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A prospective study from Pakistan looked at the frequency of causes peculiar to secondary hypertension in a tertiary care hospitals. A total of 70 patients with confirmed diagnosis of secondary hypertension were randomly included. The authors concluded that thyrotoxicosis, pregnancy induced hypertension and pre-eclampsia, Cushing syndrome and glomerulonephritis, in their descending order are major contributors to the development of secondary hypertension in our patients.

A paper from Qatar looked at the usage of tobacco products. The author stressed that tobacco use is a major public health problem with prevalence of 37% and imposes a huge burden on health care services. The author described Qatar's approach in tobacco control, which is based on three strategies, are: legislative measures to raise public awareness, and providing smoking cessation services for smokers. The author stressed that a tobacco control strategy in Qatar needs

to be modified to tackle a number of challenges that have appeared recently.

A retrospective descriptive study was submitted from Jordan on all patients with the confirmed diagnosis of congenital heart disease referred for echocardiography. The author concluded that the majority of patients with CHD detected have non-cyanotic CHD. TOF is the commonest cyanotic lesion and VSD non-cyanotic lesion. In order to avoid complications, early detection of congenital heart disease is of utmost importance for proper management. 2D-echo with Doppler examination forms the gold standard for diagnosis.

A paper from Bangladesh assessed the knowledge and use of contraception of ever-married women of a district of Bangladesh namely Naogaon. The data analysis revealed that the current use rate of contraception is high enough (above ninety percent) and most women currently use modern methods.

A paper from Nepal looked at various GP newly graduated to looked at their capabilities in working in rural areas. The authors concluded that factors affecting GP recruitment in Nepal are complex and interacting. Addressing these issues requires a holistic and integrated response to encourage, place and appropriately use the skills of GPs.

A paper from Iran Looked at war. According to the statistics in the year 2000, mortality caused by war-related injuries has been estimated to be the 18th leading cause of death in Eastern Mediterranean Region (EMRO) of the World Health Organization (WHO), which justifies paying more attention to it. The author discussed the health impacts of the most recent war within the region i.e. the war in Iraq on the above patterns in order to highlight that this war has enormously deteriorated the fragile situation within the region.

A case report from Amman looked at Appendiceal duplication. The case was discovered incidentally intraoperatively. A 20-year old male patient admitted to a surgical ward in our military field hospital in Iraq, with symptoms and signs of acute appendicitis. Intraoperatively the patient was found to have appendiceal duplication. Appendectomy was performed successfully, with a smooth post operative course.

Pattern of Congenital Heart Disease at Prince Hashim Hospital- Jordan

ABSTRACT

Background: Congenital heart disease is the most common congenital problem in children. Presentation can vary from asymptomatic accidental findings to severe cardiac decompensation and death. Early recognition has great implications on prognosis.

Objectives: To study age, gender distribution and frequency of congenital heart disease in children referred to echocardiography in a single hospital in Zarqa.

Method: This is a retrospective descriptive study on all patients with the confirmed diagnosis of congenital heart disease referred for echocardiography over a period of two years from October 2005 to October 2007. Patients from day one of life till 14 years were included.

The study was conducted in the pediatric cardiology clinic at Prince Hashem Hospital in Zarqa.

Results: A total of (173) children were included. There were 95 males (54.9%) and 78 females (45.1%) with a ratio of 1.2:1. Seventy four percent of the children had acyanotic cardiac lesions. Ventricular septal defect followed by atrial septal defect, patent ductus arteriosus, and pulmonary valve stenosis were the most common acyanotic congenital heart lesions. Whereas Tetralogy of Fallot (TOF) followed by transposition of the great arteries were the commonest cyanotic congenital heart lesions. There was a female dominance in PDA and A-V canal lesions heart defects (63% and 68% respectively). More males had aortic valve defects.

Conclusion: The majority of patients with CHD detected have non-cyanotic CHD. TOF is the commonest cyanotic lesion and VSD non-cyanotic lesion. In order to avoid complications, early detection of congenital heart disease is of utmost importance for proper management.

2D-echo with Doppler examination forms the gold standard for diagnosis.

Key words: Congenital heart disease, 2 dimension echocardiography, Ventricular septal defect, Patent ductus arteriosus.

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Introduction

Congenital heart disease (CHD) is the most common congenital problem in children accounting for nearly 25% of all congenital malformations¹. Early recognition of such diseases has great implications. Clinical presentation and deterioration may be sudden and can lead to death². Despite improved medical care CHD is considered one of the leading causes of neonatal mortality².

CHD may present in different ages from birth to adolescent age group². Most cases are asymptomatic and discovered during routine neonatal check ups³. Other presentations can range from cyanosis, clubbing of fingers to full blown congestive heart failure^{2,3}.

CHD has not been studied thoroughly in Jordan as in other western and neighboring countries.

The purpose of this study is to present a single center experience in congenital heart disease at Prince Hashem Hospital in Zarqa and compare it to other countries.

Patients and Methods

This is a retrospective chart review conducted in the Pediatric echo-cardiac clinic from October, 2005 to October, 2007 in Prince Hashem hospital in Zarqa/ Jordan . All children with the confirmed diagnosis of congenital heart disease were included. Congenital

heart disease is defined as the structural heart disease of intrathoracic great vessels that is actually or potentially of functional significance present at the time of birth even if there was a delay in detection, as defined by Mitchell et al.⁴ One hundred and seventy three children were studied. Age ranged from day 1 till 14 years of age.

Clinical data were reviewed. Consideration was given to total number of cases with CHD, age at diagnosis, sex distribution and type of CHD.

Patients with multiple congenital anomalies or syndromes were excluded. Premature babies were also excluded. Patients with acquired heart diseases such as rheumatic heart or mitral valve prolapse were also not included.

Results and Discussions

A total of (173) children were included. There were 95 males (54.9%) and 78 were females (45.1%) ,with a male: female ratio of 1.2 :1, as shown in Figure 1. One hundred and twenty seven children (74%) of the total cases had acyanotic cardiac defects. Cyanotic heart defects were seen in 126 patients (26%). Ventricular septal defect followed by atrial septal defect, patent ductus arteriosus, and pulmonary valve stenosis were the commonest acyanotic congenital heart lesions, 43.4%, 13.6%, 8.3%, 6.2% respectively. Whereas Tetralogy of Fallot (9.5%) followed by transposition of the great

arteries (5.5%) and tricuspid atresia (3.6%) were the commonest cyanotic congenital heart lesions as shown in Table 1.

Figure 2 compares cyanotic and acyanotic congenital heart diseases.

Female dominance of PDA and A-V canal lesions at 63% and 68% of cases respectively were seen whereas a male dominance in the aortic valve lesions was seen.

DISCUSSION

Congenital heart diseases are an important group of diseases that cause great morbidity & mortality in children⁵. Our aim was to show our experience and compare it to others. This study does not give a true incidence and prevalence of CHD in the total population since it is confined to Prince Hashem hospital only, and this needs to be done on a larger scale. It is generally accepted that the improvement of diagnosis, attention or awareness among general pediatricians and early referral to pediatric cardiologists has resulted in an increase of reported prevalence of CHD^{2, 5}.

The present study indicates that CHD is an important pediatric cardiac problem in our study group.

To the best of our knowledge there are no other local studies and reports about cases of CHD at Al - Zarqa governate. There were (173) cases, 95 were male (54.9 %) of CHD and 78 (45.1%) females. Male to female ratio was 1.2:1, which is slightly higher than that shown by other studies of equal frequency⁶.

Seventy four percent of cases were acyanotic CHD and the remaining were cyanotic. This correlated well with international studies. It is inevitable that some cases would have escaped detection and referral which mainly includes neonates, born at home or who die without medical attention.

VSD is found to be the most common acyanotic CHD (43.4%) in our study. This is higher than what is reported in other studies as shown in Table (2)^{7, 8}. Worldwide, VSD is the most common acyanotic CHD accounting

for 25-30% of all CHD⁹. This may be explained by the difference in genetic make up and ethnicity.

ASD ranked second in frequency accounting for 13.6%. Other studies have shown comparable results. See Table 2.

PDA was seen in 8.3% of cases. This is lower than that reported in Saudi Arabia and Denmark at 10.4% and 12.5% respectively^{7, 10}. The difference can be explained by the exclusion of all premature babies in our study.

There is a significant difference in the incidence of Coarctation of the aorta in developing countries as compared to that of developed countries^{11, 12}. It is reported to be 3.4%, 3.3% and 1.1% in our study, in Saudi Arabia and Taiwan respectively, as compared to 10.2% in Sweden¹⁴. Shehan M from Taiwan suggested a probable explanation related to certain vitamin deficiencies in diet⁸. We believe it might also be related to the later diagnosis of this entity in late adolescence which is an age group not included in our study.

Among the cyanotic lesions Tetralogy of Fallot was the commonest cyanotic congenital heart anomaly followed by transposition of the great arteries being 9.5% and 5.5% respectively. This is comparable to worldwide incidences (5-7%)^{7, 8, 9}.

There was a female predominance in PDA and AV canal defect at 63% and 68% respectively in our study. This is consistent with that reported by Kenna in Liverpool¹⁵. Male predominance was seen in pulmonary stenosis. This is similar to that found in Alexandria, Egypt¹⁶, but contrasts with other studies in the UK and Saudi Arabia that have shown male predominance in aortic valve diseases and coarctation of the aorta^{7, 15}.

The multifactorial etiology of CHD involves the chromosomal abnormality, maternal diabetes, smoking, teratogenic drug and maternal infection during early pregnancy^{9, 17}. These most likely can explain the difference in reported incidences in different countries.

CHD has a multifactorial nature of inheritance¹⁷. This emphasizes the

importance of genetic counseling to patients with family history of congenital heart diseases^{17, 18}.

RECOMMENDATION

1. Our study should be a base for a national Pediatric cardiac database.
2. We recommend the continuity of statistical studies in all Jordanian hospitals.
3. Echocardiography is considered gold standard for diagnosis of congenital heart disease.
4. Early referral of children with suspicion of CHD to the nearest Pediatric cardiac center for early treatment to improve the outcome is needed.

CONCLUSION

This study gives only an overview of the pattern of congenital heart disease at Prince Hashim Military Hospital.

The majority of patients with congenital heart disease detected have non-cyanotic CHD. TOF is the commonest cyanotic lesion and VSD non-cyanotic lesion. In order to avoid complications early detection of congenital heart disease is of utmost importance for proper management.

2D-echo with Doppler examination forms the gold standard for diagnosis.

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Figure 1: Patients' Gender distribution

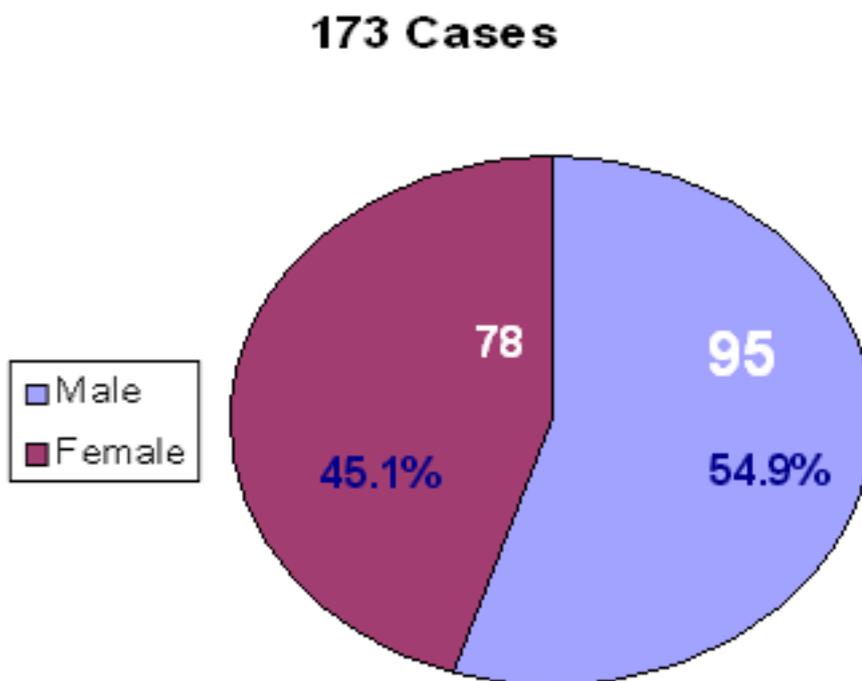


Figure 2: Type of Congenital heart disease

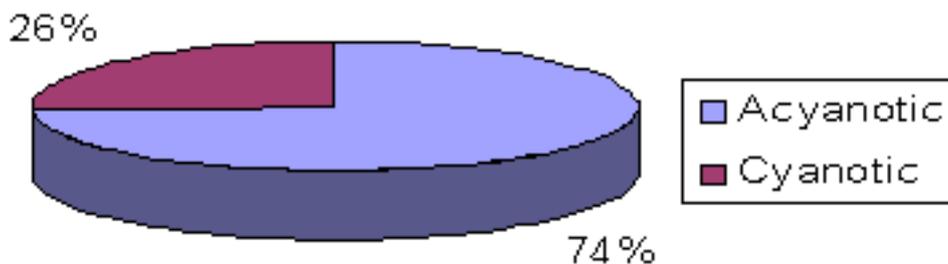


Table 1: Relative distribution of cyanotic and non-cyanotic CHD lesions

Cardiac lesion	Number	Percentage
Ventricular Septal Defect	75	43.4%
Atrial septal defect	22	13.6%
Patent Ductus arteriosus	14	8.3%
Pulmonary valve stenosis	10	6.2%
Aortic valve stenosis	6	4.3%
Tetralogy of Fallot	16	9.5%
Transposition of great arteries	9	5.5%
Complex CHD	4	2.25
Tricuspid Atresia	6	3.65
Complete atrio-ventricular septal defect	6	3.6%
Coarctation of aorta	5	3.4%

Table 2- Comparative study of lesions with other studies

Types of CHD	Prince Hashem Hospital	Fuad Abbag (Saudi Arabia)	Alberta Hertiage pediatric cardiology programme(Canada)	Mary K.M.Shann (Taiwan)
Ventricular Septal Defect	43.4%	32.5%	34.4%	39.3%
Atrial septal defect	13.6%	10.4%	10.5%	5.3%
Patent Ductus arteriosus	8.3%	15.8%	10.8%	9.8%
Pulmonary valve stenosis	6.2%	10.1%	-----	2.5%
Aortic valve stenosis	4.3%	2.7%	-----	-----
Tetralogy of Fallot	9.5%	4.5%	10.2%	12.3%
Transposition of great arteries	5.5%	1.5%	5.1%	5.3%
Complex CHD	2.25%	2.7%	3.5%	5.0%
Tricuspid Atresia	3.65%	1.5%	-----	-----
Complete atrio-ventricular septal defect	3.6%	-----	4.4%	-----
Coarctation of aorta	3.4%	3.3%	-----	1.1%

Prevalence of Contraceptive Use in Naogaon District of Bangladesh

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Key words: Ever married women, Contraception and Logistic Regression.

ABSTRACT

The aim of this study is to assess the knowledge and use of contraception of ever-married women of a district of Bangladesh namely Naogaon. The study uses data collected from some specific rural and urban areas of Naogaon district, Bangladesh. The information was collected from 800 ever-married women by interview method. Bivariate analysis and logistic regression analysis were adopted in evaluation of data and the analysis revealed that although the knowledge of contraceptive use has been conveyed to the majority of couples in Bangladesh, the current use rate of contraception is high enough (above ninety percent) and most of them currently are using modern methods. The most prevalent method of contraception is the pill. The level of current contraceptive use is higher in urban areas than in rural areas however, this gap is very narrow. Logistic analysis shows that education of both respondent and husband, visit of family planning workers, place of residence, desire for additional children, talking to husband about family planning and the number of living children have a net significant effect on the current use of contraception.

Introduction

Nowadays the population problem is one of the burning questions in Bangladesh. Bangladesh strides hard to solve ubiquitous problems related to some population issues such as- fertility reduction, to achieve the replacement level, reproductive health and reproductive rights of women in terms of family planning etc. In this case, the family planning program has been considered as one of the successful programs in a setting without much socio-economic development that is considered a prerequisite for fertility decline in a broader sense and ensures the reproductive rights and health of a woman in the individual sense. Use of contraception is generally the main determinant influencing reduction in fertility in developing countries (Mitra et al; 1993). Any deliberate practice to avoid conception and to keep the family size small is the main motive of contraception. Although contraceptive prevalence among ever-married women of reproductive age is increasing rapidly, in many developing countries, the rate has not yet reached those of developed countries. Therefore, it is important to understand the levels and determinants of contraceptive use in order to formulate policies supporting proper strategies for raising contraceptive prevalence. Such considerations as desired family size and child-spacing influence contraceptive prevalence among

married women at the individual level, while at the macro level, the laws and regulations and cultural norms are important factors that determine access to contraception. However, unwanted pregnancies resulting from lack of contraceptive use have led to an increasing number of abortions among women. Though the accepted contraceptive use rate has got its momentum, still there might exist differences in such use rate by rural-urban residence as well as regional difference. The present study is an attempt to assess the use of contraception of ever-married women of Naogaon district, Bangladesh.

Data Collections and Methodology

In this study, the ever-married women of reproductive age in Naogaon district are the study population. The data was collected on fertility performance along with various socio-economic characteristics of the respondents from both urban and rural areas in Naogaon district. The number of respondents was 400 from rural and 400 from urban areas. To determine the contraceptive behavior of ever-married women of the study population, the percentage of married women has been analyzed by categories of several independent variables. The Logistic Regression Model is used for identifying the risk factors and for predicting the probability of success.

The general logistic model expresses a qualitative dependent variable as a function of several independent variables, both qualitative and quantitative (Cox, 1984).

If P is the probability of use of contraception, then

$$P = \frac{1}{1 + e^{-(\beta_0 + \beta_1 X)}}$$

where β_0 and β_1 are the regression coefficients and X is a vector of covariates that affect the use of contraception. The general logistic regression model can thus be expressed as:

$$\begin{aligned} \text{Logit}(p_i) &= \log_e \frac{p_i}{1 - p_i} \\ &= \sum_{j=0}^k \beta_j x_{ij} \end{aligned}$$

which express the log odds of current users as a linear function of the independent variables.

In this analysis, the input data were matrices tabulating the current use status of contraception by independent variables. The logistic model is fitted by considering current use of contraception as the dependent variable, which have dichotomized by assigning 1 if respondents were using any method of contraception at the time of the survey and 0 for not using any method. In performing stepwise regression analysis for the determination of significant variables, 10 variables were initially selected for logistic regression analysis. If the odds ratio is greater than unity, the probability of being a current user is higher than that of being a non-user. The P value is used to identify the significant effects to assess the relative importance of the selected variables in the logistic regression model.

Results and Discussion

3.1 Knowledge of Contraception

In the 2004 BDHS survey, knowledge of contraceptive methods was assessed through a series of questions combining spontaneous recall and prompting procedures,

as in the earlier BDHS survey. Information about knowledge was sought for six modern methods the pill, IUD, injection, condom, female sterilization and male sterilization as well as two traditional methods: periodic abstinence (safe period or rhythm method) and withdrawal. Today a desire for family limitation is noticeable everywhere. A relatively wide range of contraceptive choices is available to women ranging from short acting to medium term, long action and permanent methods. These methods are available through Government, Non-Government Organizations (NGOs) and private sector network.

3.2 Current Use of Contraception

The term "current use" refers to the method that was being used by an individual client at the time of the survey. According to the BDHS-2004 report current use of contraception is defined as the proportion of women and men who reported that they are using a family planning method at the time of interview. Table 1 shows the percentage distribution of ever-married women by current contraceptive use status. The table show that about 93.9 percent women of the study area are currently using a contraceptive method. This current contraceptive use rate is higher in urban areas than in rural areas (about 96.5 percent vs. 91.2 percent) giving rise to almost 5% urban rural gap in contraceptive use. Among all methods, the pill accounted for the highest use (nearly about 51.0 percent). There has been a wide difference in the use of pill by rural-urban residence. The use rate of the pill in urban areas is 56% and in rural areas is 46.3%, a gap of nearly 10%. The use rate of condoms is higher in urban areas but the use rate of injections and male and female sterilization are higher in rural areas. Traditional methods are less widely used than modern methods.

Conclusions

The study reveals that nearly all women of the study area are aware of at least one contraception method. The current rate of contraceptive use in Bangladesh is still high (93.9 percent)

and it has an increasing tendency day-by-day. This study found a persistent, strong relationship between women's education and contraceptive use, but education makes less difference to contraceptive use where family planning programs are strong, although female education should be encouraged particularly on the rural areas. The husband-wife discussion about family planning and a more equal status of women in family in terms of decision making about family planning are important for increasing the contraception use rate and also a husband's consent is required before his wife can accept a contraceptive method. Efforts should be made to encourage greater participation of women in all family decisions. The current use of contraception is more in urban areas. It is also being increased in rural areas to control the growth rate of Bangladesh. Improvement of the status of women in the family and society in general, and enhancement of contraceptive supply through visits by field workers to the individual level in particular, would make the family planning program more effective and successful in Bangladesh.

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Table 1: Distribution of Ever Married Women by Current Use of Contraception

Contraceptive method	Urban	Rural	All
No method	3.5 (14)	8.8 (35)	6.1 (49)
Any modern method	94.6 (378)	90.9 (363)	92.6 (741)
Pill	56.0 (224)	46.3 (185)	51.0 (408)
IUD	1.5 (6)	1.5 (6)	1.9 (14)
Injection	4.8 (19)	17.8 (71)	11.3 (90)
Condom	27.3 (109)	10.0 (40)	18.3 (146)
Female sterilization	5.0 (20)	14.8 (59)	10.0 (80)
Male sterilization	-	0.5 (2)	0.3 (2)
Any traditional method	2.0 (8)	0.5 (2)	1.3 (10)
Periodic abstinence	1.5 (6)	0.3 (1)	0.9 (7)
Withdrawal	-	0.3 (1)	0.1 (1)
Other method	0.5 (2)	-	0.3 (2)
Total number	100 (400)	100 (400)	100 (800)

Table 2: Current use of Contraceptives of the Study Population

Characteristics of the Study Population	No. of Respondents	Currently using Contraception (%)
All (15-49)	800	93.9
Place of residence		
Urban	400	82.0
Rural	400	68.0
Age of respondent		
Less than 20	54	70.4
20-34	526	75.9
35 and over	220	75.5
Education of respondent		
No education	120	72.5
Primary	140	75.4
Secondary and higher	540	77.9
Education of husband		
No education	109	72.5
Primary	131	74.0
Secondary and higher	560	76.3
Number of living children		
No children	82	41.5
1-2	404	76.2
3 or more	165	87.8
Age at first marriage		
Less than 20	440	78.5
20 or more	360	64.4
Religion		
Muslim	750	58.0
Non-Muslim	50	76.5
Talked to husband about FP		
Never	247	41.8
Once or more	553	69.2
Desire for more children		
Want more	303	61.4
Want no more	497	83.9
Occupation of husband		
Agriculture	210	76.2
Service	265	78.5
Business	220	70.5
Labor	72	70.8
Others	33	67.9
Visit of FP workers		
No	149	64.5
Yes	651	85.6

Table 3: Logistic Regression of Current Use of Contraception among Ever-Married Women

Characteristics	Beta Coefficient (B)	S.E.	Significant probability (p)	Odds ratio
Place of residence				
Rural (r)	-	-	-	1.000
Urban	0.862	0.237	0.000	2.368
Religion of respondent				
Muslim (r)	-	-	-	1.000
Non-Muslim	0.715	0.340	0.035	2.044
Education of respondent				
No education (r)	-	-	-	1.000
Primary	0.309	0.296	0.096	1.734
Secondary and higher	0.227	0.273	0.005	1.797
Education of husband				
No education (r)	-	-	-	1.000
Primary	0.466	0.318	0.043	1.623
Secondary and higher	0.339	0.279	0.025	1.712
Occupation of husband				
Agriculture (r)	-	-	-	1.000
Service	1.032	0.602	0.086	1.356
Business	-0.440	0.603	0.465	0.644
Non-agriculture labor	-0.835	0.603	0.166	0.434
Others	-0.761	0.644	0.238	0.467
Age at first marriage				
Less than 20 (r)	-	-	-	1.000
20 or more	0.116	0.235	0.021	1.123
Desire for more children				
Want more (r)	-	-	-	1.000
Want no more	0.816	0.212	0.010	2.261
No. of living children				
No children (r)	-	-	-	1.000
1-2	1.511	0.390	0.000	2.221
3 or more	0.500	0.270	0.064	2.806
Talked to husband about FP				
Never (r)	-	-	-	1.000
Once or more	1.145	0.048	0.000	3.050
Visit of FP workers				
No (r)	-	-	-	1.000
Yes	0.008	0.230	0.074	1.608
Constant	0.992	0.775	0.201	2.697

Note: (r) represent reference category;

: *** for P<0.01, ** for P<0.05, and * for P<0.1

Tobacco Control in Qatar

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Key words: Tobacco use; Tobacco Control; Smoking; Qatar.

ABSTRACT

The import and usage of tobacco products are progressively increasing in Middle East. National health data in Qatar revealed that tobacco use is a major public health problem with prevalence of 37% and imposes a huge burden on health care services with its associated mortality and morbidity especially coronary heart disease and cancer. The aim of this paper is to describe Qatar's approach to tobacco control, which is based on three strategies: legislative measures raise public awareness, and providing smoking cessation services for smokers. Since 1996, Qatar is taking a leading role in imposing anti-smoking legislative measures in the Arab world and by issuing the first comprehensive tobacco control law in the country, which includes smoking bans and increased taxes on tobacco products. In addition to establishing smoking cessation clinics to help smokers to quit, different sectors are supporting a number of tobacco awareness campaigns with the main focus on preventing youngsters becoming smokers. The tobacco control strategy in Qatar needs to be modified to tackle a number of challenges that have appeared recently.

Introduction

It has been known for many decades that tobacco is the leading preventable cause of ill health and premature death in the world. It causes 1 in 10 deaths among adults and about 4 million premature deaths worldwide^{1,2}.

Available data in the Middle East indicate a considerable and steady increase in tobacco consumption over the past three decades. Data also demonstrates high rates of smoking in these countries, especially among men where smoking prevalence rates among adult males increased up to 40% in some countries. Moreover, imports and manufacture of cigarettes are progressively increasing in this region³⁻⁵.

While the prevalence of smoking in the Arab countries of the Persian Gulf is 30-50%, national health data in Qatar, the second smallest country in the Persian Gulf with a total population of more than 724,125, reported that the prevalence of smoking is 37% among males and 0.6 % among females according to the Gulf Family Health Survey (GFHS) in 1999. On the other hand smoking is increasing among all youths (15-18 years old) from 13% in 1998 to 18% in 2001 according to the Global Youth Tobacco Survey (GYTS)⁶⁻⁸.

Smoking-related diseases in Qatar are the most prevalent diseases. While Coronary Heart Diseases (CHD) is ranked as the leading cause of death among adults over 40 years-old^{9,10}, Qatar has the second highest lung

cancer age-standardized incidence rate among Arab countries in the Persian Gulf after Bahrain with a rate of (18.5 for males, 5.5 for females) 100,000 person-years¹¹.

There is no accurate data regarding the annual imported tobacco by Qatar but the best available data showed that it is more than 1,110 tons. In the last ten years the imported tobacco for consumption was around US\$ 15 million annually⁸.

This paper aims to describe the current public health strategies and challenges of tobacco control in Qatar.

Current tobacco control in Qatar

Tobacco control in Qatar incorporates the international strategies recommended by the World Health Organization (WHO) and Regional plan of Arab countries in the Persian Gulf. Currently, tobacco control approaches in Qatar are based on three strategies: legislative measures, increase of public awareness, and providing smoking cessation services for smokers.

1. Tobacco control legislative measures in Qatar:

Qatar took a leading role in imposing tobacco control legislative measures in the Arab world. In 1996, the Ministry of Health has banned smoking in its premises, which includes all offices, primary care clinics, and hospitals.

In 1999 another law has been issued to increase the custom duties on imported tobacco products.

The first comprehensive law concerning the control of tobacco and its derivatives in Qatar has been put into force in 2002. The Law number 20 of 2002 encompasses a range of legislative measures starting from smoking bans in enclosed public places, banning advertising for tobacco products, prohibition of selling tobacco products to minors, and other measures (as shown in Table-1).

Table-1 Tobacco control law in Qatar- The law number 20 of 2002

1. 1. Smoking ban in all enclosed public places including public transportation, public workplace, educational institutes, health care premises, and recreation places such as cinemas and theaters.
2. 2. Ban of tobacco advertisement in mass media and billboards.
3. 3. No sell for tobacco products to minors (any person under 18-year old).
4. 4. No sell for tobacco product within 500-meters around the school.
5. 5. No vending machines for cigarettes to be allowed in the country.
6. 6. No tobacco to be cultivated in the country.
7. 7. One fourth of pack size to be dedicated for health warning labels on diseased caused by smoking.
8. 8. Two percent of revenue of taxation on tobacco products to be used in tobacco control and health education programs.

The Health authorities implement the law by officials with judicial powers to report any incidence of violations of the law and imposing the fines. The law imposes a fine which ranges from 200-500 Qatari Riyals (US \$ 54.8-137) against anyone who breaches the law by smoking in enclosed public places. Whereas the law punishes anyone who sells any tobacco products to minors with six months prison and/or a fine of 5,000 Qatari Riyals (US \$ 1,370).

In June 2003, Qatar has signed The Framework Convention on Tobacco Control (FCTC), which is the world's first ever public health

treaty which embraces all elements of a comprehensive tobacco control agenda. In July 2004 the FCTC has been ratified in the country.

2. Smoking cessation services in Qatar:

In Qatar, smoking cessation services have been provided free of charge since 1999. These services include providing personal counseling, monitoring carbon monoxide levels, prescribing nicotine replacement therapy (NRT) and Bupropion by public health medicine physicians who are trained in smoking cessation counseling.

Till now there are only two smoking cessation clinics in Doha and Al-Khor (the second largest city). It is estimated that more than 700 smokers utilize the services annually and the quit rate reaches 38%.¹² Unfortunately both clinics are hospital-based and there is no single primary care or community-based clinic that can provide good accessibility to quit smoking.

3. Anti-smoking awareness activities in Qatar:

In the last ten years a number of anti-smoking activities have been implemented in Qatar aiming to increase the awareness of the public about the adverse effects of both smoking and passive smoking. The main efforts have been directed to tackle smoking among school students through the school health education program provided by the National Health Authority of Qatar (NHA-Qatar) and Ministry of Education. These activities include educational sessions on harmful effects of smoking, developing personal skills to deal with peer pressure, and training of school's social workers as smoking cessation advisors. Also smoking has been used as a subject for "Draw in Health", which is a school students' competition aimed to design a health education poster.

Another program focused on promoting quitting of smoking among smokers through the international smoking cessation competition "Quit & Win". This competition was supported financially by one of the Islamic Charity Organizations.

In addition to the efforts of the NHA

and Ministry of Education, new partners have joined the campaign to tackle smoking habits. Some of these partners are governmental like the Ministry of Islamic Affairs, petroleum companies, and gas companies. While other partners were non-governmental organizations like The Qatari Society of Cancer Control, and Sport clubs.

Lately community mobilization has been used to control smoking in one of the Qatari cities, Wakrah. "Smoke Free Wakrah" is a community-base initiative which aims to prevent adolescents from being new smokers through peer education, restricting selling tobacco products near places visited by youngsters, such as schools, parks, and sport clubs. Advocacy has been used in this initiative in different areas, like mass media, mosques, and street marches. Smoke Free Wakrah was initiated by social workers in all schools of Wakrah, including girls' schools and supported by a large number of local community leaders and businessmen. Measuring the Variables

Dependent variables: To measure abnormality, the Self- Report method is used.

Independent variables: Socio-economic base variable: This index is based on Duncan (Miler & Salkind, 1991) socio-economic index which is a combination of average indexes of income, education level and job.

Family problems: It means that there are some problems which endanger family equilibrium and aren't in the direction of aims and profits of a family. Family problems variable is the combination of quarrel and family problems, which consist of verbal disputes, thrashing and leaving home by parents.

Glockm and Sturk indexes are used to measure religiousness (Glockm & Sturk,1981). This method is one of the best methods to measure piety. Piety is a combination of believing in God, believing in Resurrection, feeling closeness to God, participating in religious ceremonies, saying prayers, fasting and accepting the veil.

External social index is the degree of a person's control by family,

Challenges of Tobacco control in Qatar

Tobacco control in Qatar faces a number of challenges that are considered as barriers for its success. Tobacco control legislation is regarded as a major strategy for tobacco control in Qatar.

However it has some crucial limitations like the low price of tobacco products in Qatar, compared to other countries even after a 10% increase in price. For example in 2003 a packet of 20 sticks costs US \$ 1.37- 1.92, which is still considered as a very cheap price in a rich country like Qatar. It is also apparent that there is poor level of compliance with smoking bans in enclosed commercial buildings like malls, and companys' offices compared to the governmental buildings and worksites due to the severe shortage of officials with judicial powers to check violations of the law, all days of the week.

Another challenge in tobacco control is the other forms of tobacco that appeared recently such as Water Pipes and chewing tobacco. The number of people getting addicted to smoking and "sheesha" (Water Pipe) is alarmingly on the rise in Qatar, especially among women, despite the law introduced six years ago on the control of tobacco and its derivatives. The increasing numbers of sheesha cafes showed that the tobacco control law doesn't cover the restriction of this type of smoking.

On the other hand using chewing tobacco has never been known in Qatar till migrants from the Indian sub-continent, who came to Qatar for work, brought it in the 1980s. Now using chewing tobacco is increasing among adolescents and youths in educational institutes and recreation centers as most of them thought wrongly that it is a harmless tobacco.

Lack of updated information regarding prevalence of different types of tobacco and the amount of tobacco used is a major defect in the tobacco control strategy in Qatar. Such information on tobacco use and economics is crucial for measuring the impact of public health policies particularly in primary care clinics.

Lastly most of the physicians, nurses, and health educators in Qatar are not trained in delivering smoking cessation counselling. This point affects the accessibility of many smokers who would like to quit, to smoking cessation services.

CONCLUSION

Tobacco use remains a major public health problem in Qatar and imposes a huge burden on health care services with its associated morbidity and mortality, although Qatar has taken a number of actions in order to tackle tobacco-related health problems. However still there is need to strengthen these actions through a comprehensive tobacco control plan, which should include more inter-sectorial cooperation in implementing health education campaigns, the new rising smoking habits like water pipes and chewing tobacco. Besides the tobacco control law should be modified to cover other types of tobacco products and to increase their prices. Also smoking cessation services should be provided through a network of primary care- based or workplace smoking cessation clinics. Lastly more research about the effectiveness of these measures is needed.

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War is An Unjustifiable Man-made Disaster Within the Eastern Mediterranean Region

Key words: War, Eastern Mediterranean Region (EMR), Iraq.

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ABSTRACT

According to the statistics in the year 2000, mortality caused by war-related injuries has been estimated to be the 18th leading cause of death in Eastern Mediterranean Region (EMR) of the World Health Organization (WHO), which justifies paying more attention to it. Therefore, this report tries to disclose the different patterns of age and sex groups' mortality rates caused by war-related injuries in the year 2000 within EMR. It also discusses the health impacts of the most recent war within region i.e. the war in Iraq on the above patterns in order to highlights that this war is enormously deteriorated the fragile situations within region.

Introduction

The Eastern Mediterranean Region (EMR) is one of the six World Health Organization's (WHO) Regions that in the year 2000, consists of 22 countries including Afghanistan, Bahrain, Cyprus, Djibouti, Egypt, Iraq, Islamic Republic of Iran, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates and Yemen⁽¹⁾. The region is the cradle of many religions including Islam (that is the faith of the 90% of the people within region), Christianity, Judaism and Zoroastrianism⁽²⁾. For its geopolitical situation and enormous natural resources including oil enormous reservoirs, the region has endured a great deal of wars and armed conflict throughout human history.

As the statistics show, in the year 2000 mortality caused by war-related injuries has been estimated to be the 18th leading cause of death in this region whilst it has been estimated to be the 11th cause of death in African Region (AFR), the 34th in both the European Region (EUR) and South-East Asia Region (SEAR), the 62nd in the American Region (AMR) and the 66th in the Western Pacific Region (WPR)⁽¹⁾. Therefore, on the face of these figures, mortality caused by war-related injuries should be considered as one the most urgent public health problems only within the AFR and EMR.

Since, these aggregate figures may hide dissimilarities that have happened among sexes and age groups, the chief aim of this report is

two-fold. The first aim is to disclose the different patterns of age and sex groups' mortality rates caused by war-related injuries in the year 2000 within EMR. It should be noted that such a basic understanding could help to assess the true magnitude of the war problem within the region and to apply efficient measures to prevent, reduce or control it. The second aim of this report is to discuss the health impacts of the most recent war within the region i.e. the war in Iraq, on the above patterns in order to highlight that this war has enormously deteriorated the fragile situations within the region.

Mortality rates caused by war-related injuries within EMR in the year 2000

I have obtained, plotted and compared different age and sex groups (0-4, 5-14, 15-29, 30-44, 45-59, 60 and above) estimated mortality rates caused by war-related injuries (ICD9 codes E990-E999)⁽³⁾, which have been estimated by the WHO Global Burden of Disease project (GBD) for 2000, version 1⁽⁴⁾ and its aggregated results for WHO regions has been published in the world report on violence and health⁽¹⁾. This version of the GBD has been applied to the statistical modeling, systematic reviews of health service data and epidemiological studies plus extensive analyses of mortality data to produce as fair as possible estimates of mortality caused by war-related injuries⁽⁴⁾.

The resulting plot shows that in all age groups the rates of mortality caused by war-related injuries are higher in males in comparison to females. In both genders the first and the last age groups have higher rates than the other groups. Furthermore, the most high-risk age group among males is the first one (0-4 years) (34.6 per 100,000), which also has the highest rate among all other age and sex groups, and among females is the last one (60 and over) (13.7 per 100000). The least high-risk age group among males is the second one (5-14 years) (4.1 per 100000) and among females is the fourth one (30-44 years) (2 per 100000) (Diagram 1), which also has the lowest rate among all other age and sex groups.

Based on these patterns it seems that within the region, mortality caused by war-related injuries in the year 2000 affected the most vulnerable groups i.e. children and elderly more than the other groups. Although the increased mortality rates among these high risk groups especially infants during armed conflicts have been well documented⁽⁵⁾ in what follows I will try to briefly draw the attention of the readers to the most recent war within the region i.e. the war in Iraq, which has begun in March 2003, mainly by the US and UK led coalition forces. Although this war has happened after the year 2000, its nature and its consequences could help to not only better understand the above observed patterns but also to emphasize on this fact that the vulnerable groups within the region are still dying from war related injuries even in a greater extent compared to the year 2000.

The health impacts of the most recent war in Iraq

During the past 20 years, the people of Iraq have been caught up in three wars i.e. war with Iran in the 1980s, the Gulf War in 1991 and the US and UK led coalition invasion of Iraq in 2003⁽⁶⁾. Just a year before the third war was started, a report from Medact i.e. a UK based organization

of health professionals had warned that a new war on Iraq could produce a humanitarian disaster^(7 & 8). Despite this warning, the war begins and we have now realized that the impacts of this recent war on the health situations of Iraqi people are devastating.

In terms of health systems, the quality of state services is poor due to persistent under-funding, poor physical infrastructure, scarcity and mismanagement of supplies, lack of up to date skills and knowledge and staff shortages⁽⁹⁾. For instance, it has been documented that in 2006, of 34,000 physicians registered in Iraq before the 2003 invasion, almost 2000 had been murdered, 250 had been kidnapped and 12,000 had left Iraq⁽¹⁰⁾.

In terms of mortality, the situation is even worse. A survey, which compares mortality in Iraq during the period of 14.6 months before war with 17.8 months after war reveals that more than 100,000 excess deaths have happened in the second period. Air strikes from invaded forces accounted for most of these extra deaths, which mostly happened among women and children⁽¹¹⁾. Unfortunately, the subsequent survey conducted recently by the same team concluded that the mortality figure has risen to almost 655,000, most of them happen in males due to violence⁽¹²⁾.

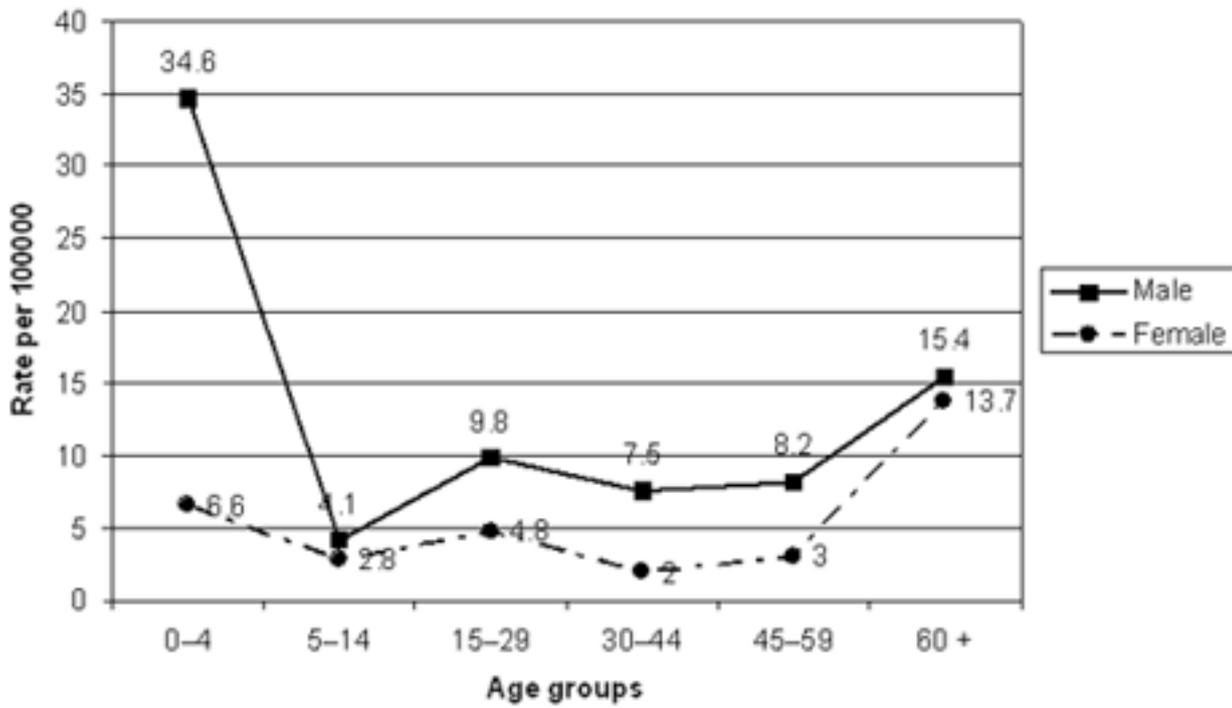
Let us compare these extra deaths in Iraq with this estimation by the WHO that globally in the year 2000 nearly 310,000 people died from war related injuries⁽¹⁾. By making this comparison or realizing this fact that these extra deaths are high above the death toll of Hiroshima one comes to this conclusion that this rings a very strong alarm⁽¹³⁾ that this war has turned into a human unjustifiable disaster that has made the already frail situation in EMR even more fragile.

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Diagram 1. Estimated rates of death caused by war-related injuries by age and sex groups, WHO EMR, 2000



Nepal's General Practitioners - Factors in Their Location of Work

Key words: Practice Location, General Practice Training, Recruitment.

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SUMMARY

BACKGROUND: The MD in General Practice is the one postgraduate programme specifically seeking to address the rural doctor shortage by training doctors for district hospitals.

OBJECTIVE: To explore the key issues of practice location of all MDGP graduates to enhance recruitment of doctors in rural practice.

METHODOLOGY: Study of demographic factors of 98 living graduates enhanced by qualitative study using triangulation of data from one postal questionnaire, one hand delivered questionnaire with semi-structured interview and focus group discussion.

RESULTS: The spouse growing up outside Kathmandu and whether the doctor had ever been a Health Assistant were the statistically significant factors in whether currently working outside Kathmandu.

The main themes arising with regard to improving recruitment of doctors to GP were:

- * Selection of rural candidates
- * Raising awareness of General practice both in the community and in undergraduate medical training
- * Having GP input to training of undergraduate doctors
- * Providing early positive rural experience during training
- * Selective admission to postgraduate GP training programmes with provision of scholarships

CONCLUSIONS: Factors affecting GP recruitment in Nepal are complex and interacting. Addressing these issues requires a holistic and integrated response to encourage, place and appropriately use the skills of GPs.

Introduction

The Medical Doctorate in General Practice (MDGP) began in 1982 as an initiative of the Tribhuvan University and the University of Calgary, Canada. Phases 1 and 2 had overseas components but Phase 3 from 1991 has been conducted entirely within Nepal. Subsequently BP Koirala Institute of Health Sciences (BPKIHS) started a MD in Family Medicine in 2001 and National Academy of Medical Sciences (NAMS) started an MDGP programme in 2005. This has been the one postgraduate programme specifically seeking to address the rural doctor shortage by training doctors for district hospitals. In the light of Nepal's shortage of rural doctors to address the health needs of this country (2005 Ministry of Health figures suggest urban doctor ratio of 1:1,057 and rural of about 1:41,000), a study of factors affecting a doctor's decision concerning practice location is helpful.

Studies from developed countries notably USA, Canada and Australia suggest a number of significant factors. The doctor's background especially growing up in rural area has generally been found to be the most important independent predictor of rural practice(1-3). Other factors suggested and studied have been exposure to rural practice during medical training both in medical school (4,5) and residency(6,7), personal intention and motivation - commitment to rural family medicine appeared to be a powerful factor (1,8,9) and various financial, professional and lifestyle issues(10). Fryar et al(3) concluded that personal characteristics and background may be useful considerations in selecting applicants for family practice residency programmes committed to reducing shortages of health care service in rural areas. Felix et al(11)

also concluded addressing community factors in recruitment efforts through community development activities may increase their success. There appear to be different factors in retention(1).

In a 2001 study of thirty-nine MDGPs(12), rural upbringing appeared the most significant in determining location of work. Because numbers were small, it was felt a repeat of the study in a developing country like Nepal with larger numbers may add more useful and robust information to what is already available from developed countries.

Methods

This study was done by hand delivering or mailing a questionnaire to the MDGP graduates resident in Nepal between June and September 2006. It was the same questionnaire used in the 2001 study.

Information was collected about personal demography and current and previous places of work and work habits. Places of work were classified as whether within or outside the Kathmandu Valley since this is the major urban area of Nepal. The data results were compiled and analysed in SPSS and SAS programmes looking at what background factors influenced the current place of work.

There was also a qualitative study using triangulation of data from one postal questionnaire, one hand delivered questionnaire with semi-structured interview and focus group discussions during a national symposium on General Practice.

Two authors independently read and transcribed each of the questionnaire responses, identifying main themes emerging and performing initial

coding. A high level of agreement was found between raters on the main issues. There were no significant outlying data. The summary of focus group discussions and plenary notes were also independently read and transcribed by two authors. A full description of this symposium's findings is found in a separate paper (Building up General Practice for Nepal, 2006). The final analysis was developed in discussion with all authors.

Results

Some contact was made with 75 of the 87 graduates living in Nepal and responses were received from 62 doctors, 39 from outside of Kathmandu valley and 23 from within Kathmandu, an overall response rate of 71%.

One graduate had died and eleven are overseas. At least three of these twelve had worked at some time in rural areas.

Where are Nepal's General Practitioners?

- **Fifty-three (62.1% of those in Nepal) were out of Kathmandu Valley.**

- Thirty in government service, eight in Medical Colleges and fifteen in Private Institutions including mission hospitals/ Private Practice. Note - there are no females (out of 9 graduates) currently working outside Kathmandu.

- **Thirty - four (37.9% of those in Nepal) were in the Kathmandu Valley.**

- Eleven in government hospitals, twelve in Medical Colleges and eleven in Private Institutions/ Practice. (Of these, at least five had at some time worked in rural areas.)

- **Eleven were overseas.**

- Of these at least 2 had done some work previously outside Kathmandu.

The location of practice by region is illustrated in Graph 1.

RESULTS and DISCUSSION of Factors in Location of Work

The univariate analysis using chi-

square of the independent variables and the 2 dependent variables of place of first practice and of current practice is shown below.

Where the doctor predominantly grew up was used as the independent variable since there is significant correlation/co linearity with birthplace (just 2 born outside Kathmandu grew up predominantly in Kathmandu) and schooling (just 1 who schooled outside Kathmandu grew up predominantly in Kathmandu and 1 who schooled in Kathmandu grew up predominantly outside Kathmandu).

- The strong association between age (≥ 45 and < 45), Years of GP practice (≤ 6 and > 6), and the phase of the programme (Phases 1 and 2 vs Phase 3) is understandable as they are essentially conveying the same information (i.e. co linearity).
- Phase 3 doctors were more likely to have a Health Assistant background and had undergraduate rural exposure. In fact all Phase 1 and 2 doctors had a science background. This probably reflects the availability of training.
- Doctors with >6 years MDGP practice are more likely to have grown up outside Kathmandu.
- There is an association between spouses growing up in large urban centres and being more educated (a professional/graduate/health worker) probably reflecting opportunity.
- There is a strong association between the doctor's and spouse's place of growing up (rural and rural) which may also reflect opportunity for meeting/arranging marriage.
- There is a strong association between the 2 dependent variables indicating little movement of doctors.

For **place of first practice** whether in or out of the Kathmandu Valley, the factors which reached statistical significance ($p < 0.05$) on multiple logistic regression are:

- the phase of the programme in which the graduate trained. Those trained in phase 3 were more likely to work outside the Kathmandu Valley (45/70) than those in Phases 1 and 2 (3/11).
- the age of the doctor. Those > 45

(26/37) were more likely to work outside the valley than those < 45 (13/28).

- where the spouse grew up. Where the spouse grew up outside Kathmandu (34/48) the doctor is more likely to have first practised outside Kathmandu than when the spouse grew up in Kathmandu (5/18).

For **current place of practice** whether in or out of Kathmandu Valley, the factors which reached statistical significance ($p < 0.05$) on multiple logistic regression are -

- Spouse place of growing up. The doctor is more likely to be out of Kathmandu if the spouse grew up out of Kathmandu (35/48) compared to the spouse growing up in Kathmandu (4/18).
- Previous type of work. If ever been a Health Assistant (26/36) then more likely to be practising outside Kathmandu than if done Intermediate in Science (13/30).

Unlike much of the international literature, the doctor's rural background did not reach statistical significance on multiple logistic regression analysis in this study but there may be some relationship with the spouse rural background which was the most consistent significant factor in this study.

Regarding the phase there is only a small number in Phases 1 and 2 and the high predominance of them in Kathmandu (8/11) may reflect their age and seniority and their need to be in teaching positions in Kathmandu. Specifically these early graduates became the department faculty. The age relation is at variance with the phase and may reflect that the more recent younger graduates are less likely to be outside Kathmandu because of recent security issues and the greater number of females.

Unlike some^(6,7) but not all overseas literature⁽²⁾, undergraduate rural exposure did not appear significant as a determinant of location.

From the qualitative arm of the study, the main themes arising with regard to improving recruitment of doctors to GP and rural practice were:

- Selection of rural candidates with involvement of rural/peripheral

communities in the process of selecting people they want as their doctor. This could be particularly applied to the already available 10 government seats in private medical schools.

- Raising awareness of General practice both in the community and in undergraduate medical training.
- Having GP input to training of undergraduate doctors. A number of MDGPs cited good role models as significant in their choice - "One of my senior doctors encouraged me."
- Providing early positive rural experience during training. Several doctors' rural experience contributed to their choice. "While working in periphery (Okhaldhunga), I realized that MDGP would be the best speciality to provide optimum service."
- Selective admission to postgraduate GP training programmes with provision of scholarships. Doctors can be encouraged and selected who have already shown a commitment to serve in rural areas.

Limitations

One of the researchers and an assistant visited as many of the rural MDGP doctors as they could contact leading to a very high response rate of 75% (39/52). However, the focus group discussions were held in Kathmandu and many of the rural doctors were unable to attend due to the previously discussed problems associated with isolated practice in rural areas. This may have led to an over-representation of more urban-based physicians.

In addition, the focus of this study was how to improve recruitment of General Practitioners in rural Nepal. Many doctors expressed the opinion that General Practitioners should not be seen purely as rural physicians.

Conclusion and Recommendations

- The spouse rural background and a HA background should be considered (along with doctor's rural background and interest in rural practice) in any selection of

candidates for training.

- A need exists to establish an integrated career pathway of education and training for rural practice, beginning at the pre-undergraduate level and continuing through undergraduate medical education to specific rural practice vocational training followed by appropriate continuing and university graduate education, practice structures and family supports.

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12. Hayes B, Gupta S Recruitment and Retention Issues for Nepal's General Practitioners. *JNMA* 2003; 42: 142-147. TABLE 1. Univariate Analysis of Factors in Location.

Table 1. Univariate Analysis of Factors in Location

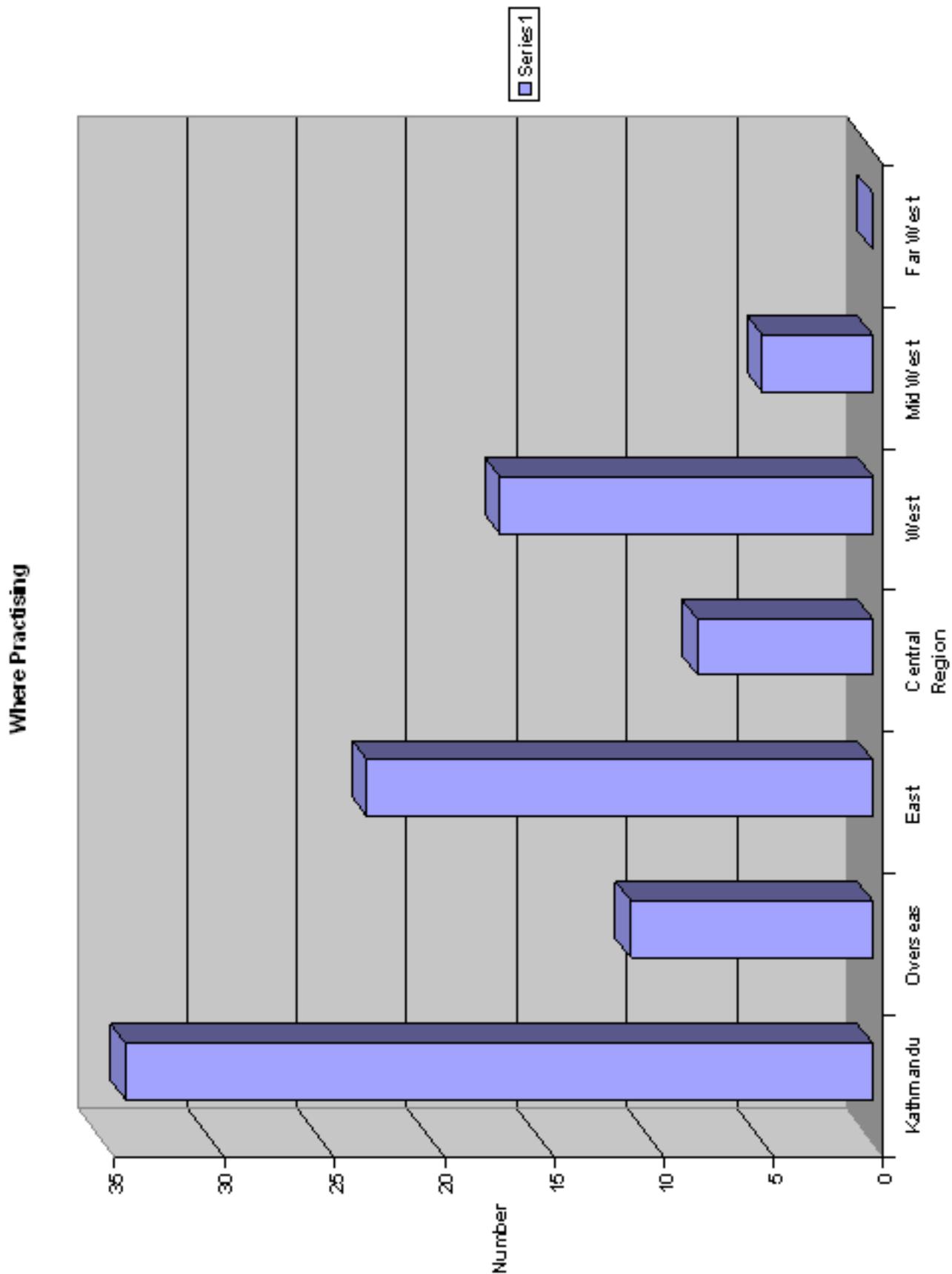
	First Prac	CurrPrac	MeaAge	MeaChil	MeaGP year	GP Phas	DocGrewup	Prev Wor	Ugr exp	Spo Gro	Spo Training
First Prac											
CurrPrac	***										
MeaAge	*	ns									
MeaChil	ns	*	**								
GP year	ns	ns	***	ns							
GP phas	**	*	**	ns	***						
Grewup	*	*	*	ns	**	ns					
Prev wor	ns	**	ns	*	ns	**	ns				
Ugr exp	ns	ns	ns	ns	ns	**	ns	ns			
Spo Gro	**	***	ns	ns	ns	ns	***	ns	ns		
Spo trai	ns	ns	ns	ns	ns	ns	ns	ns	ns	**	

All tests were Chi-square with use of Fisher's exact 2 tail test where 2x2.

* p = 0.05-0.15 ** 0.001 –0.05 *** < 0.001 ns - > 0.15 (not significant)

Those factors with p<0.15 were then subjected to Multiple Logistic Regression to identify the main statistically significant factors determining practice location.

Graph 1. Location of MDGP's by Development Region



Frequency of Causes Peculiar to Secondary Hypertension in A Tertiary Care Hospital Of Peshawar

ABSTRACT

Objectives: To determine the frequency of causes peculiar to secondary hypertension in a tertiary care hospital of Peshawar.

Design: Prospective observational study.

Sampling: A total of seventy patients with confirmed diagnosis of secondary hypertension were randomly included.

Setting: Department of Medicine Khyber teaching hospital Peshawar. Duration: From January 2006 to August 2007.

Methods: Relevant information was recorded from patients and a treatment chart of the patients, on a questionnaire designed in accordance with the objectives of the study.

Results: A total of 70 patients with confirmed diagnosis of secondary hypertension were randomly included. Of the total, 62.29% were males and 37.71% females. The age range of the patients was from 14-78 years with a mean age of 47.5 years. The causes of secondary hypertension were: thyrotoxicosis (34.28%), pregnancy induced hypertension and pre-eclampsia (27.14%), Cushing syndrome (17.14%), glomerulonephritis (7.14%), acromegaly and corticosteroids intake over a long period of time especially in rheumatoid patients (2.85%), history of oral contraceptives, NSAIDS intake over a long period of time especially in rheumatoid patients, hypercalcemia, pheochromocytoma, polycystic kidney and renal artery stenosis each recorded in 1.42% of cases.

Conclusion: Thyrotoxicosis, pregnancy induced hypertension and pre-eclampsia, Cushing syndrome and glomerulonephritis, in their descending order are major contributors to the development of secondary hypertension in our patients.

Key words: Secondary hypertension causes peculiar to secondary hypertension, Peshawar.

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Introduction

While most forms of hypertension have no known underlying cause (and are thus known as “essential hypertension” or “primary hypertension”), in about 10% of the cases, there is a known cause, and thus the hypertension is secondary hypertension (or, less commonly, inessential hypertension)¹. Isolated systolic hypertension is the most common form of hypertension, especially among patients 50 years or older. Worldwide 5% of hypertensive patients have secondary hypertension. Hyperthyroidism increases systolic blood pressure by decreasing systemic vascular resistance, increasing heart rate, and raising cardiac output. Potential cardiovascular consequences of hyperthyroidism include atrial arrhythmias (especially atrial fibrillation), pulmonary hypertension, left ventricular hypertrophy, and heart failure. The prevalence of hypertension is greater among hyperthyroid patients than euthyroid patients². Pregnancy-induced hypertension (PIH) is a form of high blood pressure in pregnancy. It occurs in about 5 percent to 8 percent of all pregnancies.

Pregnancy-induced hypertension is also called toxemia or pre-eclampsia. It occurs most often in young women with a first pregnancy. It is more common in twin pregnancies, in women with chronic hypertension, pre-existing diabetes, and in

women who had PIH in a previous pregnancy³.

Cardiovascular disease is the major cause of morbidity and mortality in Cushing's syndrome and excess risk remains even in effectively treated patients. The cardiovascular consequences of cortisol excess are protean and include, inter alia, elevation of blood pressure, truncal obesity, hyperinsulinemia, hyperglycemia, insulin resistance, and dyslipidemia⁴. Renovascular hypertension (RVHT) denotes non-essential hypertension in which a causal relationship exists between an anatomically evident arterial occlusive disease and elevated blood pressure. RVHT is the clinical consequence of renin-angiotensin-aldosterone activation as a result of renal ischemia. Renal artery stenosis (RAS) is a major cause of RVHT and accounts for 1-10% of the 50 million cases of hypertension in the United States⁵. The present study was designed as to determine the frequency of causes peculiar to secondary hypertension in a tertiary care hospital of Peshawar.

Materials and Methods

This prospective observational study was conducted in Department of Medicine Khyber teaching hospital Peshawar, from January 2006 to August 2007. A total of seventy patients with confirmed diagnosis of secondary hypertension were

randomly included. Of total 62.29% were males and 37.71% females.

Relevant information was recorded from patients and treatment chart of the patients, on a questionnaire designed in accordance with the objectives of the study. Inclusion criteria were all patients who had established diagnosis of cirrhosis, irrespective of age and sex, admitted to the Medical department of Khyber Teaching Hospital (KTH). Exclusion criteria were all patients with essential or primary hypertension. Similarly patients with thyroid diseases or any other renal pathology that had not yet developed hypertension were also excluded. Only patients diagnosed by the consultants as patients suffering from secondary hypertension in our medical ward were included.

A detailed history of patients was taken with the help of a pre-designed questionnaire, prepared in accordance with the objectives of this study. Family history of hypertension was also recorded. The questionnaire contained preliminary information regarding age, sex, address and education of patients. It also contained information about causes of secondary hypertension. Blood pressure of each patient was recorded and hypertension was defined as systolic blood pressure more than 140 mm Hg and diastolic blood pressure more than 95mm Hg on more than one occasion⁶. Investigation reports of thyroid function tests, serum cortisole, renal function tests, radiographs and magnetic resonance angiography (MRA) for RVT, urine routine examinations and proteinuria for PIH etc were also recorded from the ward record of the patients if there were any. Finally statistical analysis of the data was performed and association of risk factors with cirrhosis was studied.

Results

Sampling: A total of 70 patients with confirmed diagnosis of secondary hypertension were randomly included. Of the total 62.29% were males and 37.71% females (Table 1).

Age range of patients: The age

range of the patients was from 14-78 years with a mean age of 47.5 years. The MODE value of age in our patients was 45 years age (Table 2).

Causes of secondary hypertension: The causes of secondary hypertension were: thyrotoxicosis (34.28%), pregnancy induced hypertension and pre-eclampsia (27.14%), Cushing syndrome (17.14%), glomerulonephritis (7.14%), acromegaly and corticosteroid intake for a long period of time especially in rheumatoid patients at(2.85%), history of oral contraceptives, NSAID intake for a long period of time, especially in rheumatoid patients, hypercalcemia, phaeochromocytoma and Polycystic kidney and renal artery stenosis each recorded in 1.42% cases (Table 3).

Table 1: Sex wise distribution of patients

Sex of patients	No of patients	Percentage of total (%)
Males	38	62.29
Females	23	37.71

Table 2: Age wise distribution of patients

Age range	No of patients	Percentage of total (%)
14-30 years	7	10.00
31-60 years	38	54.28
60-78 years	25	35.71

Table 3: Causes peculiar to secondary hypertension

Causes peculiar to secondary hypertension	No of patients	Percentage of total (%)
Thyrotoxicosis	24	34.28
Pregnancy induced hypertension and pre-eclampsia	19	27.14
Cushing syndrome	12	17.14
Glomerulonephritis	5	7.14
Acromegaly	2	2.85
Corticosteroids intake for longer time especially in rheumatoid patients	2	2.85
History of oral contraceptives	1	1.42
NSAIDS intake for longer time especially in rheumatoid patients	1	1.42
Hypercalcemia	1	1.42
Renal artery stenosis	1	1.42
Phaeochromocytoma	1	1.42
Polycystic kidney	1	1.42

Discussion

Hypertension is one of the most common worldwide diseases afflicting

humans. Because of the associated morbidity and mortality and the cost to society, hypertension is an important public health challenge. Hypertension is the most important modifiable risk factor for coronary heart disease (the leading cause of death in North America), stroke (the third leading cause), congestive heart failure, end-stage renal disease, and peripheral vascular disease⁷.

The average systolic blood pressure (SBP) of people aged 30 years or above estimated in 2005 (date from urban population only) reveals as 130-139 mm Hg for Pakistani adults, 120-129 mm Hg for Indians, 140 mm Hg or above for Senegal and below 120 mm Hg for adults in Thailand⁸. Based on recommendations of the Seventh Report of the Joint National Committee of Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VII), the classification of blood pressure (expressed in mm Hg) for adults aged 18 years or older is as follows:

Normal - Systolic lower than 120, diastolic lower than 80

Pre-hypertension - Systolic 120-139, diastolic 80-99

Stage 1 - Systolic 140-159, diastolic 90-99.

Stage 2 - Systolic equal to or more than 160, diastolic equal to or more than 100⁹.

Five percent of adults with hypertension have the secondary form of hypertension, the cause and pathophysiologic processes of which are known. Characteristics that may suggest secondary hypertension such as abdominal diastolic bruits (renovascular hypertension), decreased femoral pulses (coarctation of the aorta), or bitemporal hemianopias (Cushing's disease).

A combination of a good history and physical examination, astute observation, and accurate interpretation of available data usually are helpful in the diagnosis of a specific causation¹⁰. In the present study 34.28% of cases of secondary hypertension were attributed to hyperthyroidism. Similar findings are reported from various studies^{11,12}.

The second most important cause of secondary hypertension is pregnancy induced hypertension and pre-eclampsia (27.14%). It has been reported from our country research study that eclampsia is the second major cause of maternal mortality in Pakistan and its incidence is 2.31% in our country¹³. Cushing syndrome was encountered in 17.14% cases of the secondary hypertension.

Hypertension is one of the most distinguishing features of endogenous Cushing's syndrome, as it is present in about 80% of adult patients and in almost half of children and adolescent patients. Hypertension results from the interplay of several pathophysiological mechanisms regulating plasma volume, peripheral vascular resistance and cardiac output, all of which may be increased.

The therapeutic goal is to find and remove the cause of excess glucocorticoids, which, in most cases of endogenous Cushing's syndrome, is achieved surgically¹⁴. Five cases (7.14%) of the secondary hypertension attributed to glomerulonephritis. Our findings correlated with the findings of Arnaud L, et al¹⁵. Acromegaly and corticosteroid intake for a long period of time, especially in rheumatoid patients, was recorded in 2.85% patients. Patients with acromegaly have a significant morbidity and mortality, associated with cardiovascular disease.

Acromegaly is often complicated by other diseases such as diabetes mellitus, hypertension, and coronary artery disease, so the existence of acromegalic cardiomyopathy remains uncertain¹⁶.

Conclusion

From this study we concluded that thyrotoxicosis, pregnancy induced hypertension and pre-eclampsia, Cushing syndrome and glomerulonephritis, in their descending order are major contributors to the development of secondary hypertension in our patients. Acromegaly and corticosteroid intake for a long period of time, especially

in rheumatoid patients, are moderate risk factors, while history of oral contraceptives, NSAID intake for a long period of time, especially in rheumatoid patients, hypercalcemia, pheochromocytoma, polycystic kidney and renal artery stenosis are minor contributors to the development of secondary hypertension.

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Appendiceal Duplication - A Rare Condition with Serious Clinical and Medico Legal Implications - Case report

Key words: appendiceal duplication, vermiform appendix, appendectomy.

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ABSTRACT

Appendectomy is usually left for junior surgical resident to perform. Though rare, a greater awareness of this entity among junior surgical residents is essential.

A review of the literature, with discussion about the different forms of appendiceal duplication, with concentration on clinical and medico legal significance of this finding.

We present a case of appendiceal duplication, discovered incidentally intraoperatively.

A 20-year old male patient was admitted to the surgical ward in our military field hospital in Iraq, with symptoms and signs of acute appendicitis. Intraoperatively the patient was found to have appendiceal duplication, appendectomy performed successfully, with smooth post operative course.

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Case Report

A twenty -year-old male presented to the emergency room with 48-hour history of per umbilical and right lower quadrant (RLQ) abdominal pain, vomiting, and anorexia.

The physical exam was significant for low grade fever, localized RLQ tenderness and guarding. Both rebound and cough signs were positive.

The patient's white blood cell count (WBC) was 15,000, his blood chemistry and urine analysis were within normal. Abdominal ultrasound was reported free.

The patient was admitted and taken to the theatre for appendectomy, intra operative findings were two appendices with two separate bases (figure 1,2,3,4), one of them showed gross signs of inflammation with no evidence of perforation. Appendectomies were performed successfully through grid-iron incision.

The patient had a smooth postoperative course and was discharged home on the third day of admission.

DISCUSSIONS

The anomalies of the vermiform appendix are rare; appendiceal duplication is reported with an incidence of 0.004%¹

Appendiceal anomalies include anomalous location of a single appendix, horseshoe anomaly of the

appendix, agenesis, duplication, and triplication².

Double appendix is usually asymptomatic, the majority of them are diagnosed at surgery or on postmortem examination, and some of them can be discovered accidentally or preoperatively on barium enema³.

Cave and Wall Bridge have classified the duplication of appendix into three types. A: Partial duplication of the appendix on a single caecum; B: Single caecum with two completely separate appendices; B1: "Bird-like appendix" called so because of its resemblance to the normal arrangement in birds, where there are two appendices symmetrically placed on either side of the ileo-caecal valve; B2: One appendix arises from the usual site on the caecum, with another rudimentary appendix arising from the caecum along the line of one the taenia coli; and C: Two caeca, each bear an appendix. The present case represents Type B1 of appendicular duplication⁴.

When only one of the double appendixes is inflamed on exploration or laparoscopy appendectomy should be done for both of them so as to avoid diagnostic confusion that may arise on removal of a single appendix⁵.

CONCLUSION

Appendectomy is usually left for junior surgery residents to perform, although congenital anomalies of the vermiform appendix are rare; awareness of them during performance of an operation carries

important clinical and medico-legal implications.

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