beginning with the title page, number to be given in the lower right corner of each page. Each component of the manuscript should begin on a new page in the sequence of title page, abstract, text, reference, tables and legends for illustration.

Title page

Should include the title of the paper which should be concised but informative, name of the author(s) with highest academic degree(s) and institutional affiliation, name of the departments to which the work should be attributed, disclaimers, if any; name and address of author responsible for correspondence about the manuscript.

Abstract

Should be in second page and should usually be not more than 150 words in unstructured abstracts or 250 words for structured abstract (original article). The structured abstract should have the following sections :

(i) Objectives (ii) Materials and methods

(iii) Place and period of work (iv) Results

(v) Conclusion.

Below the abstract author should provide 3-10 key words.

Text

Should be presented in the form of –

Introduction

The purpose of the article, the rationale for the study or observation should be summarized, only strict pertinent references to be given and data or conclusion from the work being reported not to be included.

Material and methods

In this section selection of the observational or experimental subject (patient or laboratory animals, including control) should be described clearly. The age, sex and other characteristics of the subjects should be identified. Identify the methods, apparatus, and procedure in detail to allow other workers to reproduce the result. Give references to establish methods, including statistical methods. Precisely identify all drugs and chemicals used, including generic name, dose and route of administration. Author submitting review manuscripts are advised to include a section describing the methods used for locating, selecting, extracting and synthesizing data.

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In result section, when data are summarized, specify the statistical methods used to analyze them. Results to be presented in a logical sequence in the text, table and illustration. Tables should be numbered consecutively in the order of their first citation in the text, and supply a brief title for each.

Place explanatory matter in footnotes, not in the heading. Be sure that each table is cited in the text. Figure should be professionally drawn and photographed.

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Type each table double spaced on a separate sheet. Do not submit tables as photographs. Number of tables consecutively in the order of first citation in the text and supply a brief title for each. Give each column a short or

abbreviated heading. Place explanatory matter in footnote, not in the heading. If you collect data from another published or unpublished source obtain permission and acknowledge fully. The use of too many tables in relation to the length of text may produce difficulties in the layout of pages.

Discussion

Should emphasize the new and important aspect of the study and the conclusions that follow from them. Relate the observations to other relevant studies.

Conclusion

Should be linked with the goals of the study. Recommendation when appropriate, may be included.

Acknowledgements

May go to the text, one or more statements may specify

i) the contributions that need Acknowledging but do not justify authorship, such as general support by a departmental chair
ii) Acknowledgements of technical help
iii) Acknowledgements of financial and material support, which should specify the nature of the support.

References

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Editorial action

Manuscripts are examined by editorial board and are sent to reviewers. All discussions to accept, review or refuse will be made by the editors. Rejected manuscript will not be returned to the authors. Proof correction by the author will be appreciated. No reprint will be provided.

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Editorial

Community Medicine and health care

Man's fight against diseases continues from immemorial. So it is true to say that medicine was born out of necessity and compassion. In ancient times, medicine was dominated by magic, witchcraft, rituals and false belief and was closely intertwined with the custom and culture of the individual community. With the progress of science - through trial and errors, discoveries and inventions and with all the cumulative experience of past, modern medicine has become very complex, highly specialized and expensive. As a result, a huge disparity in the state of health between the developed and developing countries was created. Then all the countries of the world under the banner of WHO were committed to wipe out the disparity and ensure the health for all by the year 2000. The goal of modern medicine is not only the treatment, more importantly prevention of disease, promotion of health and improvement of quality of life. In the present context, community medicine is a comprehensive health care for the people and it focuses on the health need of the community. Current policy of combining the community medicine with primary care aims to change the health status of the community by intervention at individual and community level.

The medical science is progressing with the advancement of educational science and technology. Global changes are happening in medical education in accordance and conformity of these advancements and changes. With the application of these knowledge and skill of medical science, future doctors should satisfy their patients with the changing needs of the community.

The medicine, the art of restoring and preserving health, has progressed through the ages from the primitive charm medicine of prehistoric time to the high technology medicine of the present time which has opened up new avenues for specialized medical care. Specialization has no doubt raised the standard of medical care, but at the same time it has become highly personalized and institutionalized and the cost of medical care services has increased many folds. This phenomenon has made modern medical services beyond the reach of average people. A large number of world population do not receive proper medical care. In order to narrow the health gap, social control of medicine evolved. But mere socialization does not serve the purpose, and then involvement of community became important to assume responsibility for their own health and well-being. With increasing public expectations about their health care services, the quality of medical care itself is under scrutiny all over the world. Therefore, a positive change is needed in the role of doctors. The role of teachers and students in teaching-learning with positive changes in medical education, its strategy and process are also needed to be reviewed and developed. Early exposure of the learners to community medicine not only helps learners to make them aware of the importance of the course of study, but also enables them to become motivated towards self-learning. Placement in the community surrounding of the country gives ample opportunities to learners to be accustomed to the reality that exists in the community, enables students to explore and gain a deeper understanding of population health through experience in community health, with a direct emphasis of its application to clinical medicine. Students are provided learning opportunities to enable them to integrate knowledge of the social determinants of health with their patient assessment and management. In addition, they learn how to critically evaluate the way a health system balances differing priorities when providing health care for a population.

Students will get the opportunity to develop clinical skills and skills in teamwork, ethical practice and reflective practice within the context of community health care. They learn how to investigate and evaluate population

health interventions and their application within clinical practice. This will prevent them from the reality shock, on being posted to the real-life situation after graduation.

With competencies required to cater the health need of our people, it is gratifying to note that all concerned in the promotion of medical education in the country have involved themselves in the planning and formulation of need-based education programme and included subjects like behavioral science communication skill, community medicine/primary care medicine with required emphasis in this document.

Professor Shireen Ayesha Siddiqua

Original Article

Pregnancy complications and health seeking behavior of women in a selected rural area of Bangladesh

Dr. Shayela Farah[1], Dr. Mohoshina Karim[2]

Abstract

Objectives : This study was carried out to explore the various types of complication during pregnancy, during delivery and after delivery and also the care seeking behavior for those complications.

Methods : This descriptive study was carried out over a period of May to August 2012. Data were collected among 112 respondents who had delivered child within last 24 months and were selected purposively.

Results : Majority (82.1%) of the respondents belongs to the age group of 20-30 years and with a mean (±SD) of 25.05 (± 4.33) years. Out of 112 respondents 86.6% husbands were the main decision maker of family. Sixty three percent respondents had received antenatal checkup from different health facilities and highest in Govt. hospital (47.8%). About 30% mother faced complication during their pregnancy period. Commonest complications during pregnancy period were excessive vomiting, severe headache and blurring of vision (66.7%). Out of the complicated mother 70% sought care in time. A total 13.4% mothers faced complications like obstructed labour (33.3%) , Prolonged labour (26.7%), Eclampsia (26.7%), Abnormal position (13.3%) during delivery. After delivery 12.5% of total respondents developed complications like high fever with foul smelling discharge (85.7%). Among the respondents who were not received antenatal care developed more complications during pregnancy and delivery period ($P<0.05$). In this study educational status and monthly income of a family is statistically significant in health seeking behavior for pregnancy complications ($P<0.05$). So care seeking behavior is closely related with pregnancy complication.

Conclusion : In countries, many mothers experience serious health problems during pregnancy, delivery and the postnatal period that require professional care, but they often remain unaware of the serious nature of their illness. Timely and properly seeking treatment could help to reduce maternal mortality and morbidity.

Key words : Complication, Health seeking behavior, Antenatal care.

Introduction

Pregnancy is a normal, healthy state that most women desire at some point in their lives. Yet while pregnancy and childbirth should be an occasion for rejoicing, life-threatening complications may occur, which if inappropriately managed, could lead to maternal death or disability. Pregnancy-related complications are a leading cause of death of the women of reproductive ages (15–49) in developing countries[1]. Every year over half a million women die during pregnancy and following childbirth 174,000 of these in the South-East Asia (SEA) Region of WHO[2]. This alarming disparity represents one of the greatest indicators of the gap between rich and poor in our world today[3].

Ante-natal care (ANC) services indirectly saves the lives of mothers and babies by promoting and establishing good health before childbirth and the early post-natal period.

It often presents the first contact opportunities for a pregnant woman to connect with health services, thus offering an entry point for integrated care, promoting healthy home practices, influencing care-seeking behavior and linking women with pregnancy complications to a referral system; thus impacting positively on maternal and fetal health[4]. Currently, 71% of women worldwide utilizes ANC services; and in industrialized countries 95%, South Asia 54% and Sub-Saharan Africa 64%. Proper utilization of maternal health services and child healthcare improves survival

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Original Articles

and quality of life for mothers and children, and reduces maternal mortality[5-11].

Complications of pregnancy and childbirth cause more deaths and disability than any other reproductive health problems. In a recent national survey on maternal health in Bangladesh, the large number of women reported complications during pregnancy and childbirth, but few reported that they sought care from medically trained providers in health facilities, even if they perceived the complication to be life-threatening[12]. In Bangladesh, four out of five women experience at least one illness during the index pregnancy and puerperium[13]. At least one morbidity was suffered by 57% of women during pregnancy,[14] these morbidities included bleeding, fits/convulsion, pre-eclampsia, fever, excessive vomiting, urinary problem, varicose veins, hepatitis, rheumatic heart diseases, malaria and tuberculosis.

Most of the pregnancy-related diseases and 90% of maternal deaths could be prevented by proper medical care at different stages of child bearing age[15,16]. According to the Bangladesh Maternal Health Services and Maternal Mortality Survey (National Institute of Population Research and Training 2001), only 48% of mothers receive antenatal care during pregnancy. Despite the government's commitment to provide health facilities on people's doorsteps through innovative approaches in Bangladesh, the utilization of health services during the antenatal, pregnancy and postnatal periods is still far below any acceptable standard[17,18]. DGHS health bulletin, 2009 published about ANC that at least one ante natal care is now 51.7%[19]. The general pattern of healthcare-seeking for female diseases reveals that more than two-thirds of rural women in Bangladesh do not receive any antenatal care during pregnancy. Study was reported that the respondents perceived fits/convulsions and hypertension as serious ante partum morbidities. Three-quarters of those suffering from these conditions had perceived them as serious and sought care[14].

The number of deliveries in health facilities constituted of 15 % in Bangladesh[20]. So, for Bangladesh one of the major challenges for the public health sector is to identify the factors associated with under-utilization of the available health services, and to find ways to reach those groups who need maternal health services most. Many empirical studies of preventive and curative services have found that the use of health services is related to the availability, quality and cost of the services, as well as social structure, health beliefs and the personal characteristics of the users[21-24].

Methodology :

This was a population based cross sectional descriptive study conducted from May to August 2012 in Dasmina upazilla at Patuakhali to determine the complications of pregnancy and health seeking behavior of pregnant rural women in Bangladesh.

Total 112 women who delivered within last 24 months were included in the study population. Convenient sampling technique was adopted to select the sample. Data were collected by face to face interview using a semi-structured, pre-tested questionnaire which had three parts consisting of socio-demographic characteristics, pregnancy related and care seeking behavior related variables.

Results and observations:

Table 1: Socio demographic characteristics of the respondents

Socioeconomic characteristics of the respondents		Frequency	Percent (%)
Age	<20 years	05	4.5
	20-30 years	92	82.1
	>30 years	15	13.4
Mean=25.05yrs, SD (+_) 4.33			
Education	Illiterate	24	21.4
	Primary	82	73.2
	Secondary	06	5.7
Occupation (Husband)			
Day laborer		43	38.4
Farmer		17	15.2
Service holder		21	18.8
Business		20	17.8
Others	11	9.8	
Monthly family income			
Taka <5000		52	46.4
Taka 5000-10000		52	46.4
Taka >10000		08	7.2
Mean=5500,SD=(±)3063.15 TK			
Decision makers regarding health seeking affairs			
Husband		97	86.6
Father/Mother in law		12	10.7
Others	03	2.7	

Table 2: Distribution of respondents regarding their antenatal care

71(63.4%) respondent received ante natal care from different health facilities. Lack of money and prohibition from family members were the prevalent reason those who did went for seeking ANC.

	Frequency	Percentage
ANC(n=112)		
Done	71	63.4
Not done	41	36.6
Number of ANC(n=71)		
< 4 times	17	23.9
4 times	31	43.7
> 4 times	23	32.4
Place of ANC(n=71)		
FWC	19	26.8
Govt. hospital	34	47.8
Private hospital	12	16.9
Satellite clinic	06	8.5
Reason for not seeking ANC		
No money	26	63.4
Prohibition from family member	15	36.6

Table 3: Distribution of the respondents by type of complications

During Pregnancy(n= 33)			During Delivery(n=15)			After Delivery(n=14)		
Excessive vomiting	17	51.5%	Obstructed labour	05	3 3.3%	Puerperial sepsis	12	5.7%
Swelling of leg/face	0	12.1%	Prolonged labour	04	26.7%	PPH	02	14.28%
Anaemia	05	15.1%	Eclampsia	04	26.7%			
Burning micturation	04	12.1%	Abnormal position	02	13.3%			
Convulsion	03	09%						

Table 4: Distribution of treatment seeking behaviors among the respondents Out of 33 respondent who faced complication during their pregnancy 23 (70%) sought treatment and 10 (30%) didn't take any treatment. Among 15 respondents who had faced complications during delivery period all sought treatment.

	During pregnancy		During delivery		After delivery	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Sought treatment	n=33	%	n=15	%	n=14	%
Yes	23	69.7	15	100.0	14	100.0
No	10	30.3	00	0.0	00	0.0
Place of treatment (n=23)						
Govt. Hospital	12	52.2	10	66.7	03	21.4
Private Clinic	11	47.8	03	20.0	05	35.7
At home	-	-	02	13.3	02	14.3
Others(Satellite clinic, Pharmacy)	-	-	-	-	04	28.6
Care provider (n=23)						
Doctor	19	82.6	12	80.0	08	57.1
Nurse/Paramedics	04	17.4	01	6.7	04	28.6
TBA/FWV	-	-	02	13.3	02	14.3

Table 5: Relationship of complications of pregnancy with ANC

Complication during pregnancy was significantly more among respondents, who didn't attend ANC (P<.001). Complication during delivery was also more among those didn't attend ANC (P<.05). However, Post delivery complication didn't show any relation with ANC.

	ANTENATAL CARE		
	Yes (n=71)	No (n=41)	Chi sq and P value
Complications during pregnancy period			
Yes	13 (18.3 %)	20 (48.8 %)	$X^2 = 11.6$
No	58 (81.7 %)	21 (51.2 %)	P = 0.001*
Complications during delivery period			
Yes	06 (8.5 %)	09 (22.0 %)	$X^2 = 4.01$
No	65 (91.5 %)	32 (78.0 %)	P = 0.043*
Complications after delivery			
Yes	07 (9.9 %)	07 (17.1 %)	$X^2 = 1.2$
No	64 (90.1 %)	34 (82.9 %)	P = 0.27

Table 6: Relationship of health seeking behavior for pregnancy complications with educational status.

Association between educational status and treatment seeking behavior (P<0.05) and place of treatment were significant (P<0.01).

	Educational Status				Chi sq P value
	Illiterate	Primary	Secondary	HSC& above	
Sought treatment for pregnancy complication					
Yes	02 (25.0%)	05 (71.4%)	09 (81.8%)	07 (100%)	$X^2 = 11.4$ P = 0.01
No	06 (75.0%)	02 (28.6%)	02 (18.2%)	00 (0.0%)	
Place of treatment for pregnancy complication					
Govt. hospital	02 (100%)	04 (80.0%)	06 (66.7%)	00 (0.0%)	$X^2 = 11.8$ P = 0.008
Private clinic	00 (0.0%)	01 (2.0%)	03 (33.3%)	07 (100%)	

Table: 7 Relationship of Health seeking behaviour of complications during pregnancy with economic status.

It was seen that treatment seeking behavior during pregnancy has got no association at all with monthly family income (P>.05). But the association between place of treatment and monthly income was found significant (P<.05).

	Monthly family income			
	<5000 Tk	5000–10000 Tk	>10000 Tk	Chi sq & P Value
Seeking treatment				
Yes	06 (18.2 %)	14 (42.4 %)	03 (9.1 %)	$X^2 = 3.55$
No	06 (18.2 %)	03 (9.1 %)	01 (3.0 %)	P = 0.170
Place of treatment				
Govt. hospital	06 (26.1 %)	06 (26.1 %)	00 (0.0 %)	$X^2 = 9.26$
Private clinic	00 (0.0 %)	08 (34.8 %)	03 (13.0 %)	P = 0.010

Discussion :

Maternal health services have a potentially critical role to play in the improvement of reproductive health. In developing countries, where the prevalence of pregnancy-related morbidities is very high, maternal health services provide unique opportunities to detect and treat these diseases[9]. In the present study, an attempt has been made to describe the different complications of pregnancy and care seeking behavior in a rural setting. The study findings of age group, the educational status, occupation, monthly family income were almost similar with the findings conducted by Bangladesh demographic health survey, 1999-2000, the current occupational status of Bangladeshi population[3,25].

In the study most of the respondents had received antenatal checkup at least 4 times from health facilities like FWC, govt. hospital, satellite clinic, private hospital. The respondents, did not seek ANC were due to financial problem or prohibition from husband or other family member. DGHS health bulletin, 2009 published about ANC that at least one antenatal care visit is now 51.7%.[19] In Bangladesh, another study[26] reveals 48% women received ANC during their pregnancy period and BDHS survey found 40.3% women sought any type of antenatal care during their pregnancy[25]. In this study ANC receiving rate was relatively higher due to availability of health facilities in the study place because there is a community clinic, satellite clinic, and family welfare center and also upazilla health complex nearby.

During pregnancy, majority respondents suffered from excessive vomiting, anaemia, burning micturation and swelling of leg or face and convulsion. In the study, two thirds of the respondents who faced complication during their pregnancy sought treatment and treated in Govt. hospital or private clinic. In most of the cases treatment was given by the doctor to 19 (82.6%) respondents and was given by nurse or paramedic to 04 (17.4%) respondents. In BDHS survey[25] they found four complications during the pregnancy period. The prevalence of prolonged labour was the highest, followed by excessive bleeding, high fever/discharge and convulsions. The pattern of seeking treatment for prolonged labour, excessive bleeding and high fever/discharge were similar; roughly one-third of the women went to a health professional, between one-fifth and one-quarter to a TBA or other provider, while almost half of the subjects did not seek any help. The pattern was different for convulsions, with almost half going to a health professional, and over one-quarter either seeking out a TBA or other providers, or seeking no help. Several studies also suggested that prenatal care may protect mothers from complications due to pregnancy. In a study conducted in the Philippines, it was found that mothers with prenatal care are less likely to experience hemorrhage. Prenatal care also protects mothers from pre-eclampsia which is the most common cause of maternal mortality. Prenatal care, timely diagnosis and proper management prevent the complications of pre-eclampsia[27].

Regarding complications during last delivery among the mothers 05(33.3%) had obstructed labour, 04 (26.7%) had prolonged labour, eclampsia, and 02 (13.3%) had abnormal position of foetus. Among 15 respondents who had faced complications during their delivery period all sought treatment. Among them 10 (66.7%) went to Govt. hospital and 03 (20%) went to private clinic and 02 (13.3%) brought provider at home. Treatment was provided by the doctor to 12 (80%) respondents and by nurse/paramedic to 02 (13.3%) respondents and by TBA/FWV to 1(6.7%) respondents. During seeking treatment 53.3% did not face any problem. In another study in Bangladesh[28] the most common pattern of care seeking was bringing medicine and/or treatment to the home (67.7%).Village doctors (7.3%) and traditional birth attendants (5.3%) were most common, with few families bringing a medically trained provider to the home (3.2%).Thirty per cent of women sought care outside the home in a health facility or in a provider's office/home. Fourteen mothers experienced post delivery complications, among them 12 (85.7%) suffered from high fever with foul smelling discharge, 02(14.28%) suffered from post partum hemorrhage. After delivery, 03(21.4%) respondents went to Govt. hospital, 05(35.7%) went to private clinic, 02 (14.3%) brought provider at home and rest 04 (28.6%) got treatment from Satellite clinic or pharmacy. Treatment provided by the doctor to 08 (57.1%) respondent, by nurse/paramedic to 04 (28.6%) respondent, by TBA/FWV to 02 (14.3%) respondent.

Among the respondents who were not received antenatal care developed more complications during pregnancy period and delivery period which is statistically significant ($P<0.05$). Study in Uttar Pradesh was also found similar findings[29].

It has been well established that age plays an important role in the utilization of medical services[19]. Educational status and monthly income of a family has great impact on care seeking behavior. In this study education and monthly income of a family is statistically significant in health seeking behavior for pregnancy complications ($P<0.05$). These findings were similar in the study of Bangladesh, Haiti and Nigeria[19,30].

Conclusion :

Involvement of the community by providing assistance to the mothers in time of need of emergency care and seeking antenatal, natal and post natal care has been found to be useful in reducing maternal mortality and morbidity.

All the respondents who developed complications during and after delivery sought health care. The present study may be a useful guideline for future large scale community based study on pregnancy complication and health seeking behavior to achieve Millennium Development Goal 5.

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Original article

Liver function status in pre-eclamptic patients

Dr.Md. Ashraf-uz-zaman[1], Dr.Gulnahar Begum[2], Dr.Nasreen Sultana Lovely[3], Prof. Bilquis Ara Begum[4]

Abstract

Objectives : The aim of the study is to evaluate the extent of hepatic impairment in pre-eclampsia and maternal & perinatal outcome in pre-eclamptic cases.

Methods : This prospective cross sectional observational study was carried out in the Department of Obstetrics and Gynaecology, MCHTI (Maternal & Child Health Training Institute), Dhaka, from January 2010 to December 2012. Total 100 cases were included in this study.

Results : This study found the mean age of the patients was 27.61±5.20 years ranging from 18 to 40 years. 46% impaired liver function in pre-eclamptic mother. Serum Alkaline aminotransferase 46%, Serum Aspartate amino-transferase 44%, Lactate dehydrogenase 46%, Serum bilirubin 6% were increased and fibrinogen, platelet count were decreased. 16% were intrauterine death, 34% were intrauterine growth restriction, 13% were asphyxia, 70% prematurity and 32% were neonatal death. Pre-eclamptic group could contribute to prematurity.

Conclusion : Serum ALT, Serum AST, LDH, Serum bilirubin significantly raised in pre-eclampsia and fibrinogen, platelet count significantly decreased in pre-eclamptic cases. Amongst those with pre-eclampsia abnormal liver function tests were associated with lower platelet count and more maternal complications.

Key words : Pre-eclampsia, liver function test.

Introduction :

Pre-eclampsia is a common disorder of pregnancy and a major cause of maternal and perinatal mortality and morbidity[1]. In Bangladesh the maternal mortality ratio is unexpectedly high i.e. 3/l000 live birth[2].

Pre-eclampsia is a multisystem disorder of unknown etiology characterized by hypertension associated with proteinuria, greater than 0.3 g/L in a 24 hour urine collection after 20th weeks of gestation[3]. The exact cause of preeclampsia is not known. Possible causes include: autoimmue disorders, blood vessel problems, diet and genes[4]. Pregnancy- associated risk factors in pre-eclampsia are chromosomal abnormalities, hydatiform mole, multiple pregnancy, oocyte donation or donor insemination and urinary tract infection[5].

Maternal- specific risk factors in pre-eclampsia are extremes of age, black race, family history of pre-eclampsia, nulliparity, pre-eclampsia in a previous pregnancy, diabetes, obesity, chronic hypertension and renal disease[5]. Being a multi-organ disorder, pre-eclampsia affects the brain, kidneys, lungs, liver as well as the uterus of the mother, thereby putting the baby also at risk with decrease liver function and decrease in the blood clotting ability of the body[6]. A confirmed medical diagnosis is made by means of laboratory evidence, such as some of them are increased liver enzymes, low platelet count, increase in plasma creatinine, uric acid and decreased circulating fibrinongen[7]. Alteration of liver function in pre-eclamptic patients are about 10%-15%[7]. It is common in severe pre-eclampsia where S.ALT, S.AST and LDH markedly increased. The elevated liver enzymes are thought to result from damage to liver cells as the consequence of similar events, liver transaminase (AST) levels that help to define the condition have to be greater than 70 U/L, but are often many times higher than this (sometimes in the 1000's U/mL range)[8]. It should also be noted that the liver is an extremely vascular organ, and if significant damage occurs, intrahepatic hemorrhage, subcapsular hematoma formation, or even hepatic rupture may occur and can be life-threatening events even if recognized early[8]. HELLP syndrome is a severe complication of pre¬eclampsia which is characterized by haemolytic anaemia, elevated liver enzymes, low platelet count. The majority of pre-eclamptic patients with hepatic

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involvement complain of epigastric or right upper quadrant pain several days before the onset of more serious symptom[9].

Maternal mortality is very high in Bangladesh. Every hour 03 women die due to causes related with pregnancy and child birth. Pre-eclampsia is the third leading pregnancy-related cause of death[5]. The pre-natal mortality rate is also much higher. Lack of antenatal care is one of the predisposing factor. Adequate antenatal care, early diagnosis of pregnancy complication and proper management will reduce the maternal and pre-natal mortality and morbidity from this condition. The global (international) incidence of pre-eclampsia has been estimated at 5-14%[5].

This study has been designed to detect hepatic involvement in pre-eclamptic patients & to assess maternal & pre-natal outcome of these cases. Aim of this study is to detect extent of hepatic involvement in pre-eclampsia.

Materials and Methods

This prospective cross sectional observational hospital based study was carried out in the Department of Obstetrics and Gynaecology, MCHTI (Maternal & Child Health Training Institute), Dhaka, from January 2010 to December 2012. Total 100 patients were included in this study. Inclusion criteria were: patients with pre-eclampsia characterized by BP 140/90 mmHg or more and significant proteinuria after 20 weeks of pregnancy. Exclusion criteria are: Pre-eclampsia patients having history of hepatitis, cirrhosis of liver, gallstones & medical disorders that altered liver function.

Results

Table I : Age distribution of the patients

Age in years	Frequency	Percent (%)	Mean±SD
< 20	2	2	27.61±5.20
20-25	29	29	
26-30	48	48	
31-35	11	11	
36-40	10	10	
Total	10	100.0	

Table II : Liver function in pre-eclamptic mother

Liver function test	Frequency	Percent (%)
Liver function		
Normal	54	54
Impaired	46	46
Serum Alkaline aminotransferase		
Normal	54	54
High	46	46
Serum Aspartate minotransferase		
Normal	56	56
High	44	44
Lactate dehydrogenase		
Normal	54	54
High	46	46
Serum Bilirubin		
Normal	94	94
High	6	6
Platelet count		
Normal	88	88
Low	12	12
Fibrinogen		
Normal	90	90
Low	10	10

Table III: Prenatal complication

Prenatal complication	Frequency	Percent (%)
Intrauterine death	16	16
Intrauterine growth restriction	34	34
Asphyxia	13	13
Prematurity	70	70
Neonatal death	32	32

Discussion

Pre-eclampsia is a disorder of unknown aetiology. It is a major cause of maternal and perinatal mortality and morbidity worldwide, particularly in developing countries[10].

This study found the mean age of the patients was 27.61±5.20 years ranging from 18 to 40 years. Maximum (48%) patients were in the age group 26-30 years followed by (29%) 20-25 years (11%) 31-35 years 31-35 years, (10%) 36-10 years and lowest in the age group less than 20 years (2%). Sami et al. found 46% in <20 years age group, 6% in 20-30 years, 12% in 30-40 years and 36% in > 40 years[11]. In Another study found that 5.2% in < 20 years, 1.5% in 21-30 years and 1.6% in > 30 years age group.13 Okafor and Efetie found mean age was 28.4 years (range 17-40 years)[12].

Regarding liver function this study found 45.33% impaired liver function in pre-eclamptic mother. S.ALT 45.33%, S.AST 44%, S. bilirubin 5.33% were increased and fibrinogen & platelet count were decreased. Girling et al[13]. reported 37% abnormal liver function in pre-eclamptic case which was near to this study. They identified that low platelet count in pre-eclamptic cases.

The identifying complications found in this study were 16% intrauterine death, 34.7% intrauterine growth restriction, 13.3% asphyxia, 70.7% prematurity and 32% neonatal death. Pre-eclamptic group could contribute to prematurity. Prematurity is most of the fatal outcome. Pre-eclampsia is responsible for the occurrence of more than 40% of premature deliveries around the globe[14].

Conclusion

This study showed S.ALT, S.AST, LDH, S. bilirubin significantly raised in pre-eclampsia and fibrinogen, platelet count significantly decreased in pre-eclamptic cases. Amongst those with pre-eclampsia abnormal liver function tests were associated with lower platelet count and more maternal complications. So, early diagnosis may be helpful to minimize the subsequent maternal complications.

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Original Article

Demographic consequences and reasons for selecting sterilization among tubectomy clients in Bangladesh.

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Abstract

Objectives : To identify the demographic consequences, contraceptive practices and reasons for selecting sterilization among tubectomy clients.

Materials & Methods : This descriptive cross sectional study was conducted among 80 clients using pre-tested questionnaire.

Place & Period of study : The study was carried out during the period January 15 to July 31, 2009 in Model Family Planning clinic, DMCH, Mohammadpur Fertility Services & Training Center, Dhaka, Bangladesh; Association for Voluntary Services Maternity, Mirpur, Dhaka and Upazilla Health Complex, Savar, Dhaka

Results : The objective of the study was to find out the socio-demographic and fertility profile, history of previous practice of contraceptive methods and reasons for selecting tubectomy. Mean age of the respondents was 31.15 years. About 70% of the respondents were illiterate and most of them (94.4%) were housewives. Mean monthly family income of the respondents was Tk. 3603/. Mean age of the marriage of the respondents was 16.51 years and mean time interval between marriage & first pregnancy was 11.45 months. The mean number of conception was 4.06. About one third of the respondents (31.0%) never used any contraceptive method. Among the contraceptive acceptors (69%), oral pill was the most popular method but discontinuation rate was very high. About 74.7% sought for tubectomy as they wanted no more children because of family completion. Husband and wife jointly took the decision for tubectomy in 63.4% cases.

Conclusion : Low socio-economic group accepted tubectomy more. They showed minimum response in contraceptive acceptance prior to sterilization. These women marry very early and they were in need of a further 15-20 years or more of continuous protection against pregnancy. So they had no other alternative choice than the permanent method to get rid of the tough punch of poverty and burden of large family.

Key Words : Demographic consequence, Sterilization, tubectomy.

Introduction

Bangladesh National Family Planning Program offers a wide variety of contraceptive choice to couples of Bangladesh by making available a good number of modern methods that are acceptable, safe, and effective like oral pill, IUD, injectables, norplant, condom, sterilization, etc[1].

Acceptance of contraceptive is guided by numerous determinants like reproductive preferences, availability, beliefs, social bindings, etc. Increasing the contraceptive acceptance is the only way to limit the population size in Bangladesh. Overall, 54% of currently married women are using contraceptive methods.

Most widely used method is the oral pill-23%, followed by injectables-7.2%, female sterilization-6.8%, periodic abstinence-5%, condom-4% and withdrawal-4% in our country[1].

A 4-year prolonged study was conducted by ICDDR,B in Matlab on contraceptive use. It was found that failure in different methods was very high. It was 22% for condoms, 13.4% for foam, jelly & other traditional methods, 12.9% for oral pills, 2% for IUDs and 0.5% for injectables[2].

About 910000 women conceived in a day, 50% of these conceptions are unplanned and 25% are definitely unwanted[3]. Tubal sterilization is a permanent method of birth control in female. About 138 million women are protected from unwanted pregnancies by voluntary female sterilization. It is very effective in countries where women marry very early such as Bangladesh and India. It is the most widely used contraceptive method in at least 20 countries. Modern temporary methods are used by more than 80% users. As many women have completed their family, they have achieved their desired family size, which are currently 2.5 at an early age and thus in need of a further 15 years or more of continuous protection

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against pregnancy[4].

Voluntary sterilization deserves more publicity for increasing its acceptance. In most places, people learn about female sterilization services from other people, friends, neighbors, relatives, or family planning workers. Mass media has played a minor role. To assure that couples learn about sterilization in advance, information should come from a variety of sources. It should be included in providers formal and informal discussions of contraceptive methods with clients, individual counseling sessions with all new and continuing family planning clients, mass media promotion and discussion of contraceptive methods and training sessions for family planning clinic staff, counselors and community based distributors[5-6].

*According to Unified Management and Information (UMIS) unit, Family Planning Directorate, Ministry of Health and Family Welfare (MOHFW), Government of Bangladesh (GOB), 16.8% and 25.6% of the target has been achieved in permanent sterilization in the year 1997-98 and 1998-99 respectively[5]. A major priority for the Bangladesh Family Planning Program will be to strengthen permanent method acceptance over coming years.

With the expansion of the family planning program and the wide gap between the set target and actual achievement, there has been considerable interest in determining what factors influence couples decision to use contraception. The current use rate was found to be directly associated with the respondents age, number of living children and duration of marriage. The level of education of both the husband and the wife seems to have a positive effect on the current use of contraception. Urban residents surpass rural residents in use of contraception. The experience of child loss has a negative role on contraceptive use. Husband wife communication also has a positive effect, showing the highest use rates among those women who took a decision about family jointly with their husbands. With an increase in the frequency of visits by family planning workers, contraceptive use increases rather rapidly[7-8].

For female sterilization, health problems were the most cited misconceptions. Dizziness, weakness, weight-gain, weight-loss were the most common problems mentioned. Other misconceptions were difficulty in doing hard work, difficulty in carrying heavy things, death of the mother or children and inability to have children[9-10]. If younger people groups are brought under the umbrella of family planning then the population growth will not only be decreased, maternal and child mortality and morbidity can be reduced and the overall development of the country would be enhanced[11-12].

Contraception failure deserves serious attention of program managers and policy makers to make Bangladesh National Family Planning Program successful. Therefore, this study reveals the importance of permanent methods among couples having two children and the age of last child will be two years.

METHODOLOGY

This descriptive cross sectional study was conducted for a period of six months from January 15, 2008 to July, 2008 at

1) Model family planning clinic, DMCH
2) Mohammadpur Fertility Services and Training Center, Dhaka.
3) Bangladesh Association for Voluntary Services Maternity, Mirpur, Dhaka.
4) Upazilla Health Complex, Savar, Dhaka.

Eighty tubectomy clients were interviewed by using purposive non-probability sampling technique. Data were collected with the help of a structured pre-tested questionnaire and analysis done by using SPSS.

RESULTS

Table No. 1 : Distribution of the respondents by age group, level of education, occupation & monthly income

Age group (years)	Frequency	Percent
25- 29	26	32.4
30- 34	39	46.5
35	15	21.1
Total	80	100.0
Educational status		
Illiterate	25	31.0
Only can sign	30	39.4
Class one-five	16	16.9
Class six-ten	8	11.3
SSC	1	1.4
Total	80	100.0
Type of occupation		
Housewife	70	94.4
Day labor	3	1.4
Service	3	1.4
Others	4	2.8
Total	80	100.0

Mean age = 31.15 ± 3.34 years

The table shows that tubectomy is the method of choice of the women of 25-34 (46.5%) years age group. Most of the clients were illiterate and housewives. Only 5.6% were working group.

Table No. 2 : Distribution of the respondent's husbands by educational status & occupation

Level of education (in years)	Frequency	Percent
Illiterate	12	15.5
Only can sign	22	35.2
Class one-five	10	12.7
Class six-ten	19	26.8
SSC Passed	5	7.0
HSC & above	2	2.8
Total	80	100.0
Type of occupation		
Business	24	31.0
Farmer	18	23.9
Service	8	8.5
Day labor	6	7.0
Rickshaw puller	5	5.6
Driver	4	4.2
Others	15	19.7
Total	80	100.0

FIG.- 1 : Distribution of the respondents by total monthly family income

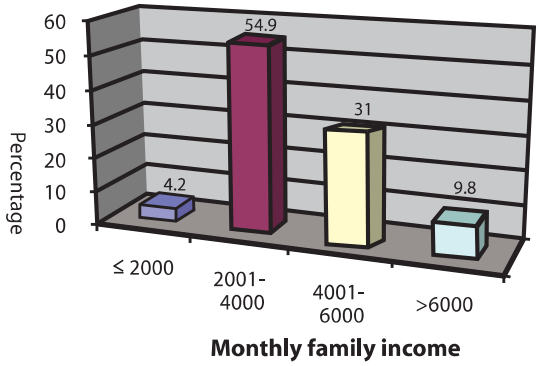

Table No. 3 : Distribution of the respondents by age at marriage & duration of marriage

Age at marriage (years)	Frequency	Percent
≤14	14	15.5
15 – 18	48	67.6
19 – 22	16	14.1
≥23	2	2.8
Total	80	100.0
Mean age at marriage = 16.51 ± 2.61 years		

Duration of marriage (years)	Frequency	Percent
≤11	15	18.3
12 to 15	35	43.7
16 to 19	20	28.2
≥20	10	9.9
Total	80	100.0

About 68% respondents married by the age of 15 - 18 years. 43.7% of the respondents were married for 12 - 15 years. 28.2% were married for 16- 19 years.

Table No. 4 : Distribution of the respondents according to parity

Parity	Frequency	Percent
2	6	5.6
3	29	38.0
4	23	28.2
5	13	15.5
≥6	9	12.7
Total	80	100
Mean number of conception = 4.06 ± 1.47		

Table No. 5 : Distribution of the respondents by
1) Interval between marriage & 1st pregnancy
2) Interval between marriage & 1st child birth

Interval between marriage and 1st pregnancy (in months)	Frequency	Percent
≤05	30	39.4
06 – 12	24	31.0
13 – 19	16	15.5
≥20	10	14.1
Total	80	100.0
Interval between marriage and 1st child birth (in months)		
≤12	20	23.9
13 – 24	40	54.9
≥25	20	21.1
Total	80	100.0

Table - 5 shows 70% of the respondents were pregnant within 12 months after their marriage. Mean time interval of 1st child birth = 21.99 months. Table also shows that more than half of the respondents (54.9%) delivered their 1st child within 13- 24 months of their marriage.

Table No. 6 : Distribution of the respondents according to total number of living male and female children

Number of total living children		Frequency of respondents having children		Percentage of Respondents having children	
Male	Female	Male	Female	Male	Female
0	0	1	10	1.4	14.1
1	1	33	23	46.5	32.4
2	2	26	22	36.6	31.0
3	3	11	14	15.5	19.7
4	4	0	2	0	2.8
Total		80	80	100.0	100.0

46.5% of the tubectomy clients had at least 1 male child and only 1.4% of the respondents had no male child. 14.1% had no female child.

TABLE-7

Distribution of the respondents by age of last child

Age of last child (in months)	Frequency	Percent
≤20	27	35.2
21 – 40	22	28.2
41 – 60	6	5.6
≥61	25	31.0
Total	80	100.0

Table- 7 shows that 35.2% had last child aged 20 months or less. 31% of the respondents had last child aged more than 61 months or above (5 years).

TABLE-8

Distribution of the respondents by outcome of previous pregnancies

Outcome of previous pregnancies	Frequency	Percent
Live birth	238	82.6
MR	25	8.7
Spontaneous abortion	15	5.2
Still birth	10	3.5
Induced abortion	0	0.0
Total	288	100.0

***Multiple responses**

Among 288 conceptions, in most of the cases (82.6%), outcome was live birth. MR was done in 8.7% of the cases and 8.7% had either spontaneous abortion or stillbirth.

Table-9

Distribution of respondents according to the use of family planning methods before tubectomy

Use of Family planning methods	Frequency	Percent
Never used	22	31.0
Oral pill	32	43.7
Injectables	16	19.7
Condom	4	2.8
Norplant	2	1.4
IUD	2	1.4
Total	80	100.0

Table-9 shows that 69.0% of the population used contraceptives and 31% never used any contraceptive method before tubectomy.

TABLE-10

Distribution of the respondents according to source of information about tubectomy

Source of information about tubectomy	Frequency	Percent
Family Planning Worker	58	76.1
Relative	10	12.7
Counselor	6	5.6
Neighbor	5	4.2
Physician	1	1.4
Total	80	100.0

Table-11

Distribution of the respondents according to the reasons for accepting tubectomy & decision making process

Reasons for accepting tubectomy	Frequency	Percent
Family complete	56	74.7
Husband wants	9	9.9
Poverty	9	9.9
Too many children	1	1.4
Others	5	4.2
Total	80	100.0
Decision of tubectomy		
Both husband & wife	47	63.4
Wife only	16	19.7
Husband only	11	12.7
Physician	6	4.2
Total	80	100.0

Table shows that, most of the respondents (74.7%) chose the method because their family was complete. 9.9% came for tubectomy for husband's choice and another 9.9% said poverty was the reason. 1.4% came for too many children and 4.2% for other problems (health problems- cystocoele, blood pressure). A significant percent of couple (63.4%) took decision for tubectomy. 19.7% took decision by herself. 12.7% came by their husband' decision and remaining 4.2% took decision by their doctor's advice.

Table-12
Relationship between total monthly income of the tubectomy clients and parity

Total monthly income	Parity of tubectomy Clients		Total
	< 3	>4	
≤4000	26(36.6%)	22(31.0%)	48(67.6%)
≥4001	05 (7.0%)	18(25.4%)	23(32.4%)
Total	31(43.7%)	40(56.3%)	71(100%)

X^2 = 6.647 df = 1 p value = 0.010

Relationship between total monthly income and total number of conception of the tubectomy clients were analyzed statistically, the test result is significant i.e. total monthly income has influence on parity.

DISCUSSION

In Bangladesh, sterilization is voluntary and a client is not accepted for sterilization unless s/he has a minimum of two living children and the age of the last child is more than 1 year[15-16] (now two years).

the mean age was 16.51 years. Ahad MSA[17] showed in his study that the mean age at marriage was 13.74 and 13.41 years in 1979 and 1985 respectively. The highest percentage of acceptors had passed 12-15 years of married life. More than half of the respondents conceived for 3- 4 times in their life. Mean parity was 4.06, In a study, Swenson et al[18] showed that mean parity was seven. The decrease in this study is because family planning works are intensive and innovative.

Most of the respondents had 3- 4 living children and only few had two living children. Nearly half of the respondents (46.5%) were found to have at least one male child. About 25% of the clients had their youngest child less than two years old. 33.8% of the respondents had last child aged 2-5 years. In a study McIntosh[19], it was found that 83.2% performed the operation within three years of their last delivery. Islam AIMM et al 20 showed in their study that most of the clients had last child upto 2- 3 years of age.

About previous contraceptive practice before tubectomy, majority (69%) used/ took any one method of contraceptive in their life. But the mean duration was not more than 4 years. So it was found that discontinuation rate of contraceptive use was more.

Above findings show that the contraceptive practice prior to sterilization was not remarkable. But this group directly approached for permanent method which may be due to poverty and poor knowledge about the concept of spacing between births. Khan MA et al[21] in his study explored that an intensive and innovative family planning program in rural Bangladesh can achieve success not only in terms of contraceptive prevalence, but can also attract users interested in child spacing and others wanting to limit their family size by offering the widest range of contraceptive methods.

In this study, family planning workers were the main source of information about tubectomy. This may be due to success of field workers motivational activities & better counseling of the service providers. This finding is consistent with the previous study[22] conducted in Bangladesh.

Male partner also has a great role for acceptance of contraceptive methods by his partner. The result of the study revealed that a large proportion of respondents (63.4%) communicated with their husbands regarding tubectomy. From this, it can be said that clients' husbands are being more aware about acceptance of family planning. In another study, Swenson et al[22] showed that 80% of tubectomy clients cited themselves, their husbands or close relatives as the most influential in their decision to have tubectomy. It also suggests that client satisfaction with tubectomy in Bangladesh can be attributed to the desire to terminate childbearing.

Main reasons for accepting sterilization in the present study were completion family, few of them did it for wants of their husband and poverty, 1.4% did it for too many children. These findings are consistent with the study done by Miah JA[23] where the major reasons for accepting sterilization were rearing up of children better, to have a happy family and to ensure better health of the couple. All these are due the fact that their families were complete. Women's contraceptive behavior is an important issue because the effective use of contraceptive can protect women from hazards of pregnancy. In our country relatively older women are more likely to use contraceptive than the younger women. They are getting pregnant while using any one of the method. Their use is often described as irregular and incorrect. Thus their unwanted pregnancy is a result of use failure rather than method failure. Most of them do not take pill regularly

because they are not convinced of importance of regular use and misinformation from people around them.

Conclusion

Through counseling, describing the simplicity is essential to increase the number of clients for tubectomy. Client satisfaction may contribute greatly to the acceptance of tubectomy by others. Well-informed tubectomized persons invariably serve as the most influential source of information in the community.

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Original article

Clinical profile of rheumatic fever (RF) and rheumatic heart disease in 5-15 years old school children: a school survey report

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Abstract

Objective : To find out the presentation of `RF and RHD, in 5-15 years school children

Method : Total twenty seven (n=27) cases of rheumatic fever (RF) and rheumatic heart disease diagnosed in 5-15 years aged school children in Metropolitan Dhaka city during a school survey program from 1990 to 1991.

Result : Twenty five children (n=25) had acute rheumatic fever of which thirteen girls (n=13) and twelve boys (n=12). Rheumatic fever (RF) was diagnosed by revised Jon's criteria (1982). Major Manifestations of the rheumatic fever were carditis in 9 cases (36%), Polyarthritis in 20 cases (80%), Chorea in 1 case (4%) (n=1) and subcutaneous nodule in 2 cases 8% (n=2). Erythema marginatum was not observed in this series. Minor manifestations of fever in this series were 92% and raised erythrocyte sedimentation rate 88%. Previous history of rheumatic fever and or presence of rheumatic heart disease 24% and arthralgia 8%.Two cases were diagnosed as rheumatic heart disease, among them one was girl (n=1) and the other was a boy (n=1). Rheumatic heart disease diagnosed clinically and confirmed by echocardiographic study. Eight cases were diagnosed as rheumatic heart disease, six of these presented with rheumatic fever. Two cases had no previous history of rheumatic fever. Among the eight rheumatic heart diseases, seven were mitral regurgitation and one mitral stenosis.

Conclusion : Arthritis is the commonest manifestation of RF followed by carditis, subcutaneous nodule and chorea. Murmur due to carditis of first attack of RH may disappear by immediate treatment and secondary prophylaxis.

Key words : RF= Rheumatic fever, RHD= Rheumatic heart disease, Streptococcus group A, Rheumatogenic Strain, M type 1, 3, 5, 14, 18, 19, 24, 27 & 29.

Introduction

Rheumatic fever is a acute inflammatory disease which may follow beta-haemolytic, group A streptococcal infection of the throat but no other infection of other sites, such as skin. Characteristically it tends to recur[1].

"Rheumatic heart disease" denotes cardiac sequels of rheumatic carditis1. Clinical manifestations of the rheumatic fever were arthritis, carditis, chorea, subcutaneous nodule and erythema marginatum. Most common manifestations of rheumatic fever (RF) was arthritis which leaves no joint deformity. Most serious manifestation was carditis. Chorea was the most curious manifestation and most rare and inconsequential[1] manifestations were subcutaneous nodule and erythema marginatum. Major changes in the epidemiology of acute RF had occurred during the twentieth century[2]. The illness was no longer seen mainly in temperate climates but occurs predominantly in developing tropical countries[3,4].

With rapid industrialization in this subcontinent together with urbanization and development of slums, there were more cross infections and favorable conditions exist for the spread of RF and RHD[3].

Jones criteria (revised) for guidance in the diagnosis of rheumatic fever (1984)

Major manifestations	Minor manifestations
Carditis	Clinical Fever
Polyarthritis	Arthralgia
Chorea	Previous RF or RHD
Erythema	Laboratory :
marginatum	Acute phase reactions
Subcutaneous	ESR, Leukocytosis
nodules	C-reactive protein
	Prolonged P-R interval

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Supporting evidence of proceeding streptococcal infection :

1. Increased ASO or other streptococcal antibodies
2. positive throat culture for group A Streptococcus
3. Recent scarlet fever.

RHD is an eminently preventable disease[5]. The cost of treating repeatedly a larger number of patients is already overcrowded hospitals and the high cost of cardiac surgery including valve replacement and commissurotomy provide strong argument for prevention. Secondary prophylaxis remains the most practical solution[5,6].

Clinical profile of rheumatic fever & RHD was studied, so that we can have a good knowledge of RF & RHD in Bangladesh.

Materials and Methods

Study population :

5-15 year old school children from 15 selected school of metropolitan Dhaka city examined to findout RF and RHD cases. The schools were selected by stratified random sampling method.

Selection criteria :

RF was diagnosed by using Jones criteria (Revised)[7] and further supported by investigations such as echocardiography, chest X-ray and electrocardiogram. RHD was diagnosed in cases which presenting with mitral or aortic murmurs due to established valvular lesions with or without past history of RF[8].

Exclusion criteria :

1. All collagen vascular diseases were excluded.
2. All other murmur due to congenital heart disease was excluded from study.
3. Venous hum and innocent systolic murmurs were ruled out by dynamic auscultation.

Investigations :

Blood samples for ASO titer and ESR were drawn and throat swabs were taken from the patients by the author herself from the field. Sterile disposable swab (Becton Dikinson Company USA) with transport media used to collect throat swab. ASO titer was estimated by latex agglutination method. Normal values for the kit was 50-200 international unit. ESR estimation done by Westergren method. Normal values in our streptococcal reference laboratory were:

Adult male : 0-10 mm at first hour

Adult female : 5-15 mm at first hour

Children (1-12 yrs) : 5-20 mm at first hour

ECG, Chest X-ray done in NICVD and echocardiographic (both 2-DE and M-mode) study was carried out in RF/RHD project. One year follow up done with standard medical management of RF and RHD and those twenty seven children put on rigid secondary prophylaxis.

Result :

All the children (n=10,538) from the selected schools (n=15) were examined clinically. Seventy seven children were investigated for RF and RHD. Total twenty seven children were diagnosed as cases of RF and RBD. Among them 25 children were diagnosed as RF cases and rest two were RHD.

Table 1 : Distribution of sex by RF/RHD
n=27

Diagnosis	Boy	Girl
RF	12	13
RHD	01	01

Age distribution is shown in table 2.

Table 2 : Distribution of children by age group

Age group	No. previous RF/RHD	Age of first attack
5-6	0	2
7-8	4	5
9-10	9	11
11-12	5	4
13-14	8	5
15	0	0

9 cases of RF were of 9-10 years age group and age of initial attack of RF were the same. Both cases of RHD belong to 9-10 years age group. RF and RHD were prevalent in both sexes almost equally.

Table 3 : Major manifestations of RF (n=25)

Major criteria	Total (%)	Boy	Girl
Carditis	9 (36.0)	5	4
Polyarthritis	20 (80.0)	10	10
Chorea	1 (4.0)	0	1
Subcutaneous nodule	2 (8.0)	2	0
Erythema marginatum	0 (0.0)	0	0

Arthritis was the most common manifestation. Swelling of the joints was migratory in nature lasted 3-7 days each joint in order of preference knees (80%) followed by ankles, elbows and wrists and joint. Duration of polyarthritis was ranged from 7-16 days.

Carditis (36%) was the second commonest manifestation. Both patients with subcutaneous nodule had carditis. Apical systolic murmur was the commonest murmur encountered. One boy had carycomb murmur. Tachycardia, cardiac enlargement in chest X-ray and heart failure were the other findings of the carditis in this series. Basal diastolic murmur was not found in this study group.

Rheumatic chorea was 4% (n=1) and that was a girl. She had no other manifestations of RF. Subcutaneous nodule was found in two cases and both of them were boys. One of them had numerous nodules over occiput, spines, exterior surfaces of hands, elbow and feet. They disappeared after 7-10 days after treatment. Erythema marginatum was not observed in this series. One patient with severe carditis died despite of immediate hospital admission and after all possible treatments.

Table 4 : Minor manifestations of RF n = 25

Minor criteria	Total (%)
Previous history of RF/RHD	6 (24.0)
Arthralgia	2 (8.0)
Fever	23 (92.0)
ESR raised	22 (88.0)
Prolonged P-R interval	1 (4.0)

Fever and raised ESR were the two most common minor manifestations. Previous history of RF/RHD was found in six cases and poly arthralgia in two cases. PR interval was prolonged in only one case.

Table 5 : ASO and ESR report of RF/RHD

Signs	ASO (mean) IU/ml	ESR mean mm at 1st hour
RF with polyarthritis	440.0	44.65
RF with carditis	457.1	79.29
RF with chorea	<200	19
RHD	<200	15

Table 6 : Throat swab culture report of RF/RHD n = 27

Group	A	B	(-ve)
Total	4 (14.8)	1 (3.7)	22 (81.5)

Figures in the parenthesis illustrate percent

Group B was found incidentally in the throat of a case of RHD. Two cases of chronic mitral regurgitation of rheumatic origin (diagnosis confirmed by echo-cardiographic study) were diagnosed and followed up. Among the nine acute rheumatic carditis, seven cases had chronic cardiac lessions. Rheumatic process involved mitral valve in this series. After one year follow up with rigid secondary prophylaxis eight cases had found to have RHD.

Table 7: Frequency of RHD in 5-15 years

Diagnosis	Total (%)	MR	MS
RF followed by no. of heart disease	19 (70.0)	00	RHD
8 (29.6)	7 (87.5)	1(12.5)	

Discussion :

It was said that RF in tropics was manifested somewhat different from that of temperature climate. But several studies[9-13] showed that definite major manifestations such as arthritis, carditis and chorea were not different from these reported elsewhere[14] (eg. arthritis 70-80% & carditis 50% of initial attack).

MAJOR MANIFESTATIONS OF JONES CRITERIA

Country	Poly-arthritis	Carditis	Chorea	Subcutaneous nodule	Erythema marginatum
Saudi Arabia9	36-63%	44-74%	14-22%	-	-
Kuwait10	75.8%	38.3%	10%	-	3.3%
USA11	61%	53.7%	26.8%	9.7%	-
USA(Ohio)12	78%	30%	8.7%	-	13%
Bangladesh13	80%	60%	10%	15%	5%
Bangladesh15	51%	64%	6%	7%	-
Thailand16	24%	90%	8%	8%	5%

Erythema marginatum was absent in this series may be due to the fact that (in fact that) it lasts transiently. Moreover we had small number (n=25) of acute RF cases. So, absence of these rare manifestations was not unlikely. In one study[15] did not find erythema marginatum in any case of RF but in another study[16] observed erythema marginatum. Both the studies were hospital based.

Six cases were of recurrent RF followed by RHD. In one case of RHD which had moderately severe MR the mumur disappear after regular penicillin prophylaxis. By secondary prophylaxis no recurrence of RF occurred.

Conclusion :

Arthritis is the commonest manifestation of RF followed by carditis, subcutaneous nodule and chorea. School

survey is needed to find out RF and RHD cases. Rheumatic recurrences caused more damage to the heart valves. Murmur due to carditis of first attack of RH may disappear by immediate treatment and secondary prophylaxis.

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Review Articles

Review

Adverse drug reactions

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Abstract

Adverse drug reactions are a common clinical problem. They are diagnosed on clinical grounds from the temporal relation between the start and finish of drug treatment and the onset and offset of the reaction. Pharmacological adverse reactions are generally dose-dependent, related to the pharmacokinetic properties of the drug, and resolve when the dose is reduced. Idiosyncratic adverse reactions are not related to the known pharmacology of the drug, do not show any simple dose-response relation, and resolve only when treatment is discontinued .Vigilance by clinicians in detecting, diagnosing, and reporting adverse reactions is important for continued drug safety monitoring.

Key words : Adverse, drug reactions

Introduction

An adverse drug reaction is any undesirable effect of a drug beyond its anticipated therapeutic effects occurring during clinical use. In contrast, an adverse drug event is an untoward occurrence after exposure to a drug that is not necessarily caused by the drug[1].

When a drug is marketed little is known about its safety in clinical use because only about 1500 patients are likely to have been exposed to it[1,2]. Thus drug safety assessment should be considered an integral part of everyday clinical practice since detection and diagnosis often depend on clinical acumen.

In this article we review the current status of adverse drug reactions, briefly describing the complexity of the more bizarre reactions and outlining a strategy to eliminate serious adverse drug reactions.

Adverse drug reactions are a major clinical problem, accounting for 2-6% of all hospital admissions[3-6]. Recent surveys in the United States have indicated that adverse drug events increase the length of hospital stay and costs[5,6].

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Importance of adverse drug reactions

Adverse drug reactions:

- Account for 5% of all hospital admissions
- Occur in 10-20% of hospital inpatients
- Cause deaths in 0.1% of medical and 0.01% of surgical inpatients
- Adversely affect patients' quality of life
- Cause patients to lose confidence in their doctors
- Increase costs of patient care
- Preclude use of drug in most patients, although they may occur in only a few patients
- May mimic disease, resulting in unnecessary investigations and delay in treatment

Types of adverse drug reactions

Adverse drug reactions are type A (pharmacological) or type B (idiosyncratic)[7]. Type A reactions represent an augmentation of the pharmacological actions of a drug. They are dose-dependent and are therefore readily reversible on reducing the dose or withdrawing the drug. In contrast, type B adverse reactions are bizarre and cannot be predicted from the known pharmacology of the drug.

A) Pharmacological adverse drug reactions

Type A adverse drug reactions are more common than type B reactions[3] accounting for over 80% of all reactions. They can be divided into those due to the primary

pharmacology of the drug' that is, augmentation of the drug's therapeutic actions, and Those due to the secondary pharmacology of the drug, that is, an action different from the drug's therapeutic actions but still rationalizable from the known pharmacology of the drug.

Thus, for β blockers, bradycardia and heart block are primary pharmacological adverse effects while bronchospasm is a secondary pharmacological adverse effect. More emphasis is now placed on the secondary pharmacology of new drugs during preclinical evaluation to anticipate problems that might arise once the drug is given to human.

Recent experience with fialuridine, an experimental drug for hepatitis B, highlights the need for continued development of appropriate in vivo and bridging in vitro test systems to predict secondary pharmacological adverse effects in humans. In June 1993, during phase II trials, 5 out of 15 patients died while two others required emergency liver transplantation for liver and kidney failure[8]; this effect had not been observed in four animal species. On the basis of results from in vitro studies in cultured hepatoblasts, the toxicity may be due to inhibition of mitochondrial DNA polymerase γ by fialuridine and its metabolites[9].

Factors predisposing to pharmacological adverse reactions include dose, pharmaceutical variation in drug formulation, pharmacokinetic or pharmacodynamic abnormalities, and drug-drug interactions. Some drugs, including captopril, were introduced into clinical practice at a dose that was subsequently shown to be associated with an unacceptable frequency of toxicity and for which a lower dose was found to be both safe and effective. Elderly people and patients with diseases such as renal failure which affect drug handling are more likely to have type A reactions. The likelihood of developing an adverse interaction also increases with the number of drugs prescribed; for example, if five drugs are given simultaneously the chance of an adverse interaction occurring is 50%[10]. To date, this has largely been a problem in elderly people but it is becoming increasingly common in younger patients with chronic diseases such as AIDS, who may be taking[6-10] different drugs[11].

B) Mechanisms of idiosyncratic adverse drug reactions

- Pharmaceutical variation: eosinophilia-myalgia syndrome with l-tryptophan
- Receptor abnormality: malignant hyperthermia with general anaesthetics
- Abnormal biological system unmasked by drug: primaquine induced haemolysis in patients deficient in glucose 6-phosphate dehydrogenase
- Abnormalities in drug metabolism: isoniazid induced peripheral neuropathy in people deficient in the enzyme N-acetyl transferase (those who are slow acetylators)
- Immunological: penicillin induced anaphylaxis
- Drug-drug interactions: increased incidence of hepatitis when isoniazid is prescribed with rifampicin
- Multifactorial: halothane hepatitis

Idiosyncratic adverse drug reactions

Idiosyncratic adverse reactions are less common than pharmacological adverse reactions, but they are as important because they are often serious and account for many deaths. Mechanisms of idiosyncratic adverse effects[12] are listed in the box.

The body's drug metabolising system has been implicated in the pathogenesis of many idiosyncratic reactions[13]. Drug metabolism is conventionally divided into phase I and phase II[14]; it acts as a defence mechanism by facilitating excretion of the parent drug and its metabolites, limiting their ability to accumulate within the body and cause dose-dependent toxicity. Metabolic processes may also prevent accumulation of some drugs within particular cells or cellular compartments, which would eventually lead to toxicity. The best example of this is perhexilene, an antianginal agent, which caused hepatotoxicity and peripheral neuropathy in people deficient in the CYP2D6 (debrisoquine hydroxylase) isoform of cytochrome P-45015.

Paradoxically, drug metabolising enzymes, particularly the phase I cytochrome P-450 enzymes, may also cause the formation of chemically reactive metabolites, a process termed bioactivation[12,13,16]. Such metabolites may be toxic. In most people the formation of chemically reactive metabolites is counterbalanced by detoxification mechanisms' a process termed bioinactivation. In susceptible people the usually favourable balance between bioactivation and bioinactivation may be perturbed by either genetic or host factors such as age, enzyme induction, and disease, all of which allow the toxic metabolites to escape detoxification. Under these circumstances, the toxic metabolites may bind covalently to various cellular macromolecules and cause toxicity. With most drugs, however, the factors which cause this imbalance are unknown, which explains why such

reactions continue to occur. In some cases chemically reactive metabolites will be formed irrespective of the dose[16]. At therapeutic doses any toxic metabolite formed will be detoxified by cellular defence mechanisms, but an imbalance between bioactivation and bioinactivation may result after overdoses. This will lead to the formation of large amounts of chemically reactive metabolite, which will overwhelm cellular detoxification capacity and lead to cell damage.

The clearest example of this occurs in paracetamol overdose, which causes hepatotoxicity and kills about 160 people each year in the United Kingdom[17]. Paracetamol hepatotoxicity should not be classed as an adverse reaction since the hepatic injury occurs when the drug is used inappropriately. However, the occurrence and severity of liver damage with paracetamol is a function not only of the dose but also of various host factors[13]. Indeed, paracetamol hepatotoxicity has been reported with therapeutic drug use. For example, a recent study in 67 alcoholic patients with paracetamol hepatotoxicity showed that 40% had taken less than 4g/day (the recommended therapeutic dose) and 20% had taken 4-6 g/day (a non-toxic dose)[18]. Paracetamol is largely metabolised by phase II processes (glucuronidation and sulphation) to stable metabolites, with 5-10% undergoing P-450 metabolism to the toxic quinoneimine metabolite[19]. This is detoxified by cellular glutathione. At overdose, saturation of the phase II pathways results in a greater proportion of the drug undergoing bioactivation. This leads to glutathione depletion and allows the toxic metabolite to bind to proteins, resulting in hepatocellular damage[19]. The use of N-acetylcysteine to treat paracetamol overdose shows that elucidation of the mechanism of drug toxicity can lead to the development of rational treatments that will prevent toxicity. Alcoholic patients show increased susceptibility to paracetamol because excess alcohol consumption depletes glutathione20and induces the CYP2E1 isoform of cytochrome P-450[21], the primary enzyme concerned with paracetamol bioactivation[22].

Importance of the immune system

Many idiosyncratic adverse reactions are thought to be mediated by the immune system on the basis of clinical criteria[12,13,23]. The mechanism by which a drug leads to an immune mediated adverse reaction is explained by the hapten hypothesis[24]. Central to the hypothesis is the assumption that small molecules such as drugs can be recognised as immunogens, that is, a substance capable of eliciting a specific immune response only when they become covalently bound to macromolecules such as proteins (to form haptens)[24]. The type of hypersensitivity is partly determined by the nature of the immune response and the site of antigen formation. The best understood reactions are the type I hypersensitivity reactions induced by penicillins and mediated by IgE antibodies directed against a drug hapten conjugated to protein[13,25]. Severe anaphylactic reactions occur in only 1 in 2000 patients; the genetic basis of the IgE response to penicillins remains unclear.

Less well understood are the immunological mechanisms underlying severe reactions such as the Stevens-Johnson syndrome and immunoallergic hepatitis. In vitro studies have shown that drugs causing these reactions undergo oxidative metabolism to chemically reactive metabolites that can form haptens with proteins[26]. Both humoral and cell mediated responses directed against drug induced antigen have been detected in patients. For example, in halothane hepatitis[27]. With some compounds the immune response is directed predominantly towards an autoantigen. For example, in hepatitis induced by tienilic acid patients have circulating autoantibodies directed against the P-450 isoform (CYP2C9) that is responsible for bioactivation of the drug[28]. However, whether such autoantibodies are pathogenic or represent an epiphenomenon (their appearance is secondary) needs further study. The role of T cells in drug induced tissue injury is also poorly understood, although recent immune histochemical studies, particularly of skin reactions, suggests that they subserve a pathogenic role[29].

Host factors and adverse drug reactions

Genetically determined alterations in drug metabolising enzymes can predispose to both pharmacological and idiosyncratic toxicity[26]. Single gene defects account for only a minority of adverse drug reactions. For most adverse reactions, particularly the idiosyncratic drug reactions, predisposition seems to be multifactorial, involving not only defects at multiple gene loci but also environmental factors such as concomitant infection[13,26]. Most work has focused on enzyme polymorphisms in drug oxidation and conjugation as risk factors for drug toxicity, but this search for genes affecting susceptibility needs to be extended to include cell repair mechanisms, elaboration of cytokines, and immune responsiveness. Such investigations may in the future provide us with the capability to predict a person's susceptibility to the different forms of drug toxicity.

Concomitant host disease may also influence

susceptibility to adverse reactions. The best recent example is HIV disease, which increases the frequency of idiosyncratic toxicity with anti-infective drugs such as co-trimoxazole[30]. Around 50% of patients receiving high doses of co-trimoxazole for Pneumocystis carinii pneumonia and 30% receiving prophylactic doses develop skin rashes[31]. This contrasts with a frequency of 3% in people who are negative for HIV infection[31]. Glutathione deficiency has been suggested by some[32,33] but not all[34,35] investigators to be responsible for the increased frequency of reactions[30,31]. The reasons are likely to be more complex and to include not only changes in drug metabolising capacity (bioactivation and bioinactivation) but also immune dysregulation.

Spontaneous reporting schemes

The exposure of 1500 patients to a drug by the time of licensing[1,2] will allow the more common adverse reactions to be detected but not necessarily characterized. At least 30 000 people need to be treated with a drug to discover, with a power of 0.95, at least one patient with an adverse reaction which has an incidence of 1 in 10 00036. Thus, postmarketing surveillance is important to permit detection of less common adverse effects.

Spontaneous adverse drug reaction reporting schemes, as exemplified by the yellow card system in the United Kingdom, form the cornerstone of post marketing drug safety surveillance. Indeed, spontaneous reporting schemes remain the only way of monitoring the safety of a drug throughout its marketed life. The yellow card scheme is important in identifying previously undetected adverse reactions[37] and over the years has provided many early warnings of drug safety hazards, for example, remoxipride and aplastic anaemia to allow appropriate drug regulatory action to be taken. A problem with spontaneous reporting is that less than 10% of all serious and 2-4% of non-serious adverse reactions are reported[2,38]. All doctors need to be aware that adverse drug reaction reporting is part of overall patient care and is not simply an afterthought. Since 1964 reporting in the United Kingdom has been restricted to doctors, dentists, and coroners, although more recently a reporting scheme for pharmacists has been introduced. In some European countries all healthcare professionals are allowed to report adverse drug reactions, while in the United States patients can also report through the MED Watch scheme[39].

Conclusion

The importance of adverse drug reactions is often underestimated. They are common and can be life threatening and unnecessarily expensive. The measures outlined in the box above are important to improve the benefit to risk ratio of drug treatment by reducing the burden of drug toxicity. Because of the wide range of drugs available, the manifestations of toxicity may vary and affect any organ system. In fact, adverse reactions have taken over from syphilis and tuberculosis as the great mimics of other diseases. The pattern of toxicity is likely to change with the introduction of new biotechnology products. It is therefore important for prescribing clinicians to be aware of the toxic profile of drugs they prescribe and to be ever vigilant for the occurrence of unexpected adverse reactions.

Strategy to improve drug safety

- Avoidance of chemical functional groups that are well recognized to cause toxicity during drug design, for example, aromatic amines, phenols, epoxides, and quinones.
- Development of metabolically inert drugs to avoid metabolic interactions and prevent formation of toxic metabolites. For example, vigabatrin and gabapentin.
- Development of suitable in vitro and in vivo systems to elucidate the role of shortlived, potentially toxic metabolites in the pathogenesis of idiosyncratic toxicity.
- Increased use of in vitro systems, such as cell lines expressing drug metabolising enzymes, to predict the potential for adverse drug interactions and polymorphic routes of metabolism.
- Study of high risk patients during the premarketing drug development phase to identify pharmacokinetic and pharmacodynamic factors that influence susceptibility to drug toxicity.
- Development of computer based schemes to monitor for adverse reactions and adverse events in primary and secondary care.
- Encouragement to report adverse drug reactions to regulatory agencies
- Identification of risk factors for different types of drug toxicity by using pharmaco-epidemiological approaches.
- Identification of multi-genetic predisposing factors to allow the prediction of individual susceptibility.

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Review article

Celiac disease in children.

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Abstrac

Celiac disease (also known as celiac sprue, gluten-sensitive enteropathy, nontropical sprue) has been defined[7] as a chronic disorder with a characteristic but nonspecific small intestinal mucosal biopsy shows lesion that is associated with nutrient malabsorption.

Celiac disease is one of the most common chronic diseases in childhood, affecting 1%-2% of the population worldwide, although a substantial variation in prevalence has been reported in different region.[1] Celiac disease is characterized by chronic diarrhea, failure to thrive and abdominal distention usually observed within the first 1-2 years of life. At the older age, atypical features such as anemia, short stature, bone disease and liver failure may occur.[5] Since the symptoms of the disease are diverse, pediatricians must be able to recognize its varied clinical presentations. The prevalence of CD increases to more than 40% in patients presenting such typical symptoms as chronic diarrhea[6].

Key words : Celiac disease, Children

Introduction

Celiac disease is one of the most common chronic diseases in childhood, affecting 1%-2% of the population worldwide, although a substantial variation in prevalence has been reported in different region[1].

In 1888, Samuel Gee described the clinical features of childhood celiac disease[2]. After the Second World War, Dicke and colleagues from Holland noted that certain cereal grains, particularly wheat and rye, were harmful to children with celiac disease. Later studies showed that gliadin, the alcohol-soluble component of gluten, a water-insoluble protein from wheat, could cause impaired fat absorption in these patients[3]. Between 1954 and 1960, the intestinal histopathological features of celiac disease were described[4] based on per oral small intestinal biopsy, refining earlier descriptions based on surgical specimens. During the last 40 years, the clinical and pathological spectrum of celiac disease has become further appreciated, especially in recent studies that have implicated genetic, immunologic, and environmental factors in the etiology and pathogenesis of this most intriguing disorder.

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Celiac disease is characterized by chronic diarrhea, failure to thrive and abdominal distention usually observed within the first 1-2 years of life. At the older age, atypical features such as anemia, short stature, bone disease and liver failure may occur[5].

Since the symptoms of the disease are diverse, pediatricians must be able to recognize its varied clinical presentations.

The prevalence of CD increases to more than 40% in patients presenting such typical symptoms as chronic diarrhea[6]. Celiac disease (also known as celiac sprue, gluten-sensitive enteropathy, nontropical sprue) has been defined[7] as a chronic disorder with a characteristic but nonspecific small intestinal mucosal biopsy shows lesion that is associated with nutrient malabsorption.

Following removal of dietary wheat gliadins (the toxic alcohol-soluble gluten fractions) and equivalent dietary

prolamines in barley, rye and oats, prompt improvement in clinical condition as well as the small intestinal biopsy appearance, along with improved nutrient absorption.

Etiopathogenesis

CD is a unique autoimmune disorder because both the environmental trigger (gluten) and the autoantigen (tissue Transglutaminase) are known and elimination of the environmental trigger (gluten) leads to a complete resolution of the disease. Genetic factors-increased incidence of HLA-B8 and HLA-DR3 and also HLADQ2 and HLADQ8 which facilitate the immune response against gluten proteins. Ingestion of gluten, the gliadin fraction of it results in activation of gliadin-reactive T cells in the intestine. These CELIAC DISEASE4 T cells are hypothesized to provide immunologic help to B cells to produce TG auto-antibodies. Concordance rates of 70% to 75% among monozygotic twins and 5% to 22% among first-degree relatives.

Clinical features

Celiac disease (CD) may occur without any symptoms; asymptomatic or minimally symptomatic celiac disease is probably the most common form of the disease, especially in older children and adults.

Currently[8] possible presentations of celiac disease are recognized, as follows :

- **Typical :** This presentation is primarily characterized by GI signs and symptoms.
- **Atypical :** GI signs and symptoms are minimal or absent, and various extra-intestinal manifestations are present.
- **Silent :** The small intestinal mucosa is damaged, and celiac disease autoimmunity can be detected with serology; however, no symptoms are present.
- **Potential :** Patients have a positive specific autoimmune serology and may or may not be symptomatic, but the mucosa morphology is normal. These individuals have genetic compatibility with celiac disease and full-blown celiac disease may develop at a later stage in some or all of these individuals.
- **Latent :** Individuals with normal mucosal morphology who "have had a gluten-dependent enteropathy at some point in their life." This subset of patients is the rarest of the group.

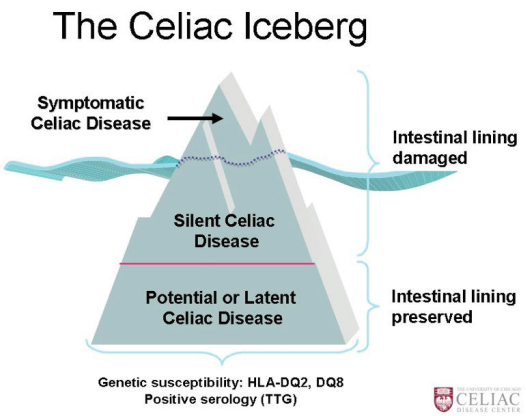

Fig : 1 the celiac Iceberg

Typical presentation

Numerous studies demonstrate that children with CD frequently have gastrointestinal (GI) symptoms such as chronic recurrent diarrhea, anorexia, abdominal pain, vomiting, constipation and abdominal distension, with failure to thrive (FTT), weight loss . However, there is little information currently available about the precise prevalence of CD in children with these specific types of GI symptoms. GI symptoms that characteristically appear at age 9-24 months[5]. Symptoms begin at various times after the introduction of foods that contain gluten. The variability in the age of symptom onset possibly depends on the amount of gluten in the diet and other environmental factors, such as duration of breast feeding.

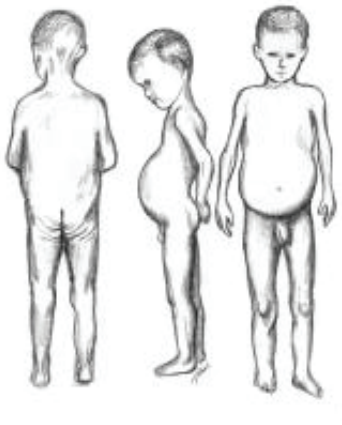

Fig : 2 Bloating of the abdomen is a relatively common finding, potbelly and muscle wasting in a child with celiac disease.

Examination findings depend on extent of celiac disease.

- Dry mucosal membranes with vomiting or diarrhea

indicate the degree of dehydration.

- Oral aphthae are more frequent than in normal population.
- Dental enamel hypoplasia is a highly specific but relatively uncommon finding.
- Bloating of the abdomen and muscle wasting are relatively common finding.
- Muscle wasting is an obvious finding and is part of the malnutrition that ensues because of the mal-absorptive condition.

Atypical presentation

An increasing number of patients are being diagnosed without typical GI manifestations at older ages. A reasonable assumption is that approximately 70% of patients with newly diagnosed celiac disease do not present with the typical major GI symptoms. Once again, a relationship between the age of onset and the type of presentation is noted in infants and toddlers where GI symptoms and failure to thrive predominate,[9] whereas, during childhood, minor GI symptoms, inadequate rate of weight and height gain, and delayed puberty tend to be more common. In teenagers and young adults, anemia is the most common form of presentation[10,11,12] Later may present with neurological disease[13] and osteoporosis[14].

Extra-intestinal manifestations of celiac disease.

Dermatitis herpetiformis15, dental enamel hypoplasia[16], aphthous ulcers, delayed tooth eruption, iron-deficiency anemia, short stature and delayed puberty, chronic hepatitis and hyper-transaminasemia, arthritis and arthralgia, osteopenia[17,18] and osteoporosis, neurological problems, psychiatric disorders.

Associated non gastrointestinal diseases

Celiac disease is also known to be strongly associated with numerous disorders, specifically with autoimmune conditions and genetic syndromes.

Down syndrome, Williams's syndrome, Turner syndrome, with autoimmune disorders like type 1 diabetes mellitus[19], thyroiditis[20,21].

Turner's syndrome, alopecia, selective IgA deficiency, Those who have first degree relatives with celiac relatives have their own chance of CD is more.

For whom screening needed:

Testing for CD should be offered to the following groups :

Group A - with symptoms like CD : Children and adolescents with the otherwise unexplained symptoms and signs of chronic or intermittent diarrhea, failure to thrive, weight loss, stunted growth, delayed puberty, amenorrhea, iron-deficiency anemia, nausea or vomiting, chronic abdominal pain, abdominal cramping or distension, chronic constipation.

Group B - asymptomatic with other presentations : Asymptomatic children and with an increased risk for CD such as type 1 diabetes mellitus (T1DM), Down syndrome, autoimmune thyroid disease, Turner syndrome, Williams syndrome, selective immunoglobulin A (IgA) deficiency, autoimmune liver disease, and affected with CD in first-degree relatives . Atypical with minimal intestinal or extraintestinal presentations like chronic fatigue, recurrent aphthous stomatitis, dermatitis herpetiformis–like rash, fracture with minor traumas, osteopenia, osteoporosis and abnormal liver biochemistry.

Differential diagnosis of the flat lesion of celiac sprue

Nonspecific lesions

Soya protein (and/or milk protein) lesion, tropical sprue, stasis and bacterial overgrowth, lesions of the Third World (including kwashiorkor), nutrient deficiency (folic acid, vitamin B12, and zinc), immunodeficiency syndromes (AIDS, graft vs. host disease), infectious agents with parasites like Giardia, Cryptosporidium, microsporia, Isospora belli, Strongyloides, hookworm, Schistosoma, Capillaria, Virus like Cytomegalovirus. Fungal infection with Candida, Histoplasma. Mycobacterial like Mycobacterium-avium intracellulare and congenital microvillus inclusion disease and also unclassified sprue.

Specific lesions

Collagenous sprue, whipple's disease, eosinophilic gastroenteritis, intestinal lymphoma, immuno-proliferative small intestinal disease.

Laboratory Studies

Serology

- IgA tissue transglutaminase (tTGA) as the first choice test. IgA endomysial antibodies (EMA) test is indicated if the result of the tTGA test is equivocal.
- Check for IgA deficiency if the serology is negative
- IgG tTGA and/or IgG EMA serological tests are indicated for people with confirmed IgA deficiency .
- Antigladine antibody (AGA) IgA and AGA IgG tests are no longer recommended as initial testing because of low sensitivity and specificity for celiac disease.

Biopsy

- When the serum tTG is elevated small intestinal biopsy is recommended.
- It is currently recommended that confirmation of the diagnosis of CD requires an intestinal biopsy in all cases.
- Even if serological tests for CD are negative, a small intestinal biopsy may be useful in symptomatic children (particularly when they are 0 to 2 years old) with chronic diarrhea, FTT, a positive family history of CD.

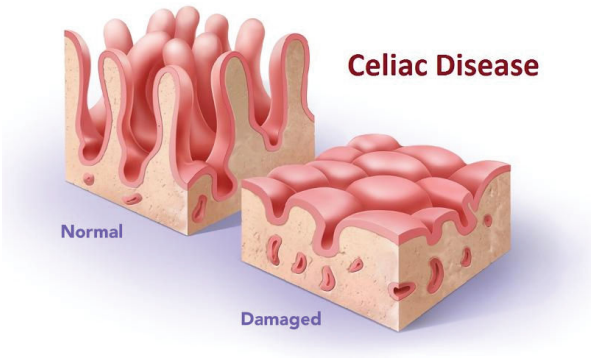

Fig: 3 Villus atrophy in celiac disease

Long Term Complications of celiac disease

Anemia and failure to thrive are common complications in children. Delayed diagnosis can leads to delayed puberty and dental problems. Osteoporosis and increased risk of fracture, unfavorable pregnancy outcomes and a modest increased risk of intestinal malignancy like intestinal B cell and T-cell lymphoma[22], gastrointestinal lymphoma[23] also occur in adult life.

Treatment

The only treatment currently available for CD is strict adherence to a GFD (Gluten Free Diet) for life. Avoid gluten which is found in wheat, rye and barley lifelong. The clinical response to gluten withdrawal occurs rapidly, usually within the first month. Normalization of the small intestinal mucosal lesion may require longer periods. There is evidence that diagnosed but untreated CD is associated with a significant increase in morbidity and mortality. Prolonged adherence to a GFD may reduce this risk for both morbidity and mortality to the levels found in the general population. For these reasons prompt diagnosis and treatment with a GFD as early as possible is desirable.

There is Iron deficiency along with there is deficiency of folate, vitamin B-12, vitamins ADEK, thiamine, niacin, calcium, beta-carotene, zinc, essential fatty acid deficiency, should be replaced as needed. There is also temporary lactose intolerance due to deficiency of lactase enzyme managed with lactose free milk.

Follow up

Periodic visits for assessment of symptoms, growth, physical examination and adherence to the gluten-free diet. Measurement of TTG 6 months after treatment with a gluten-free diet is begun, and then approximately once a year if the patient has no symptoms. Measurement of TTG at any time after starting a gluten-free diet if the patient has persistent or recurring symptoms

Conclusions

Many children with celiac disease show an atypical clinical presentation. The understanding of presentations of celiac disease may prevent delayed diagnosis. Celiac disease should be specially investigated in patients with recurrent iron deficiency anemia, short stature as because approximately half of the patients with CD might present with atypical manifestations and also children with autoimmune disorders. Delays in diagnosis of CD may predispose patients to complications such as reduced bone mineral density, autoimmune disorders and even malignancies.

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A Case Report

Cut Throat Injury

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Abstract

Cut throat injury is a common form of homicide in all over the world. Cut throat injuries are the types of incised wound from knives, razor blades, or any other object with a sharp cutting edge. Even stiff paper or broken glass may cause incised wound. Incised wound of the neck predominantly homicidal or suicidal and accidental is rare. In our region (South East Asia) Homicidal cut throat injury is common form of criminal violence but in western countries like United Kingdom; United States suicidal cut throat injury is more common. A case is being described where complete decapitation occurs where a male victim's body & head were recovered from different places. Individual autopsy of head & body were done at Sir Salimullah Medical College mortuary. Post-mortem opinion was ante-mortem homicidal cut throat injury. But scene visit & investigation confirmed that the victim was first killed by throttling then in order to conceal of his identity complete decapitation was done by extremists.

Key words : Homicide, Cut throat Injury

Introduction

In Bangladesh, victims of homicidal cut throat injury are common but most of cases are post-mortem cut injury in order to confirmation of death / concealment of body even cause of death of victim by the criminals or terrorists. Suicidal cut throat injury is also observed in some frustrated and psychiatric people. Complete beheadings are most commonly post-mortem in our country to concealment of identity of the victim. Suicidal and accidental decapitations are commonly seen in railway injury. Accidental cut throat injuries are seen in Road traffic accidents and industrial mishaps. Meticulous autopsy and complete information of victim is necessary in these cases.

Case history

Status of the victim:

First recovery – The body of a male victim about 30 years of age without head on 10-11- 09. Second recovery-The head of a male victim aged about 30 years on 12-11-09.

GD of the 1st recovered dead body without head :

No. 368, PS-Dohar (Dated-10-11-09)

GD of the 2nd recovered only head of a dead body:

No. 459, PS-Dohar (Dated:12-11-09)

Case no. Both the body and the head: (06, Dated-10-11-09

Section: 302/201/34 penal code

PM no. Sir Salimullah Medical College Morgue. Mitford, Dhaka

Dead body without head (445/09, Dated: 11/11/09)

Only the head (447/09, Dated:13-11-09)

Inquest report

A male dead body without head, age approximately 30 years was found floating on the surface water of tunnel below the culvert near the road at the junction of Awliabadth and Imam Nagar. On primary investigation by police on inquest report suggest that on 10-11-09, a gang of unknown terrorists killed the victim by cut throat injury with sharp cutting weapon and detached the head from the body which was taken away to conceal the identity. Finally after two days, the missing head was recovered on 12-11-09, floating on the pond of Mr. Hayet Ali at Charkoshi village; Dist-Manikgong and it was identified by the victim's uncles. The identity of victim was Shabuj, Age-30 years, S/O-Late Nabab Ali, Vill-Goahail Bari, P.S. Shibaloy, Dist. Manikgong.

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Description of injury on inquest report
The body (10-11-09)

Status : A dead body without head.
Age of the victim-approximate 30 years
Identity-Not established
Body complexion-fair
Body built-average
Both hands were semi flexed on each side.
Both legs were extended on the both side & whitish discolouration due to prolong immersion in water.
An old rounded mark was present on the left knee.
There were old scar marks present on the left thigh and below the knee joint.
The victim was circumcised indicates Muslim.

The head (12-11-09)

Status : Decapitated head
Identity: Established.
Condition-Partially decomposed, foul smelled.
Mouth- open
Both eyes were protruded
Peeled off skin
Whitish discolouration due to prolong immersion in water

History of the case

An unknown misfortunate male youth of thirty, who was killed, later identified as Sabuj, used to visit regularly to brothel (Prostitute area) of Douladia Ferry Ghat. In course of time he was introduced with two unknown persons and later they subsequently became intimate friends. The pecuniary condition of Sabuj was more or less good and he also owned a motor cycle. As such his so called friends became very much insatiable upon his motor cycle. In course of their relation; they invited him with an evil intension to visit Dohar area in order to embezzle the motor cycle. The young man named Sabuj respond to their invitation and went to Dohar along with his motor cycle. According to their pre-plan, dated on 10-11-09, he was firstly killed by throttling then in order to conceal the fact, they detached the head from the dead body and thrown it to a pond of Mr. Hazi Hayet Ali about five miles away from the scene of crime. After the incident, the police at first recovered the decapitated dead body dated on10-11-09, float on the surface of water under the culvert of highway at Imamnagar, Awliabad. After then sent as unknown dead body for post-mortem examination to the Morgue of Forensic Medicine Department at Sir Salimullah Medical College, Dhaka on 11-11-09. Just after two days, dated on 12-11-09, the police also recovered the decapitated head from the pond of Mr. Hazi Hayet Ali and in presence of his uncles the identity of the deceased was established. It was reveal that the victim was named Sabuj, Age-30 years, belongs to vill. Gohail bari, P.S. Shibaloy, Dist. Manikgonj.

Finally Police sent the decapitated head with his full identity to the Forensic Medicine Department at Sir Salimullah Medical College for post-mortem examination dated on 13-11-09.

Post-mortem Examination
The body

a) External findings
Status : A male body without head
Body built-average
Cyanosis-absent
Rigor mortis-Present in both lower limbs.

Injury note

A cut throat wound with decapitation at the level of 5th cervical vertebra posteriorly, one and half inch above the Supra-Sternal notch anteriorly. No other external injury was present.

Internal findings

1. Ist cervical to 5th cervical vertebra absent.
2. All the muscles, vessels, nerves and other structures of the neck were severely cut.
3. Huge amount of ante-mortem clotted blood & liquid blood was found in and around the wound area.
4. Internal organs:
   Ribs-Healthy
   Pleura-healthy
   Lungs-Healthy & pale
   Heart -Healthy & empty.
   Liver, spleen, kidneys-Healthy & empty.
   Stomach & intestines-Healthy
   Urinary bladder-Healthy & empty.
   External & internal genitalia-Healthy.
   No evidence of any other disease or deformity.

The head

a) External findings:
   1) Status: Head & portion of neck.
   2) Condition: Decomposed, swollen
   3) Mouth-Partially opened.
   4) Lips-Swollen
   5) Eyes-bulged out
   6) Skin-whitish discolouration & peeled off.
   7) Injury note:

The head including portion of the neck was upto at the level of 5th cervical vertebra posteriorly, three and half inch below the chin anteriorly.

The skin was whitish in colour & peeled off.
No other external injury was found.

b) Internal findings :

1) Scalp: Decomposed.
2) Cervical vertebra: 1st to 4th cervical vertebra and a portion of 5th cervical vertebra were found.
3) All the structures including muscles, vessels, nerves and other structures of the neck were severely cut.
4) Ante mortem clotted blood was found in and around the wound
5) Skull: Intact.
6) Meninges: Decomposed.
7) Brain: Liquefied & decomposed.

Opinion on PM report

The cause of death was due to haemorrhage and shock resulting from above mentioned cut throat injury which was ante-mortem and homicidal in nature.

Figure : Decapitate body of the victim

Figure: Head of the victim.

1. Stomach and its contents and routine viscera's are preserved for chemical analysis for detection of poison but results shows negative.
2. Blood sample was collected for estimation of alcohol; the result was negative for alcohol.

Discussion

The medico-legal issues in this case could be discussed under the following headings:

1. Ante-mortem or post-mortem cut throat injury
2. Suicidal, homicidal or accidental
3. Problem in diagnosing ante-mortem injury
4. The causative weapon
5. Studies on cut throat injury

1. Ante-mortem or post mortem cut throat injury

Most of the cases are post-mortem cut throat injury. Ante-mortem cut throat injury is rare. As it require greater force the cut of someone's head by a single assailant. In case of death due to cut throat injury there may be clotted blood present in the respiratory tract, defense wound, signs of acute inflammation in the injured area may be diagnostic of ante-mortem cut throat injury. It is difficult to prove whether the death was due to cut throat injury or any other violence such as strangulation, throttling etc. then post mortem cut throat injury.

In this case, due to highly decomposed body moreover the head was thrown in to a pond so some parts of the head and neck was eaten by aquatic predators. So in post-mortem examination no sign of any other violence was found. But in the statement of the accused that he was first killed by throttling then decapitated his head from the body. Therefore it is established that it was post-mortem cut throat injury.

2. Suicidal, homicidal or accidental

In case of suicidal cut throat injury usual site is on the left side and front and partly on the right side of neck (in case of right handed person) and placed high up in the neck. The wounds are superficial with hesitation cut marks and of them more than one or two are severe. There are tailing of the wounds present. Defense cuts are absent. Carotid arteries usually spared because, before injuring, the victim stretches his/her upwards so these blood vessels shift behind the sternocleidomastoid muscle. The causative weapon is found at the scene of incident or grasping in the hand of the victim with Cadaveric spasm. There may be suicidal note present and any other foreign material of the assailant which may be the circumstantial evidence was absent. In this case, the head of the victim was decapitated from his body, so there was no question of suicidal cut throat wound arises.

In case of accidental cut throat injury, they usually occur in machinery factory or road traffic accident, by falling of broken glass and any other sharp metallic substance with force. In this case, no evidence of such injury or scene or

circumstances was found.

In case of homicidal cut throat injury, the injury found mostly on the sides of the neck and placed at a lower level. There may be one or more severe injuries found. Defense cuts or signs of struggle may be present on the victim's body especially on the grasping surface of the hands or back of the forearms. The deep structures of the neck are severely cut. The causative weapon are usually absent in the scene of crime. Considerable disturbance at the scene and even elsewhere is usually found.

In this case the victim was first killed by throttling and then decapitated his head from the body. So, no question arises that it is other than homicidal cut throat injury.

3. Problems in diagnosing ante-mortem injury

Most common causes of failure to determination of ante-mortem injury in advanced decomposed body due to obliteration of post-mortem findings. After homicide, body is cut in to pieces and thrown in different environment also create problems in determination of manner and cause of death. Delayed recovery and environmental factors, animal or aquatic predators play an important role in obliteration of post-mortem findings. Multiple injuries may create problem in diagnosing which injury was the actual cause of death. Homicide following mutilation of the dead body is also creating difficulty in determination the actual cause of death. On the other hand, lack of proper investigating system, pathological facility, inexperience of medico-legal expert play a vital role of diagnosing the cause and manner of death.

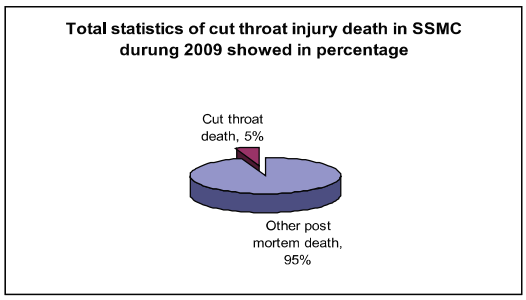
In this case, according to the statement of the accused, the victim was first killed by throttling then decapitated his head from the body and thrown in to pond distance to the scene of crime. The body was first recovered then after one day later the head was found floating on the surface of water in the pond. The skins and some parts of the head and neck were eaten by aquatic predators. So, the neck findings seems to obliterate and difficult to state the actual cause of death in post-mortem examination. In this case, the victim was decapitated so, no question arises that it is other than a homicide.

4. The causative weapon

It is difficult to establish the exact nature of weapon by observing the injury. Because complete beheadings require a heavy sharp cutting weapon with a considerable force. All the structures of the neck including cervical vertebra were severely cut. No weapon was recovered from the scene of crime.

5. Studies at SSMC (2009)

The post-mortem of SSMC comprises the Dhaka South; there are 13 police stations under it (2009). The 13 police station are-Kotwali, South Keranigang, Dhohar, Kamrangirchar, Kadamtoli, Shampur, Lalbag, Nababgang, Hazaribag, Sutrapur, Demra, Jatrabari and Bangshal. More than 3 million people reside there. In the year 2009, a total of 501(Five hundred and one) post-mortem were held in SSMC Morgue. Of them there were 26 cases of death found from cut throat injury. This showed in diagram below :



Conclusion

Decapitation or beheadings is complete severance of head from the body. It is common in suicide by railway accident, incidental decapitation may occur in long drop hanging. It may be accidental in case of railways accident, industrial workers by falling on sharp machinery, sometimes in road traffic accident. Homicidal decapitation is uncommon rather cut throat injury. It is usually post-mortem decapitation. In some criminal abortion decapitation of fetus is common. It also happened in terrorist bomb attack. The AL-Quyeda, tale-ban militia in Afghanistan practices decapitation as ominous homicide. In ancient time, it was practiced as religious credence. Now a day's judicial decapitation is not practiced in the world but it is limited in some Arab countries as capital punishment.

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A Case Report

Renal Hydatid cyst

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Abstract

Echinococcosis or hydatid cyst disease of the kidney is extremely rare and constitutes only 2-4% of all cases of hydatid disease. Its diagnosis is easy and mainly based on ultrasound and CT-scan. The treatment is mainly surgical, by open surgery or by laparoscopic management. Here, we present a case; with only renal localization, was managed by conventional surgery. The follow-up showed no residual disease.

Key words : Echinococcosis, kidney.

Case history

A 27-year-old woman with no significant medical history presented with urinary urgency and left flank pain. The patient came from rural sheep farming community.

At physical examination, the patient was afebrile, anaemic and there was palpable fullness in the left upper quadrant of the abdomen and with left flank tenderness. Initial laboratory test results were normal except reduced Hb% and microscopic hematuria.

Enhanced computed tomography (CT), which was performed resulted in the incidental discovery of a large, multiloculated, cystic left renal mass. Further laboratory test results revealed substantially elevated serum Echinococcus antibody titers, a finding that supported the diagnosis of renal hydatid disease. The patient went for surgical treatment, and an open left nephrectomy was performed.

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Unenhanced axial CT image (Fig-1) shows a well-defined complex cystic mass within the left upper quadrant. The mass contains multiple smaller, peripheral, thin-walled cysts.

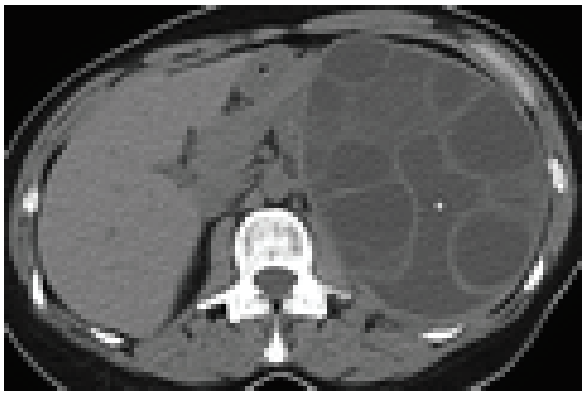

Fig-1

Gross pathologic examination revealed a 17 × 12 × 11-cm cystic mass located in the superior aspect of the left kidney. The mass was well demarcated by an apparent pseudocapsule and contained multiple free-floating internal cysts that ranged from approximately 1 to 7.5 cm in diameter. These daughter cysts were smooth and gelatinous, with white outer capsules. The external and internal surfaces of the cysts were similar, and they were filled with translucent fluid. No internal projections or solid structures were identified.

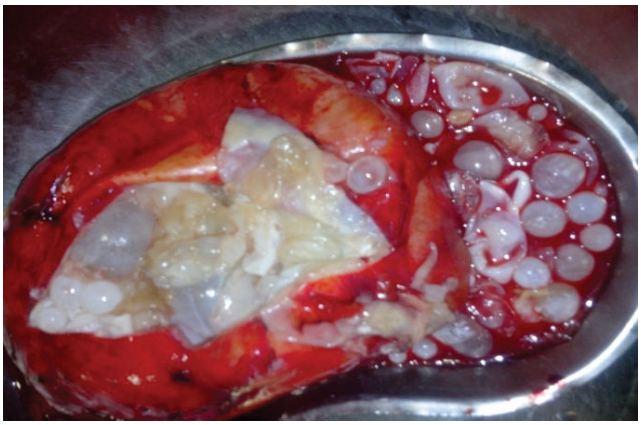

Fig-2

Photograph of the left nephrectomy (Fig-2) specimen shows the incised cystic mass and the multiple smaller, smooth-walled daughter cysts, which are filled with translucent fluid.

At microscopy, the diagnosis of renal echinococcosis (hydatidosis) was confirmed. The cyst wall consisted of an outer pericyst, a middle laminated membrane, and an inner germinal layer. Scolices were seen within the fluid of both the parent and daughter cysts. Histologic features of the renal parenchyma were normal.

The patient has received albendazol-based medical treatment for two months. The evolution is good within a follow up of one year.

Discussion

The RHC is the third localization of the hydatid cyst after liver and lungs. The RHC represents about 2.5% of the whole localizations and most often unilateral and unique, however cases of multiple and even bilateral were reported[1,2]. The RHC might remain asymptomatic for years in case of slow evolvement[3-7]. Frequently, The RHC is revealed by an abdominal mass syndrome that is often associating signs varying from general to particular such as urinary, lumbar pain; dysurea or hematuria[2,3,5]. The pathognomonic sign consisting of hydaturia should indicate the rupture of cyst and the diffusion of the content in the excretory tracts[4,8] which was not seen in our patient.

Renal hydatid cysts typically are unilateral, solitary, and found in the cortex of the upper or lower pole of the kidney. Imaging appearances vary with the development of the parasite, and three types of cysts may be distinguished: Type 1 cysts correspond to the initial developmental stage of the parasite and appear unilocular, without internal architecture; type 2 cysts are seen at an intermediate stage of parasitic development and contain multiple daughter cysts; and type 3 cysts are completely calcified and represent the death of the parasite[9-11].

Abdominal radiography may depict a soft-tissue mass that corresponds to the hydatid cyst. Ring-shaped or curvilinear calcifications may be seen in 20%–30% of cases because of calcification of the pericyst[10]. Complete calcification also may occur during the healing phase. Infundibular and caliceal distortion is the most common finding at excretory urography, but obstruction and renal dysfunction also may be seen[11].

At ultrasonography (US), the appearance of renal hydatid disease varies. A unilocular (type 1) cyst may mimic a simple renal cyst. Multiseptated daughter cysts (type 2) may be mistaken for polycystic kidney disease. However, the presence of a thick, bilayered wall is suggestive of hydatid disease[9,11,16]. The "falling snowflake" or "snowstorm" sign—multiple echogenic foci produced by hydatid sand that is dispersed when the patient rolls—is pathognomonic of hydatid disease[9,11,16]. Detachment of the endocyst from the pericyst with a "floating membranes" appearance also is characteristic[16]. Multiple daughter cysts separated by a fluid matrix that contains a mixture of membranes of broken daughter vesicles, scolices, and hydatid sand with mixed echogenicity may give rise to a "wheel-spoke" pattern[9]. Type 3 cysts appear as a bright echogenic focus with strong posterior acoustic shadowing[11].

Typical CT findings of renal hydatid disease include a unilocular cyst (type 1), a multilocular cyst (type 2) with mixed internal attenuation and daughter cysts with lower attenuation than that of the maternal matrix, and a completely calcified cyst (type 3)[9,11,16]. In type 1 and type 2 cysts, the cyst wall may be thick or calcified, and both the wall and internal septa often enhance after contrast material is administered[11].

Treatment of renal hydatid disease is primarily surgical and consists of total or partial nephrectomy. Kidney-sparing surgery with enucleation, marsupialization, and cystectomy has been described and is an alternative[17-19]. Percutaneous management, which consists of aspiration, injection of a scolicidal agent (eg, 10% povidone iodine or 95% ethanol), and reaspiration, has proved safe and effective in small studies, but concerns remain about possible risks of fluid dissemination and fatal anaphylactic reaction[17,20-22].

Although the clinical manifestations of renal hydatid disease often are nonspecific, characteristic imaging findings coupled with a history of living in an endemic region are strongly suggestive of the diagnosis.

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