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Editorial

Original Articles

Editorial Iodine Deficiency: Where We Stand

MohsinMasud Jan
Editor

Estimates put nearly 70 percent of the total population people in Pakistan at a risk of iodine deficiency and related disorders.

According to the World Health Organization, Iodine deficiency is still a public health problem in 54 countries. A total of 36.5% (285 million) school-age children were estimated to have an insufficient iodine intake.[1]

Iodine is essential for the normal growth and development. The whole spectrum of health consequences casually linked to iodine deficiency is collectively known as Iodine Deficiency Disorders (IDDs), and it is most commonly seen among poor, pregnant women and preschool children. The effects of IDD on the fetus are in the form of congenital abnormalities, early death, brain damage, cretinism and deafness; effects on children and adolescents are goiter, impaired mental function, stunted physical growth, short stature and diminished school performance; whereas the effects on women are in the form of decreased fertility, spontaneous abortions and still births in pregnant women.

The most visible sign of iodine deficiency is goiter, an enlargement of the thyroid gland. Individuals living in areas affected by severe iodine deficiency may have an intelligence quotient (IQ) of up to 13.5 points below that of those from comparable communities in areas where there is no iodine deficiency (8–10).[2,3,4]

The spectrum of iodine deficiency disorders includes goiter; hypothyroidism; increased susceptibility to nuclear radiation; spontaneous abortion; stillbirths; congenital anomalies; perinatal mortality; endemic cretinism, including mental deficiency with a mixture of mutism, spastic dysplegia, squint, hypothyroidism and short stature; infant mortality; impaired mental function; delayed physical development; and iodine-induced hyperthyroidism [5,6]

Sources of iodine include seafood, bread, grains, green vegetables, drinking water, milk (especially cow milk) and eggs. The daily requirement of iodine for adults has been established as 150 micrograms per day or 5 gram of iodized salt per day. Though Universal Salt Iodization (USI) remains as the most viable option.

Iodized salt has been introduced in Pakistan as a counter measure for the rampant Iodine deficiency, and the result is a considerable reduction in the prevalence of goiter and a progressive disappearance of cretinism.

Studies have brought to light, that more than five million children born each year in Pakistan are unprotected against brain damage; 36 percent mothers and 23 percent pre-school children suffer from iodine deficiency. Pakistan has been rated as 6th among the countries where iodine deficiency is a serious health problem.

Although according to National Nutrition Survey (NNS) 2011, 79 per cent people in Punjab province are consuming iodized salt as compared to 17 per cent in 2001, still it is low when compared with countries with similar socio-economic conditions like Nepal where 98 per cent of the total population consumes iodized salt.

There remains a dire need to create mass awareness on this issue and mount advocacy for promotion of IDDs legislation and monitoring of the enforcement of Universal Salt Iodization at production, retail and community levels in order to combat iodine deficiency in the country.

Everyone, the civil society organizations, health professionals, religious leaders, social workers, salt producers, politicians, media and policy makers, need to combine their efforts and focus towards the large scale use of Iodized Salt, because just a little effort, and a little extra cost can go miles towards preventing iodine deficiency and its subsequent consequences.

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Original Article

Orthodontic Treatment

Orthodontic Treatment Needs Among Population Visiting the Liaquat University of Medical & Health Sciences Hospital

1. Sabuhi Ghani 2. Abdul Jabbar 3. Irfan Ahmed Shaikh 4. Abdul Bari Memon 5. Erum Naz

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ABSTRACT

Objective: This study was to determine the orthodontic treatment need in local population visiting the Liaquat University of Medical & Health Sciences Hospital by using index of orthodontic treatment need.

Study Design: Descriptive cross sectional study

Place and Duration of Study: This study was conducted on patients visiting to Dental outpatient department (OPD) of Liaquat University of Medical & Health Sciences Hospital, Jamshoro from September 2012 to October 2013.

Materials and Methods: Informed written consent was taken from 150 patients' satisfying the inclusion criteria, history and clinical examination was done on patients by using index of orthodontic treatment need. SPSS version 19 was used to analyze the data and frequency was determined for categorical variables. Mean and standard deviation was computed for numerical variables.

Results: According to Dental Health Component (DHC) treatment need 36.7%, 34.7%, 24.7% and 4.0% found to have orthodontic treatment need from no little treatment to very great treatment respectively and according to Aesthetic Component (AC) treatment need 49.3%, 44.0% and 6.7% found to have orthodontic treatment need from no little treatment to great treatment need.

Conclusion: It was concluded that the patients of this locality found to have increased need for orthodontic treatment.

Key Words: Aesthetic Component, Dental Health Component, Index of Orthodontic Treatment Needs

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INTRODUCTION

Orthodontic treatment is complicated, costly and long duration dental treatments. Only trained doctors are required to complete this. Research has proved that need of the orthodontics treatment does not necessarily correlate with actual need of the patient.[1,2] Orthodontic treatment concern varies from patient to patient. Few patients with minor occlusal changes might express orthodontic concern; while others with great need may not concern about treatment.[3,4] It has been suggested by researchers that social status and feasibility of the services effects orthodontic treatment needs. [5,6]

Majority of patients demand orthodontic treatment for better facial appearance. Individual perception regarding orthodontic treatment need is influenced by multiple factors such as social, cultural and psychological factors.[3] Number of Orthodontic patients have been increasing now a days and their main concern is esthetic. For government funded programs and health insurance companies, it is difficult to manage for all patients due to lack of sources so it is necessary to assess the need for orthodontic treatment. [4]

Patients with occlusal variation might feel shy about their facial look, which may affect their psychology, smile or career opportunities.[3] Occlusal variability's are associated with psychosocial distress, poor periodontal conditions with impaired masticatory function.[6-9] For expanding Orthodontic treatment among public health system it needs exact information on orthodontic treatment needs.[10] Multiple indices have been used to evaluate orthodontic treatment need.[9-11]

Many surveys on assessment of orthodontic treatment need are performed on the index of orthodontics treatment need (IOTN) in different countries[8, 9, 12]. IOTN is useful index for research in different communities and epidemiology of occlusal variation.[11]

In Pakistan a study showed that total 75% of patients need orthodontic treatment (grade 4, 55% and grade5 20%) while 36% patients was in acute need of

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treatment according to aesthetic component.[13] As the number of orthodontic patients is increasing day by day and the latest data for the treatment need of orthodontic is not available in this region of Pakistan, so the purpose of this study was to determine the need of orthodontic treatment in patients visiting the Liaquat University Hospital.

MATERIALS AND METHODS

The study was conducted on 150 subjects to evaluate orthodontic treatment need by using IOTN among patients visiting outpatient department of Liaquat Medical University Hospital Jamshoro / Hyderabad from September 2012 to October 2013. The subjects were selected using non probability convenient sampling technique. The inclusion criteria were patients irrespective of gender, having complete permanent dentition up to first permanent molar, age between 15-25 years. Exclusion Criteria were patients with previous Orthodontic treatment, patients with any tooth extracted before the study, patient having any facial asymmetry and patients with mix dentition. Approval from university ethical committee was taken and informed written consent was obtained from the patients. History and clinical examination was done on patients' fulfilling the inclusion criteria. IOTN consists of dental health component (DHC) having five grades from no need for treatment to very great treatment and aesthetic component (AC) scale of 10 color photographs showing different levels of attractiveness of the dentition.

Statistical package for social sciences (SPSS) 19 was used to analyze data. Frequencies were determined for gender, DHC Orthodontic Treatment Need and AC Orthodontic Treatment Need. For the quantitative variables like age, mean for central tendency and standard deviation were computed.

RESULTS

The study group consisted of 150 subjects with age range of 15 to 25 years. Out of 150 subjects 44% were males and 56% were females. The mean age and standard deviation of the studied population was 19.79 ± 2.77 years. Age was divided in three groups and frequency was computed (Table-1)

The frequency and percentage of each grade of Dental Health Component (DHC) and Aesthetic Component (AC) was analyzed with respect to the overall sample size. The distribution of DHC and AC for IOTN is depicted in (Figure-1 and 2).

Table No.1: Age Group-wise Frequency Distribution

Age Group (Years)		Frequency	Percent
15-18		48	32.0
19-21		58	38.7
22-25		44	29.3
	Total	150	100.0

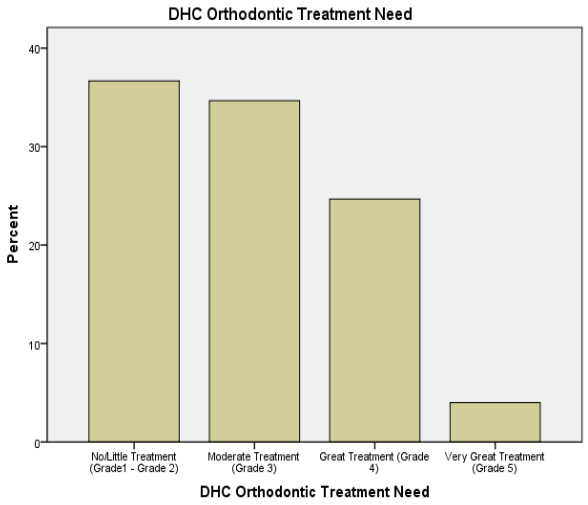

Figure No.1: Percentage-wise DHC Treatment Need

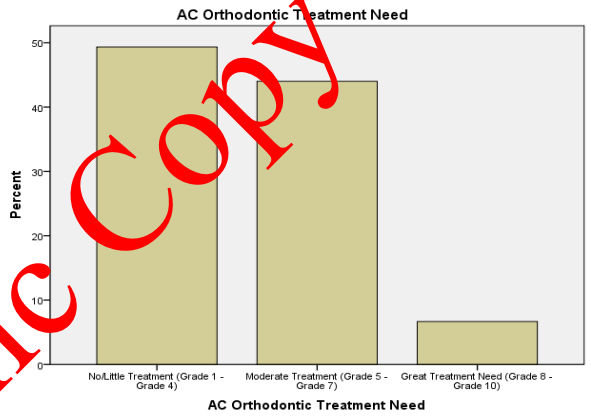

Figure No.2: Percentage-wise AC Treatment Need

DISCUSSION

The results of this study are comparable with the study of Mugonzibura E.A[14], in which AC grade 8-10 & DHC grade 4-5 occurred in 5-15% and 16-36% respectively in children.

The results of Albarkat F[15] and S.M Danaei[16] are not in agreement with this study. He showed a higher proportion of female as compared to male having normal or minor malocclusion. Similarly in the study of Zahid S and Bashir U[4] estimated frequency in definite treatment need category (Grade 4 & Grade 5) of DHC is 75%, 6.7% and 17.7% recorded for no or little treatment need and moderate treatment need category. Our category of DHC, most of the females are falling in Grade 1, Grade 3 & Grade 4. Whereas Grade 2 both male & female have balance frequency but in Grade 5 males are more involved as compared to females.

The findings of this study showed that 58% patients had orthodontic treatment need from moderate to great treatment need, these results are comparable with the study conducted by Bashir U&Hameed WU[17], in which 60% of population was found to be in definite treatment need.

The study of Siddique TA[18]yielded the results with 40% out of 125 subjects were in objective need of orthodontic treatment as recorded on casts. Difference in results might be due to difference in selection of population,study design and other characteristics such as oral hygiene, periodontium health, lip incompetence, impaired speech, masticatory problems and TMJ joint disorder. The results of this study regarding IOTN are not comparable with study results of Hedayati's[19] in which AC 91-93% were in no need or little need, 3.91% in moderate need and 4.11% in great need treatment group, while in this study 49% fall in no need or little need AC treatment, 44% and 6.66 % in moderate to great need treatment respectively. According to DHC boys showed more need for treatment than girls and Grade 8 showed the highest percentage in great treatment need. While in this study girls are in majority need treatment as compared to boys. This study had some limitations like limited sample size and inconsistent data accumulation. It was a single operator based study so operator bias could not be eliminated, however, it has been tried to provide some information about the treatment need of orthodontic.

CONCLUSION

In this study it has been concluded that; the patients of this locality found to have increased need for orthodontic treatment, so we recommend that the government and teaching institute should pay more attention to the training of orthodontic specialists, so that orthodontic cases should be properly diagnosed, referred and or treated on affordable cost.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Medical Lectures Evaluation

An Evaluation of the Type of Lectures by MBBS Students

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ABSTRACT

Objective: The current study was done to pilot different techniques of making lectures interactive and to find out compliance of the students with interactive lectures.

Study Design: Prospective / comparative study.

Place and Duration of Study: This study was carried out at the Department of Pharmacology, Aziz Fatima Medical & Dental College, Faisalabad from 01.04.2014 to 30.04.2014

Materials & Methods: An entire class of 3rd year MBBS students (n = 65) was given interactive and the regular lectures for the Drugs acting on The Central nervous system in Pharmacology. Out of the total number of 12 lectures, alternative lectures were delivered in an interactive style. At the end of 12 lectures, students' opinion was obtained using a structured feedback evaluation questionnaire, having 5 statements on a 5 point Likert scale.

Results: 92% of the students found that interactive lectures are more effective. Notably more number of students agreed or strongly agreed that interactive lectures amplified alertness, developed interest, by-passed monotony, and urged them to learn by themselves as compared to usual lectures. The students preferred use of video-clips (65%), followed by each-one-teach-one. The use of interactive lectures to create interest among students is supported by the results of the study.

Conclusion: An interactive lecture was more easily listened and considered to be more useful than the regular lecture by the students

Key Words: Evaluation, Lecturer, MBBS students

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INTRODUCTION

Didactic lectures (Traditional lectures) are the widespread mode of teaching for large groups in most professional institutes in Pakistan. They are obviously associated with a few advantages however they are not the ideal teaching method[1]. Didactic lectures are generally of one hour duration and studies have shown that student's attention wanes quickly after twenty minutes. Thus, interactive lectures have been considered as a means for overcoming the disadvantages associated with regular lectures[2].

Students criticize lectures because they may be non-interesting or even useless when they are not delivered properly. It has been tested that only a small content of what the lecturer is teaching is absorbed by the students[3,4]. Critics believe that lectures are less useful when goals like, use of acquaintance, improvement of thinking skills or alteration of attitudes is to be targeted[5]. These lectures can be prepared meaningful by effective planning and organized efforts[6,7]. When they are focused and targeted, they can help in efficient transmission of information and can evolve new concepts. Thinking of students can be problem solving and it can be a motivation for them to learn and seek knowledge[8,9].

Learning is a dynamic process and so interactive lectures are regarded as an educational paramount exercise. Participants at the International Union of Physiological Sciences Teaching Workshop in April 7-10, 2005 in Pali Mountain, CA, were convinced that there should be active participation of the students in the lectures to make them understand better[10,11].

Interactive learning can be explained in many ways. Some think it as a bilateral communication between the lecturer and audience and some suppose that it is meant by increased argument amongst the members. It also means involvement of students with the contents of lecture which could result in the production of better learners[12].

Interactive lecturing involves a different role of the teacher as well. The 'teacher' frequently becomes a 'facilitator' or 'coach', and has to change the lecture material at all and sometimes has to try new innovative methods to make his/her lecture interesting[13].

Educational research has revealed that students who are actively involved in the learning activity will learn more than students who are passive recipients of

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knowledge. This type of teaching involves more commitment of students with the books, their teachers and classmates. Indeed, even students who do not participate in the class are provoked by the questions or problem-solving exercises[14,15].

Some other studies have established that improved concentration and communication boost recall[16]. Some authors believe that improved alertness and encouragement are the key elements for learning, and frequently are more important to retain than aptitude. It has been shown that student's awareness and thought in the traditional lecture decreases significantly after 20 minutes[17]. Energy shifts or changes of pace are necessary if student's interest is required to be focused[18].

Interactive learning can improve problem-solving and communication skills of the students which is an essential part of medical education[19].

Interactive lecturing supports dynamic contribution on the part of the teacher and the student. This method of teaching arouses student's attention and allows for instant response about the lecture. It also promotes a higher level of assessment, problem solving and purpose of material taught. Indeed, interactive lecturing is an approach to utilize the potency of small group learning in a large group setup[20,21].

MATERIALS AND METHODS

This study was done on 3rd year undergraduate medical students (n = 65).

The entire class was delivered both interactive lectures and regular lectures for the central nervous system drugs in Pharmacology. Among the total number of 12 lectures in the central nervous system, alternate lectures were conducted in an interactive style. The number of interactive lectures and regular lectures were six each. Each lecture lasted for one hour.

There were three lectures per week as per teaching schedule (Mondays: 1-2 pm, Wednesdays: 1-2 pm and Fridays: 8-9 am) with regular lectures and interactive lectures being conducted alternately. The entire central nervous system was completed in four weeks. The lectures of the entire central nervous system unit were taken by three faculty members.

The various techniques which have been used for making lectures interactive were:

A) "Each-one – Teach-one" at regular intervals during the lecture, the faculty stops for one or two minutes and asks each one of the students to educate their fellows one vital feature which was previously discussed in their lecture.
B) Posing relevant cases/scenarios at the start of the lecture.
C) Playing appropriate video clippings during the lecture.
D) Questioning by the lecturer (multiple choice questions, filling up the blanks, and marking as true or false) at regular intervals during the lecture.

At the end of 12 lecture series, students' feedbacks were obtained by using a structured five point Likert scale questionnaire, to find out that lectures conducted during the sequence were able to make students attentive, have created interest, overcame monotony, motivated self-learning and provided well-defined learning. The questionnaire was validated and tested for reliability. The students have been asked to grade their preferences for various techniques used in an interactive lectures.

Written informed consents for the participation and feedbacks have been taken from all the participants of the study. The project has been approved by the institutional ethics committee.

Statistical Analysis: The frequencies were described in percentages.

RESULTS

Out of the total 65 students, feedbacks have been given by 60 students. The remaining five of them have not given any feedback.

Interactive lectures appeared to be more useful than regular lectures as it was observed by 92% of the students (Figure 2).

Table No.1: Students' perception of interactive lectures

Variables	Number of the students who strongly Agree	Number of the students who Agree	Number of the students who are Neutral	Number of the students who Disagree	Number of the students who strongly Disagree
Keeps attentive	35 (58.3)	20 (33.3)	5 (8.3)	0	0
Creates interest	30 (50)	22 (37)	8 (13.3)	0	0
Monotony overcome	18 (30)	27 (45)	13 (21.6)	2 (3.3)	0
Provides well defined learning	21 (35)	30 (50)	5 (8.3)	2 (3.3)	2 (3.3)
Motivates self-learning	16 (27)	24 (40)	18 (33.3)	1 (1.7)	1 (1.7)

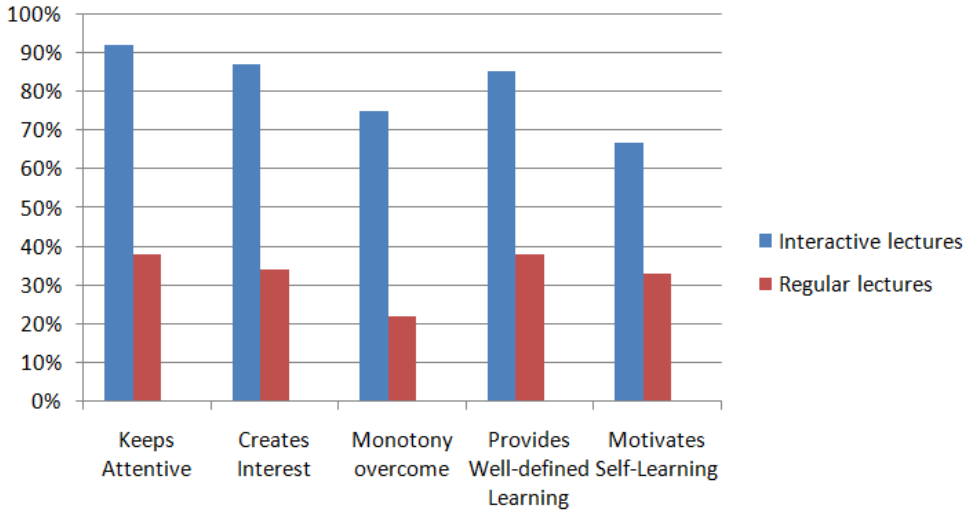

Figure No.1: Comparison of the students' opinion on methodology of lectures

Table No.2: Techniques liked by the students

Technique	Students who like the technique	
	In Numbers	In Percentage
Video clippings	39	65%
Each-one –teach-one	30	50%
Questioning	27	45%
Cases/Scenarios	21	35%

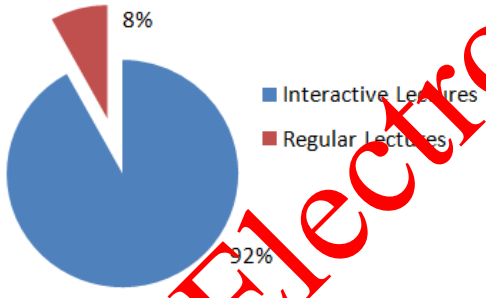

Figure No.2: Students' preference on methodology of lectures

Almost 92% of the students agreed upon or strongly agreed that interactive lectures kept them attentive, whereas only 38% of students agreed or strongly agreed that regular lectures kept them attentive. Likewise, significantly more number of students agreed or strongly agreed that interactive lectures created interest, overcame monotony, motivated self-learning and provided well defined learning as compared to regular lectures. Furthermore, a comparison of the students' opinion on these lectures has been made and it is shown in Figure 1.

The students supported interactive lectures more than the regular lectures for all five variables. This has been shown in Table 1. Among the different techniques used for interactive lectures, 65% of the students preferred the use of video clippings and 50% of them liked teaching by "each-one-teach-one" (Table 2).

DISCUSSION

Lectures are the traditional way of teaching large groups. The traditional format encourages students to focus on the superficial knowledge instead of studying thoroughly. Active learning is the learning in which students are thinking about the subject matter. Lecture method of teaching has been much criticized very much in a way that it is only meant for transfer of contents of the lecture to the student's note books not engaging their brains. There is a famous saying by Albert Camus: "Some people talk in their sleep, Lecturers talk while other people sleep".

The most important disadvantage associated with didactic lectures is that they are boring and less useful than other methods while instructional objectives include relevance of information or facts, thinking proficiency, or the alteration of mind-sets. In addition, students are often observed as inert beneficiaries of information.

Interactive lectures are a sort of dialogue in which the teacher requires students to do something beyond passive reception. Interaction can address most of the pitfalls associated with regular lectures. It can improve student participation and satisfaction levels of students and faculty. In many ways, interactive lectures keep the teachers interested and awake as well.

There can be various interactive techniques in medical education; the basic point is to improve student participation, interest and motivation in the lecture course. These ways include splitting the class into smaller groups, inquiring the listeners, application of clinical cases, use of written information, using simulations, role plays, films and videotapes, audiovisual aids and effective presentation skills.

Student-teacher interaction can be monitored using techniques like videotaping and peer review. These methods can be used as feedback by the faculty to improve their teaching and interactive skills.

Most teachers know the advantages of interactive lectures but they do not want to engage in such lectures due to many reasons. These include fear about not knowing the answers to questions raised by the students, not getting the answer by the students when any question is asked and an anxiety that a group of students may dominate during the session. Time management is another issue and some think that syllabus may not be completed. Others believe that this way of teaching is not suitable for undergraduates.

Interactive lecturing appears to increase the awareness, change the attitudes and so it can lead to a change in learning outcomes. Students' feedback indicates that there is increased involvement, motivation and engagement in Pharmacology.

In conclusion, it is obvious that students gain from interactive lecturing, even if it is for a short module but it can be of significant help to the students. This supports the claim that interactive learning should be initiated. Moreover, the students with limited prior knowledge are also able to achieve similar learning outcomes to those students having good prior knowledge. It enhances their learning ability and understanding. However, further work is needed to confirm that acceptance of this method leads to better learning by the students, and it can be done by establishment of a positive correlation between interactive classes and right answers at the end of the class student assessments.

CONCLUSION

With subcostal approach, incision time, dose of analgesia and pleural injury is minimum but high incidence of incisional hernia is there. In transcostal and supracostal approach the incision time, dose of analgesia and incisional hernia is minimum but incidence of pleural injury is relatively high.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Hospital Employees Attitude

Relationship of Corporate Social Responsibility (CSR) with Job Attitude and Behavior: employee's Perception. "A study of Public & Private Hospitals in Lahore Pakistan"

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ABSTRACT

Objective: The main objective of the study to find out the relationship between Corporate Social Responsibility (CSR) with Job attitude and behavior that how employee (paramedical & administration) of a hospital take care of their patients.

Study Design Cross sectional study

Place and Duration of Study: This study was carried out in the Global Institute (CFE Campus) Lahore from March 2014 to July 2014.

Materials and Methods: Sampling frame collected from employees and managers who are working in various hospitals of Lahore. Non-probability sampling techniques are used which does not involve random selection. Questionnaire was conducted in the form of closed ended question. Survey was conducted from June. During the survey, overall 204 questionnaires were distributed. Participant responded on the questionnaire on a scale of 1to 5.

Results: The highest value is job behavior (0.763) factor which is 76.3% and it shows that the employee perception of CSR has greater influence by the job behavior factor as compare to the other variables. Mostly employee behavior with their organization is effective and their work with their colleague is done efficiently to guide and help the staff. The ratio of job attitude factor is 5.2% which shows that this factor also influences the employee perception of CSR less than the job behavior factor. Moreover the ratio of job attitude factor is 5.2% which means that job attitude toward organization is not positive. Adjusted R square 0.347 are the dependent variable. Overall whole dependent variable is significant. The R-square of the regression is 35.3% which shows the variation in dependent variable that is predicted by independent variables. The adjusted r-square is 34.7%.

Conclusion: This study found that employees CSR perception has effects on employees work outcomes. Employees play an important role in their organizations and their perception of CSR will influence their subsequent work outcomes. The CSR programs would benefit both corporations and their employees. Organizations would also benefit from effectively interacting with their employees on CSR issues.

Key Words: Corporate Social Responsibility (CSR), Job attitude, Job behavior, Healthcare

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INTRODUCTION

Many theories are available on the "relationship of corporate social responsibility with job attitude and behaviors: Employee perception" But variable and techniques are different from these theories[1]. Different organizations derived the different meanings of the corporate social responsibility, but common strategies are adopted in the CSR program[2]. Conscience, corporate citizenship, social performance, or sustainable responsible business/ Responsible Business are the alternative names of Corporate social responsibility (CSR)[4] .In "strategy Management Journal" (MC Wailliams and Siegael's 2000), the relationship between financial performance with CSR is shown. They also discussed that the CSR is required by the law it's beyond the interest of the firm. At some point it also shows that CSR is just following the law[4]. **The World Business Council for Sustainable Development (WBCSD)** is published by Mallen Baker (2004) "Corporate Social Responsibility is the business

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activity contribute to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large"[5]. The meaning of CSR in two ways one its shows the ethical behavior that the hospital employees know about their social responsibility and secondly it shows to the environment and the society in which it operates[6]. CSR principles and practices are always promoted by the CSR Association of Pakistan because it makes hospital more innovative and helps patients to feel at home. CSR also helps in the development of the hospital, it increase efficiency gains, improve reputation, Other business venture will trust you, improve relationship with the communities[7,8].

MATERIALS AND METHODS

The concept of corporate social responsibility (CSR) has a long and varied history. Literature on corporate social responsibility (CSR) is to build a deep and broad understanding of CSR and relevant concepts[8]. In the 1960s, One of the most prominent writers to define CSR was Keith Davis, Who expressed the topic of CSR in his business and articles. Social responsibility is set forth in first time[9]. David (1960) defined CSR as a business decision which shows an organization's long-run objectives and socially responsible prospect rather than technical interests[10]. Most recently, much research work has exemplified the concern for relationship between individual perception of CSR and employee's reaction. Other scholars also consider CSR as one of the key goals for businesses. The corporation's responsibility to society is obviously addressed as an important component of business policies and activities (Rizwana Bashir 2012)[11].

Lee (2008) suggested that financial performance should never be confined from CSR in such a competitive global business climate. He implied the popularity of relevant concepts in future research work, such as corporate citizenship and employee management (Lee 2008)[12]. Mc Williams and Siegel (2000) also believed that CSR could benefit financial performance and multiple stakeholders contemporaneously. They perceived CSR as a strategic resource rather than a threat to profitability.

Demirag (2005), Ellis (2012) discussed the reputation of an organization to show the positive relationship between the organization and corporate social responsibility. The framework and hypothesis are developed[13]. The model demonstrates how CSR affects employee job attitude through two mediators, namely, job satisfaction and organization commitment[14,15] as depicted in Figure 1.

Employee perception of CSR is the starting point of the model. Different CSR dimensions may affect employees' different work attitudes and behaviors.

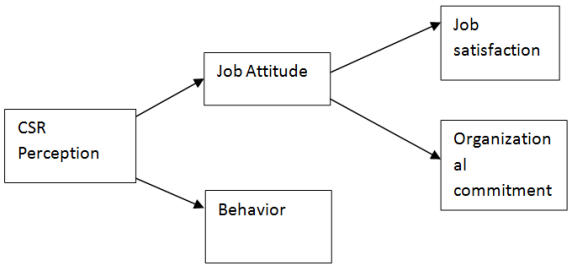

Figure No.1: Framework of the CSR-Behavior relationship

Hypothesis:

H1: Employees' perception of CSR has a significant influence on job attitude.

H2: Employees' perception of CSR has a significant influence on job behavior.

On the basis of research study, sampling frame was collected from employees and managers who are working in various hospitals of Lahore. Participant age should be 18 years or older and should be working for more than 6 months with the organization. Non-probability sampling techniques are used which does not involve *random* selection. Questionnaire was conducted in the form of closed ended questions. Survey was conducted from June. During the survey, overall 204 questionnaires were distributed. Participants responded to the questionnaire on scale of 1to 5.

RESULTS

This study analyzes the results from the collected data. SPSS version 16.0 was used in the analysis. Result of descriptive statistics has been presented in the data analysis. The results of regression analyses are also present in data analysis section. The model of the research was proposed based on theories and observation of reality. 25 employees (12.3 %) of the hospital are working on a Managerial Level and 179 employees (87.7 %) are working on a non managerial post in different hospitals of Lahore.

Table 1 shows the cross-tabulation between Age with qualification and experience and also tells us the tabulation between qualifications with experience.

Table 2 shows the cross-tabulation between Age with Gender and Position. The position is further cross tabulated with Experience and Qualification. It shows the cross tabulation between Experience and Gender. The Cronbach's alpha for the three factors range near 0.706 suggesting that they are all reliable.

Table No.1: Descriptive Cross tabulation

Age * Qualification Cross-tabulation							
		Qualification					Total
		Intermediate	Bachelor	Master	MBBS	M.Phil	
Age	20-25yrs	13	19	40	43	2	117
	26-30yrs	2	9	21	15	8	55
	31-35yrs	0	7	5	0	1	13
	36-40yrs	0	10	0	0	3	13
	above 40 yrs	0	3	1	0	2	6
Total		15	48	67	58	16	204
Age * Experience Cross-tabulation							
		Experience					Total
		Less than 1 yr	1-2yrs	2-5 yrs	5-10yrs	More than 10 yrs	
Age	20-25yrs	63	42	10	2	0	117
	26-30yrs	9	25	12	9	0	55
	31-35yrs	0	0	7	5	1	13
	36-40yrs	0	0	4	9	0	13
	above 40 yrs	0	0	2	0	4	6
Total		72	67	35	25	5	204
Qualification * Experience Crosstabulation							
		Experience					Total
		Less than 1 yr	1-2yrs	2-5 yrs	5-10yrs	More than 10 yrs	
Qualification	Intermediate	0	13	2	0	0	15
	Bachelor	10	8	18	9	3	48
	Master	18	24	12	11	2	67
	Mbbs	44	1	0	0	0	58
	Mphil	0	8	3	5	0	16
Total		72	67	35	25	5	204

Correlation Analysis: Correlation estimates with two asterisks are significant at $p<0.01$, with an asterisk are significant at $p<0.05$ (2-tailed). Participants responded to a likert scale of 1 to 5, indicating they agreed or disagreed with the statements regarding their perceptions about CSR, feeling about job or organization, and behavior at work. Based on previous studies, these variables may affect work attitudes and behavior [16, 17]. The result shows that correlation is significant at the 0.01 level (2-tailed). The correlation values near the 1, indicates higher or perfect positive correlation between the variables. With respect of 1st hypothesis, result indicates that Employees' perception of CSR has a significant influence on job attitude. With respect to the 2nd hypothesis, result indicates that Employees' perception of CSR has a significant influence on job behavior [18].

Table has been shown, H1 and H2 hypothesis are acceptable and strongly correlated and Ho hypothesis is rejected.

Regression analysis: Regression analysis was used to explore, describe and test the relationship between dependent variable and one or more independent variable. Therefore, we could test whether employees' perceptions of corporate social responsibility have significant influence on job attitude and job behavior and other relationships between variables. Mathematical equation is developed to predict the dependant variable which is as follow:

$$Y = a+b1X1 + b2X2$$

Where

X1= Job Attitude

X2= Job Behavior

Where Y indicates the dependent variable, which is employee perception of CSR. X1, X2 are the independent variables which is job attitude and behavior, and b1, b2 are the coefficients or multipliers that describe the size of the effect the independent variables have on the dependent variable Y, and a is the value Y is predicted to have when all the independent variables are equal to zero.

$$CSR = .632+ .052J.A+.763J.B$$

As in the above equation, the highest value is job behavior (0.763) factor which is 76.3% and it shows that employee perception of CSR has greater influence by the job behavior factor as compared to other variables. Mostly employee behavior with their organization is effective and their work with their colleague is done efficiently and to guide and help the staff.

Table No.2 Descriptive Cross tabulation

Age*gender cross tabulation				
		Gender		Total
		Male	Female	
Age	20-25yrs	45	72	117
	26-30yrs	38	17	55
	31-35yrs	4	9	13
	36-40yrs	2	11	13
	above 40 yrs	3	3	6
Total		92	112	204
Age * Position Cross-tabulation				
		Position		Total
		Manager	Non-Manager	
Age	20-25yrs	8	109	117
	26-30yrs	7	48	55
	31-35yrs	4	9	13
	36-40yrs	0	13	13
	above 40 yrs	6	0	6
Total		25	179	204
Qualification * Position Cross tabulation				
		Position		Total
		Manager	Non_ Manager	
Qualification	Intermediate	9	6	15
	Bachelor	5	43	48
	Master	15	52	67
	Mbbs	2	56	58
	Mphil	3	13	16
Total		34	170	204
Experience * Position Cross tabulation				
		Position		Total
		Manager	Non-Manager	
Exper-ience	Less than 1 yr	3	69	72
	1-2yrs	8	59	67
	2-5 yrs	6	29	35
	5-10yrs	3	22	25
	More than 10 yrs	5	0	5
Total		25	179	204
Experience * Gender Cross tabulation				
		Gender		Total
		Male	Female	
Experience	Less than 1 yr	22	50	72
	1-2yrs	39	28	67
	2-5 yrs	16	19	35
	5-10yrs	13	12	25
	More than 10 yrs	2	3	5
Total		92	112	204

The ratio of job attitude factor is 5.2% which shows that this factor also influences the employee perception of CSR less than the job behavior factor. Moreover the ratio of job attitude factor is 5.2% which means that job attitude toward organization is not positive.

Adjusted R square 0.347 are the dependent variable. Overall whole dependent variable is significant. The R-square of the regression is 35.3% which shows the variation in dependent variable that is predicted by independent variables. The adjusted r-square is 34.7%.

Table No.3: correlation Analysis

Correlations				
		Perception of CSR	Job Attitude	Job behavior
Perception of CSR	Pearson Correlation	1	.313**	.593**
	Sig. (2-tailed)		.000	.000
	N	204	204	204
Job Attitude	Pearson Correlation	.313**	1	.473**
	Sig. (2-tailed)	.000		.000
	N	204	204	204
Job behavior	Pearson Correlation	.593**	.473**	1
	Sig. (2-tailed)	.000	.000	
	N	204	204	204
**. Correlation is significant at the 0.01 level (2-tailed).				

DISCUSSION

This study commenced to assess the relationship between employees 'perceptions of corporate social responsibility and continuous improvement orientation and their effects upon employee attitudes and intended behaviors toward the organization. Job attitude and employees perception both are very important for CSR. But CSR mostly influence job attitude.

This study took CSR perception and work attitude into consideration. Therefore some other mediator was not included in this study. However this study is an important step towards linking individuals CSR perception with work attitude and social actions in healthcare of Pakistan[19,20].

CONCLUSION

The role of CSR in employees work outcomes has received growing attention. This study explored the effect of employee's perceived CSR on job attitude (job satisfaction and organizational commitment) and behaviors. This study also looked at attitudinal constructs that exist between relationships of perceived CSR and employee behaviors. That is, relationships between employee perception of CSR and employee job attitude would be mediated by job behaviors.

Table No.4: Regression Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.594[a]	0.353	0.347	0.45087
a. Predictors: (Constant), Job behavior, Job Attitude				

ANOVAb						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.322	2	11.16	54.905	.000[a]
	Residual	40.859	201	0.203		
	Total	63.181	203			
a. Predictors: (Constant), Job behavior, Job Attitude						
b. Dependent Variable: Perception of CSR						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	0.63	0.308		2.05	0.041
	Job Attitude	0.05	0.08	0.042	0.65	0.516
	Job behavior	0.76	0.086	0.573	8.91	0

This study found that employee's CSR perception has effects on employees work outcomes. Employees play an important role in their organizations and their perception of CSR will influence their subsequent work outcomes. The CSR programs would benefit both corporations and their employees. Organizations would also benefit from effectively interacting with their employees on CSR issues.

This study only focused on Lahore in the context of Pakistan. In order to generalize the result of the study to Lahore further research could extend the research background by collecting data from more areas of Pakistan. Gathering a larger and richer source of data will enhance the generality of results.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Smoking Hashish (Chars) a Partial Blessing in Disguise

Hashish Smoking

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ABSTRACT

Objective: To find out whether ingredients of hashish are helpful to treat anxiety, chronic pain, anorexia, insomnia and obesity**.**
Study Design: Cross sectional questionnaire based study.
Place and Duration of Study: This study was conducted in Karak City, KPK from March 2013 to march 2014.
Materials and Methods: A cross sectional questionnaire based study was conducted in the Karak city. A sample of 100 hashish addicts was selected. They were asked questions about their routine use,dosage and behavior changes while using hashish. Their general behavior was observed and laboratory tests like LFT (ALT and total bilirubin) and RFT (Urea and creatinine) were done periodically.
Results: It was noted that hashish addiction was more common in middle and lower class. Its use cause euphoria followed by 6 to 8 hours of sleep. Speech was coherent although they became more talkative. LFT's and RFT's were normal.
Conclusion: Although hashish is a substance of addiction but it also has many positive effects and further research should be done to see if some of its ingredients could be used in treating anxiety, chronic pain, anorexia, insomnia, obesity and chronic depression.
Key Words: Hashish, Addiction, Anorexia, Anxiety, Insomnia

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INTRODUCTION

Drugs and substance abuse is a menace to world population in general and Pakistan in particular. About 6.4 million people are addicted to drug and substance abuse, i.e. one in every 27 person in Pakistan is a victim of this menace. KPK is the worst affected province due to easy availability of drugs and substance. Chars (Cannabis) is the most commonly used substance in Pakistan and 3.6% of the adult population is chars addict. Drug/substance abuse is most prevalent in Khyber-Pakhtunkhwa where 7.1 per cent of the population uses drugs/substance, followed by Sindh 6.5 per cent, Baluchistan almost 5 per cent, while in Punjab, 4.8 per cent of the population is drug/substanceaddict[1]. The great concern is the rapid inclination ofjobless young people and students to the use of this substance. Probably the fast deterioration of social values, drifting away from religion and the effects of movies drive this segment of society to a world of fantasy, ecstasy and moral bankruptcy[2,3]. The abuse of all drug and substances are banned by law and prohibited by religious code of conduct but the grip of laws and code of conduct is giving way very fastly. A lot of drugs and substances like alcohol, opium, heroin, synthetic drugs, stimulants, tranquilizer and chars (hashish)are used by addicts[4]. The number of smoking hashish is greater than other substances in KPK because it is cheap and easily available.

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Chars is derived from Indian hemp plant or cannabis sativa called dagga in south and central Africa and hashish in Egypt, widely grown in Asia[5]. The parts of the plant vary in potency. The resinous exudate of the flowering top of the female plant (chars, hashish) is the most potent, followed by dried leaves and flowering shoots of the female plant (bhang) and the resinous mass of small leaves of inflorescence (ganja) having rusty green color and characteristic odor. The least potent are the lower branches of the leave of the female plant and all parts of the male plant. Majun is a sweet meal made with bhang[6].

The active principle in all of the above mentioned products is fat soluble oleoresin cannabiol (tetra hydro cannabinoid-THC[7]. The concentration of this active principle is 15% in bhang, 25% in ganja and 25-40% in chars. Apart from bhang all are usually inhaled by smoking in cigarrete, hookah and pipe[8]. Bhang is used in flavor of beverages.[6]

The term marihuana or marijuana is derived from Mexican language meaning pleasurable. The cigarrete contains 500 mg of marihuana which contains 5 – 10 mg of tetra hydro cannibiol.[9] Effects occur in 10-20 minutes and last for 2-3 hours. The half-life of active

principle is 7 days because it is fat soluble. The use and setting, as in psychedelic use are important factors in the effect of substance.[10,11,12,13]

MATERIALS AND METHODS

This study was conducted in Karak city, a district in south of KPK bordering Kohat in north and Mianwali in south (Punjab). The tribal area is at distance of 30km, the main source of hashish, opium and heroin, so chars is easily available. The substance peddlers and the consumers are acquainted with each other and the salesman can be found at corner of the street. 100 chars addicts were selected all male in age group of 18 – 60 years to carry out the study.

The study was conducted from March 2013 to march 2014. A detailed history including personal bio data(name, age, occupation, & weight), complaints, previous history, family history, sexual history, current life functioning with attention to vocational social , educational , childhood development, adolescent adjustment. Additional information from the family was also included. Medical examination and pertinent social, cultural and environmental factors influencing the individual were recorded. A detailed record of duration, frequency, mode of intake (cigarrete, hookah, pipe etc.) and timings were obtained. Laboratory investigation i.e. liver function tests (ALT and Total bilirubin)and renal function tests (urea and creatinine)were done at the beginning, middle and end of the study. Their physical and systemic examination was recorded. Their smoking habit, behavior all were closely observed by joining their sittings.

RESULTS

The observation revealed that the smoking of hashish is most common in lower and middle class. About 60% hashish was smoked in cigarettes 30% in hookah and 10 % by pipe. The majority of addicts enjoyed smoking in company and addiction brought them in close friendship without jealousy.

The effects occurred in 10-20 minutes and lasted for 2-hours. The hashish smoking is common indrivers, clerks, small business men, students, fakirs, mujawar of shrines and music lovers

The symptoms are euphoria, and sense ofwell-being and they become talkative, hallucinated, have a feeling of grandeur, followed by sleepiness and have aphrodisiac effect. Sleeps lasts for about six hours and wake up fully recovered without hangover. The addict is usually docile and sober. The soberness gives the name of smoking chars as the addiction of Malang.

Chars addict perform their duty normally to greater extent, if not taken in excess. Most of the drivers of public transport drive while under the influence of chars.

This study contradicts that its use leads to criminal acts like rape, theft and murder. Their constitutional build up may be responsible for these crimes, not the substance but it may have an influence.

Chronic use may bring mild personality changes like talkativeness, grandeur hallucination and abnormal optimism. The old people, who were chronic addict, did suffer from chronic bronchitis and COAD(chronic obstructive airway disease) but that was due to smoking and not due to the ingredient of chars. This study also contradicts that smoking produces infertility proved by their family history. LFT's and RFT"S were normal.

The study revealed the following facts tabulated in Table - I

Table No.1: Changes noted in hashish addict after use of hashish

Characteristic of patient	Percentage
Initial Mood elevation	100
Later sedation and tranquility	85
Desire for use of other drugs	20
Weight normal	96
Weight gain	4
Increase of appetite	94
Decrease in appetite	6
Speech coherent	90
More talkative	89
Less talkative	11
Drowsiness/sleepiness	100
Gait normal	95
Constipation	5
Hallucination of grandeur	78
Soberness	84
Generally have sound knowledge of calculation, distance and events	80
Generally altered knowledge of calculation, distance and events	20
Craving for drug	88
Analgesic effect	32
Severe Withdrawal symptoms	10
Tolerance	30
Normal Orientation in time, place and person	98
Normal Knowledge of previous events	97
Psychosis in chronic heavy users	5
Normal LFT (ALT and Bilirubin)	89
Normal RFT (Urea and Creatinine)	94
Chronic bronchitis	80

DISCUSSION

The results revealed that this substance causes euphoria which is short lived, it brings sleep but no hangover [14]. There is no ataxia; the person can perform his normal duties if he takes in less quantity. Hallucination is common and speech is normal but person becomes more talkative[15,16]. It also has an aphrodisiac effect. The person's appetite increases with great relish of food

intake without increase in weight which attracts attention of research. Results have also shown that hashish has an analgesic effect in people suffering from chronic pain[17]. The withdrawal symptoms are mild. It does not provoke the person in theft, rape and murder crimes. The hashish does not affect the liver and kidneys to a greater extent, it is better than other substitute and drugs in the sense that it causes less tolerance, less withdrawal symptoms, less inclination to crime, rarely constipation, less psychomotor abnormalities, no delirium tremor but in contrast more docile and soberness. Certainly addiction has undesirable affects and in chronic user's psychosis occurs in 5% of people so the use of ingredients of hashish in treating psychosis is still debatable[18,19]. The hashish is legalized in Uruguay, Netherlands and certain states of U.S.A[20,21], however charsi and bangi (a person addicted to chars and bhang) is a stigma to a person living in eastern and particularly in Muslim society like Pakistan.

CONCLUSION

The purpose of this study is not to justify or advocate the smoking of Hashish (chars). Addiction to any drug or substance is injurious to health. Most of the drugs and substance abuse is banned by law and religious code of conduct. Further research and exploration is required to identify, quantify the ingredients of chars which have favorable effects, if an oral preparation on the body to treat anxiety, chronic pain, anorexia, insomnia, irritability, depression in HIV patients and terminally ill patients. The edge of this drug would be easy availability, less costly, less tolerance, less withdrawal symptoms, less toxic to liver and kidneys. Its use in psychosis and as an analgesic is still to be evaluated.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Myasthenia Gravis

Frequency of Thymoma in Thymectomy Specimens in Myasthenic Patients

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ABSTRACT

Objective: This study was carried out to determine the frequency of thymoma in different age groups and sexes in thymectomy specimens in Myasthenia Gravis patients.

Study Design: Observational study

Place and Duration of Study; The study was carried out in General Surgery Department at PIMS over a period of three years from 2009-2012. PIMS is a tertiary care centre where large population of Islamabad and Surrounding territory, including AJK, Gilgit Baltistan, Hazara division, Peshwar and nearby districts of Punjab gets treatment .

Materials and Methods: A total of 30 patients selected at random, were included in this study. Patients were of different age groups, above 12 and under 52 years of either sex. Patients with poor medical control of disease with no contra indication for surgery. Patients with operable mediastinal mass (thymoma) were included. Generalized myasthenia gravis was diagnosed in patients. Pre-operative plasmaphoresis was carried out in all patients. Transsternal approach was used in all cases although now video assisted thoracoscopic thymectomy is becoming popular. Intraoperative findings were noted with emphasis on gross appearance and an information by histopathological report (frozen section).

Results: In our study 17 % thymectomy specimens turned out to be thymoma. Male to female ratio was 3:2. Age range was 12 years to 52 years.

Conclusion: All patients undergoing thymectomy for Myasthenia Gravis don't have thymoma. Moreover all Thymomas are not associated with Myasthenia Gravis. Ages between 3rd to 5th decade are affected by thymoma and gender difference is very little.

Key Words: Myasthenia gravis, Thymectomy, Thymoma

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INTRODUCTION

As is evident from the name, Myasthenia Gravis (MG) means grave muscular asthenia[1] (derived from Greek and Latin words).

Fluctuating weakness of muscle groups which is hall mark of MG is caused by a chronic autoimmune neuromuscular junction disorder.

In United States its prevalence is about 20/100,000 population[2]. It affects males and females of all races and all age groups. It is not contagious and is thought not to be directly inherited[3].

Common symptoms of the disease may include dysphagia, dysphasia, weakness of arms and legs, a drooping eyelid, blurred vision, and chronic muscular weakness. In extreme cases patient may develop difficulty in breathing[4].

In 85% of the cases of MG by Acetyl Choline Receptor antibodies[5] are cause of this neuromuscular disease. Thymoma accompanies MG 15% of all MG cases[6] .

The immune response against an epitope expressed on thymoma cells spills over to neuromuscular junction components sharing the same epitope[7] .

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Although most thymomas are benign , but these should be removed otherwise It may invade locally. In fact, thymectomy is otherwise also indicated to treat MG even if no neoplastic lesion is there because it does improve features of Myasthenia Gravis in some patients, even in absence of tumour [8].

Thymoma is a rare tumor, found out during thymectomy in myasthenic patients, we specially emphasize on frequency of thymoma in different age groups and sexes.

Thymic tumours arise from epithelial cells, and are mostly of the cortical subtype[9]. 50% of thymoma patients develop MG. Such cases are called Thymoma MG. This study was carried out to know about incidence of thymoma in thymectomies carried out for myasthenia gravis.

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MATERIALS AND METHODS

This observational study was carried out at PIMS Islamabad on the cases admitted in the Deptt. of General Surgery and referred from medical/neurology departments from 01-01-2010 to 31-12-2012.

- A total of 30 patients selected for surgery.
- A detailed history of all patients who were referred from neurology department of hospital was taken and thorough clinical examination was carried out.
- Patients with an operable mediastinal mass were included.
- Patients included in study were with poor medical control of disease and with no contra indication
- for surgery.
- Generalized myasthenia gravis was diagnosed in all these patients.
- All included were under 52 years and over 12 years of age.
- 16 patients were males and 14 were females.
- Pre-operative plasmaphoresis was carried out in all patients.
- Trans sternal surgical approach was used in all patients.
- Intra-operative findings were noted with emphasis on gross appearance and histo-pathological examination (frozen section).

Following investigation were carried out
Non-specific tests

- Blood Complete Picture
- Urine R/E.
- Renal Function tests
- Blood sugar level
- ECG
- Blood grouping and cross matching.
- HBsAg , Anti Hcv ,Screening.

Specific tests

- **Tensilon test**. (In Myasthenic patients Tensilon test will be positive. It evaluates the
- Response of muscles to a drug Tensilon (Edrophonium Chloride). Edrophonium blocks
- the action of acetylcholine esterase and thus can prolong muscle stimulation and temporarily
- improve muscle strength. An increase in muscle strength after an injection of Tensilon strongly
- suggests a diagnosis of Myasthenia Gravis.)
- **EMG** (a single repetitive stimulus-) In repetitive stimulation studies there was decremental
- response in compound muscle either before or after exercise (Rouwland 1984)
- Chest X-ray
- Tomograms
- CT Scan of chest.

(Chest X-ray, Tomograms and CT scans were done to assess any widening of mediastinum resulting from thymic hyperplasia, thymoma and involvement of surrounding structures, pleura and pericardium by thymic seedling).

RESULTS

In our study, total patients were 30, out 0f which 5 patients were found to be having thymoma, 1 patient had atrophic thymus and 24 patient had hyperplasia. This study revealed that frequency of thymoma is about 17%, about 3% atrophic thymus and 80% patients have hyperplasia of thymus. (Table 1 to Table 4).

Table No.1: Histopathalogical types of disease in thymus

	H Histopathology	Number of Patients	Percentage
A	Thymic hyperplasia	24	80 %
B	Thymic tumor (thymoma)	5	17 %
C	Atrophic thymus (atrophic)	1	3 %

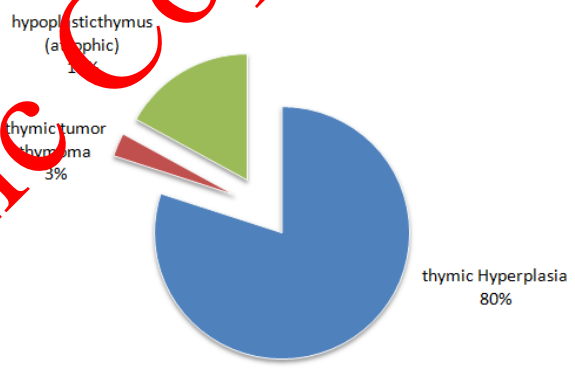

Figure No.1:Histopathalogical types of disease in thymus

There were five patients of thymoma and their ages were, 40 year female, 52 year male, 32 year male, 45 year male and 35 year female Which indicated that thymoma was found mostly in 3rd, 4th, 5thdecades.

Table No.2: Frequency of thymoma at different ages

1	40 year female	1
2	52 year male	1
3	32 year male	1
4	45 year male	1
5	35 year female	1
Total		5

Table No.3: Frequency of thymoma at different age ranges

Age Range	Total Patients	Male	Female
30 - 40	3	1	2
40 - 50	1	1	0

Table No.4: Frequency of thymoma at different sex

Total patients	Male	%age	Female	%age
5	3	60%	2	40%

It also indicates that thymoma frequency is higher in male above 40 year and in females below 40 year age.

Indications of thymectomy in this study

- Inadequate response to medical treatment --10
- Development of side effects to drugs --3
- Mediastinal widening (CxR/ CT) findings --17
- Total patients --30

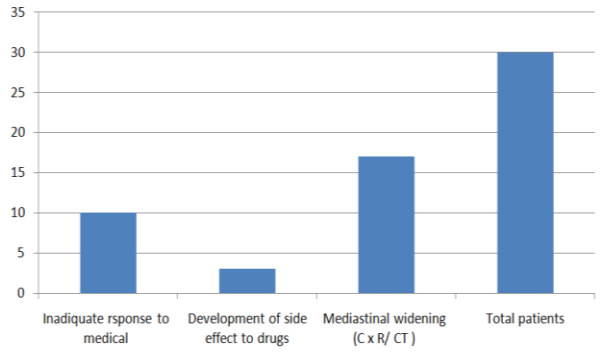

Figure No.2: Indications of thymectomy

DISCUSSION

The total study was carried out to find the frequency of thymoma in different age groups and sexes of myasthenic patients through sternotmy. Although thymic neoplasia[10] are cured well by radical excision, symptoms of MG may persist. In such patients continuous clinicolaboratory follow up is necessary. They may require continuous drug treatment[11]. Oncological treatment is necessary[12] in case thymoma has invaded local structures. A course of plasmapheresis or intravenous immunoglobulin (iv-IgG) given before surgical excision helps in decreasing pathogenic antibodies[13].

We recorded 30 patients of which 16 patientswere male and 14 were female. This sex ratio of patients which was referred to us and underwent surgery for thymectomy was slightly in favor of a higher male ratio. Besides pharmacological treatment thymectomy is the only surgical treatment Myasthenia Gravis worldwide and in about one fifth of thymectomy specimens thymoma may be encountered[14].

In order to avoid MG exacerbation and myasthenic crisis[15]after thymus removal intravenous Ig G or plasmaphoresis is done in various surgical centers. Iv-IgG is better alternative of plasmaphoresis[16] in patients at high risk of fluid overload causing cardiopulmonary failure.

Patients older than 45 years with thymoma MG[17,18] yield unsatisfactory results.

Comparative studies at different places for Frequency of thymoma

No	Place of research	Reference	Pati patients	Thymoma		% of thyThymoma
				Positive	Negative	
1	Mayo Clinic 1991	Cited by nevi 992	206	43	153	20.87
2	Agha Khan University 199	Ali et al,1992	13	3	10	23
3	National Utano Hospital 199	Ito-M et al, 19 2	133	18	115	13.50
4	Chirirginselspital Bern Germany, 1991		24	2	22	8.33
5	USA 1991 (Cancer 1992 Jul, 15: 70(20) 443-50	W gg L et al,1992	61	9	52	14.70
6	University hospital Groningen Netherland, 1991	Kuks Jb, et al, 11992	86	19	63	23.17
7	Denmark, 1992	Lindberg, et al, 11992	86	12	74	13.95
8	Switzerland, 1992	Aarili JA, et al, 11992	64	8	57	12.50
9	Pakistan PIMS	Sikandar, et al	30	5	25	16.66

After confirmation of neoplastic lesion in a patient with Myasthenia Gravis radical excision of the neoplasm[19,20] should be ensured through conventional transsternal approach or using video-assisted thoracoscopic technique. Both usually give similar results[21].

Those patients who have MG for less than five years benefit most from thymectomy.[22]

Sex Ratio in Patients of Thymoma

Number of male patients : number of female patients

3 : 2

Male : female ratio

3 : 2

1 : 5

In our study there was higher female ratio below forty and higher male ratio above forty. Percentage of thymoma in our study was about 17% which is not far different from other studies which were carried out in different hospitals at various time given in table above.[23]

CONCLUSION

We conclude that trans sternal or thoracoscopic (where expertise and technological facility exists) thymectomy is established surgical treatment of Myasthenia Gravis and incidence of thymoma is about one fifth in such thymectomy specimens. Whenever encountered, Thymoma should be excise radically. Both sexes are affected but males above forty are affected more by thymoma in our study.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Gestational Diabetes

Placental Histology in Diet and Insulin Treated Gestational Diabetics

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ABSTRACT

Objective: To observe and compare placental histology for hypoxic changes in diet plus exercise alone versus diet plus exercise and insulin treatment in patients with Gestational Diabetes Mellitus (GDM).

Study Design: Comparative / analytic study.

Place and Duration of Study: The study was conducted in Lyari General Hospital and Mamji Hospital after approval from the Institutional Review Board (IRB) and Ethical Committee of Dow University of Health Sciences from Jan 2010- Jan 2011.

Materials and Methods: After written informed consent, **30** patients were diagnosed to have GDM with RBS between 126-129mg/dl were given diet control plus exercise therapy (Group A). 30 GDM patients with RBS greater than 130 mg/dl were kept on diet plus exercise and insulin (Group B). After delivery placentae were collected from 25 patients in each group. Histological slides of placentae were prepared and parameters of hypoxia such as villous immaturity, villous fibrinoid necrosis, syncytial knots, chorangiosis, calcification etc. were observed and compared between the two groups using light microscope. Results were evaluated by SPSS 16 using student t- test and chi square test.

Results: Statistically non-significant results were obtained for the hypoxic parameters. However numerically more calcification was found in Group A while villous immaturity, villous fibrinoid necrosis and syncytial knots were present more in Group B.

Conclusion: Histological examination of placentae showed presence of hypoxic features in both Group A and Group B patients with more propensities in diet plus exercise and insulin treated GDM group.

Key Words: Diabetes, Gestational, Placenta, Hypoxia, Diet Management, Insulin

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INTRODUCTION

Pregnancy is a condition when females are more prone to develop diabetes due to a strong diabetogenic effect of maternal and placental hormones. Diabetes which occurs during pregnancy is known as gestational diabetes mellitus with FBS equals to or more than 5.5 mmol/L (100mg/dl) and post prandial glucose levels greater than 7 mmol/L(126mg/dl)".[1]

Placenta supplies nutrition and oxygen to the baby and also provides detailed information regarding infant intrauterine encounters[2]. The proper maturity of placental vessels is important for normal fetal growth and survival[3] Glucose can cross placenta so excessive glucose is stored as glycogen in the body of the fetus under the influence of fetal insulin, resulting in macrosomic babies and large sized placentae with compromised function[4] The whole process produces many maternal and fetal complications including cesarean sections, eclampsia in mothers and stillbirths, intrauterine deaths, respiratory distress syndrome and hyperbilirubinemia in babies attributed to hypoxic changes.[5]

Grossly placenta is a disc shaped highly vascular organ. Microscopically normal placenta comprises of multiple villi. They have grape like outgrowth of vessels with sinusoidal dilated capillaries to reduce the blood pressure in this area for adequate gaseous exchange[6] Maturity of these villi is necessary for proper exchange of gases and by term mostly placental structure comprises of mature villi. During the first trimester the syncytio-nuclei are regularly placed, but as the pregnancy advances these nuclei aggregate to form knots, known as "syncytial knots" due to ongoing apoptosis and necrosis of the tissue[7]. Syncytial knots significantly indicate utero-placental ischemia or fetal stress[8]. There are not more than 5 blood vessels within each villi. If their number exceeds more than 10 vessels then it is named as chorangiosis and is said to be associated with fetal congenital abnormalities and fetal hypoxia[9]. Fibrinoid necrosis may occur due to thrombus formation in maternal blood but peri-villous fibrin is the result of damaged trophoblastic tissue and is indicator

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of fetal hypoxia, intrauterine growth retardation and fetal death[10]. Visible calcification can be seen, and histologically, these are structure less basophilic areas which are a sign of placental degeneration.[11]

Conservative management for GDM includes diet control with mild exercise that is 30 minutes of walk thrice weekly. If maternal glucose levels are not controlled with diet and exercise alone then pharmacological treatment is added to the management plan. The mainstay of treatment is insulin. It acts through tyrosine kinase receptor which is finally directed towards intra cytoplasmic proteins (insulin second messenger system). This in turn increases translocation of glucose receptors on the cell membrane (GLUT 4) and enhances the intracellular entry of glucose, increases glycogen synthesis, lipolysis and lipogenesis[12].

Fetal hypoxia, growth restriction, intrauterine death and still birth are common in diabetic pregnancies. Microscopic examination of diabetic placentae could provide an insight into these problems. This study was designed to observe and compare placental histology for presence of hypoxic changes in diet plus exercise alone versus diet, exercise and insulin treated GDM patients.

MATERIALS AND METHODS

The study was conducted in Lyari General Hospital and Mamji Hospital after approval from the Institutional Review Board (IRB) and Ethical Committee of Dow University of Health Sciences from Jan 2010- Jan 2011. With written informed consent patients were enrolled for the study. Screening was carried out in high risk females, attending antenatal clinic by random blood sugar checking in OPD with glucometer. Confirmation was done with Oral Glucose Challenge Test and Oral Glucose Tolerance Test, according to WHO criteria and finally **69** diabetic patients were enrolled in the study. Two groups of GDM patients were made on the basis of RBS. Females having RBS less than 130 mg/dl were given diet control therapy for a week and then RBS was rechecked. **30** patients with RBS between 126-129mg/dl were kept in Group A, with diet control therapy and mild exercise. They were counseled to take 2000-2500 kcal/day and diet charts were provided accordingly. They were further asked to do 90 minutes of walk in a week. **39** Patients with RBS greater than 130 mg/dl were treated with s/c insulin therapy (2/3 NPH + 1/3 regular insulin, 0.8IU in 2nd trimester and 0.9 IU in 3rd trimester) administered in two doses (before breakfast and dinner) along with diet control and exercise (Group B) (1). All these patients were followed in obstetric diabetic OPD up to 32 weeks and then weekly till term. On every visit RBS was checked by glucometer and the dose of the drug was adjusted if needed. Placentae were collected at the end of the study with 25 patients in each group. These were preserved soon after delivery in 10% formalin in containers of adequate sizes. These containers were transported to Dow Diagnostic Research Lab (DDRL) for microscopic evaluations. For microscopic evaluation, histological slides were prepared. In this procedure first blocks were set by taking out placental tissues from 12 o clock, 6 o clock and center of the placenta of adequate size and were fixed in the plastic cassettes. Then these cassettes of placental tissue were processed step wise starting from dehydration in an ascending concentration of alcohol for a few hours. After that tissue clearing was done using xylene. Embedding of the tissue was done using liquid paraffin. After cooling of the blocks, finally, cutting of 4 µm thick sections were performed by manual microtome. The tissue sections were preserved on histology glass slides and were allowed to dry. Staining was then done with hematoxyline, eosin, PAS and trichome stains**.** Hypoxic parameters as villous immaturity, villous fibroid necrosis, syncytial knots, chorangiosis and calcification were observed using light microscope and findings were documented on a predesigned data form. The results were evaluated by SPSS 16 using student t- test and chi square test accordingly.

RESULTS

Both the groups had age and weight matched GDM mothers. Significant differences were present in FBS and RBS at the time of enrollment (0.005 and 0.00 respectively) (Table1).

Table No.1: Maternal characteristics Comparison between group A and group B N=50

Numerical Variables	Group A n=25 mean± SD	Group B n=25 mean± SD	Significance
Maternal weight (Kg)	78.54± 6.93	77.90± 9.03	0.78
Maternal age (year)	30.08 ± 3.16	31.60 ± 4.27	0.15
FBS (gm/dl)	88.88±8.79	102.08±20.06	0.005*
RBS (gm/dl)	148.72±38.9	239.16±69.7	0.00*

Table No.2: Microscopic examination of placentae comparison between Group A and Group B. N=50

Categorical Variables	Group A n=25	Group B n=25	Significance
Villous immaturity:			
Present	10	14	0.25
Absent	15	11	
Villous fibrinoid necrosis:			
Present	19	22	0.26
absent	6	3	
Syncytial knots:			
Present	14	15	>0.99
absent	11	10	
Chorangiosis:			
Present	13	13	>0.99
Absent	12	12	
Calcification:			
Present	10	7	0.37
Absent	15	18	

Group A: Pregnant GDM on diet control treatment

Group B: Pregnant GDM on diet control and insulin treatment.

*statistically significant difference

Student's t test applied

In placental histology villous immaturity, villous fibrinoid necrosis, syncytial knots, chorangiosis, and calcification were found to be non-significant statistically in both groups (Table 2). Though numerically, calcification were seen more in diet plus exercise alone (Group A) placentae whereas villous immaturity, villous fibrinoid necrosis and syncytial knots were present more in diet plus exercise and insulin treated (Group B) placentae.

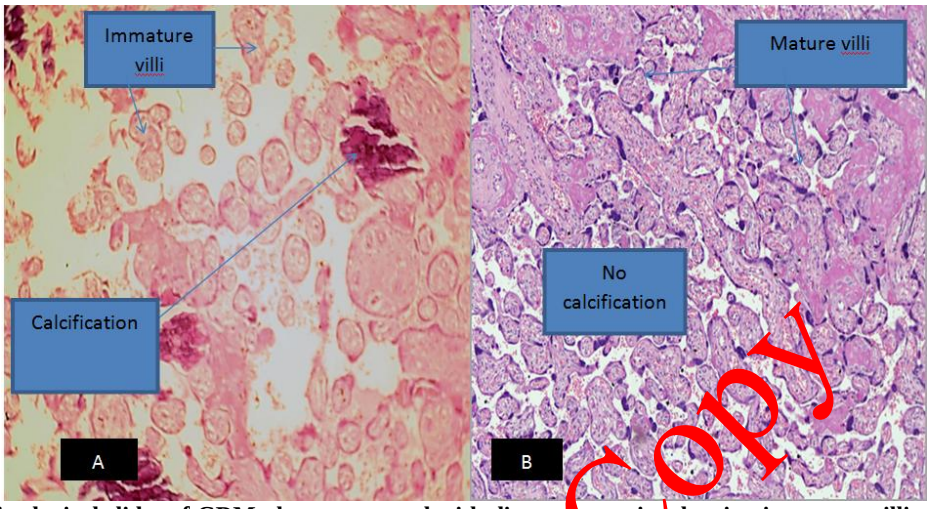

Figure No.1: Histological slides of GDM placenta treated with diet and exercise showing immature villi and calcification (A) whereas mature villi and no calcification is seen in placenta of diet, exercise and insulin treated

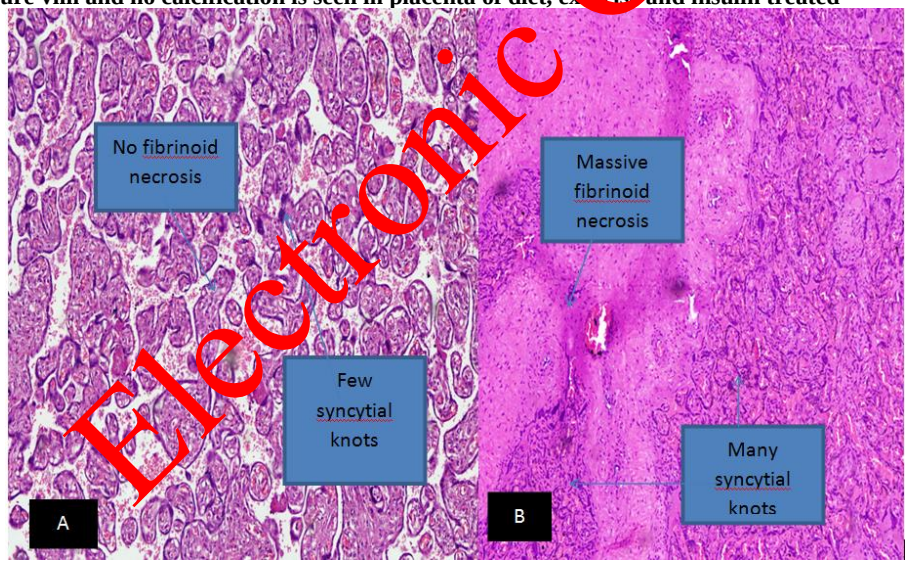

Figure No.2:Histological slide of GDM placenta treated with diet, exercise showing no fibrinoidnecrosis and few syncytial knots (A) whereas placenta treated with diet, exercise plus insulin showing syncytial knots & villous fibrinoid necrosis (B)

DISCUSSION

Placenta is an important organ for fetal survival and wellbeing. It has both maternal and fetal interactions, so has the influence in the environment of both.[13] Gestational diabetes is a carbohydrate and sugar intolerant state which occurs in 2-5% of all pregnancies. It needs proper management as it can be harmful to both mother and fetus[14].

Normal placental histology is important for its proper functioning. Any alteration in the placental histological structure such as immature villi, fibrinoid necrosis, chorangiosis, and excessive syncytial knots and calcification shows disruption of placental structure leading to defective supply of oxygen and nutrients to the fetus.

In our study more immature placental villi with abnormal structural and functional alteration were seen in insulin treated group on placental microscopy. Verma indicated that increase risk to fetal existence in comparison to diet control group. It has been pointed out that placentae of insulin treated patients had more

immature villous development than diet control placentae[15]. These immature villi are not capable enough to oxygenate the fetal blood thus are strongly associated with fetal hypoxia, growth restriction and still birth[16,17]. Maly stated that immature villi can be a causative factor behind fetal demise and growth retardation in GDM patients.[18]

According to our study results, Villous fibrinoid necrosis was found to be more in insulin treated gestational diabetics. It suggests more compromised state in placental circulation in comparison to diet control group. This is caused by excessive placental growth due to anabolic effects of fetal insulin which is probably exaggerated further by administration of exogenous insulin Morphologically placentae loses its structure and functional capabilities and this might be responsible for hypoxia and adverse fetal outcomes encountered in diabetic patients.[19]

Syncytial knots are clumped nuclei of dying placental cells protruding into inter-villous space These are considered abnormal if microscopically present within more than 30% of the villi. Extensive number of knots indicates utero-placental ischemia or fetal stress[20]. In our study more syncytial knots were seen in insulin treated placentae which indicates presence of more utero-placental ischemia or fetal stress in this group.

Rudge stated that placentae of patient kept on diet and nutritional therapy had more chorangiosis than insulin treated placentae[21] but we found different results in both groups, equal number of patients had chorangiosis. The reason of difference in results of both studies is probably the difference in sample size of both the studies. Following the patients throughout the pregnancy in the diabetic antenatal clinic, and then long individual study period of 37-38 weeks for a single sample also accounted for a relatively smaller sample size in our study. Hypoxia is an important stimulator of multiple transcription factors which play an important role in angiogenesis[22]. In diabetic pregnancies there is elevation of fetal fibroblast growth factor-2 levels which causes placental angiogenesis and hyper-capillarization[23].

Visible calcification can be seen on the maternal surface as multiple whitish areas very small and hard to touch. Histologically, these are structure-less basophilic areas (figure 1). It is the sign of placental degeneration but may also occur due to some underlying maternal pathology. In our study more placentae on diet plus exercise alone group showed calcification. Many factors like parity, increase intake of dietary calcium etc. are said to be involved in the process of increased placental calcification.[24-28]

Thus hypoxic parameters were present in the GDM placentae managed conservatively or with pharmacological treatment. However the magnitude of features were more in diet, exercise plus insulin treated GDM patients.

CONCLUSION

Hypoxic features were observed upon histological examination of placentae in both groups, one with diet plus exercise alone and other treated with diet plus exercise and insulin. However they were more common in the insulin treated GDM group.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Thrombocytopenia—An Indicator for Severe Plasmodium Vivax Infection?

Thrombocytopenia with P.Vivax

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ABSTRACT

Objective: To see the effect of thrombocytopenia in plasmodium vivax infection

Study Design: Prospective study.

Place and Duration of Study: This study was conducted at Trauma and General Hospital, Karachi from June 2013 to October 2014.

Materials and Methods: Ninety seven patients were included in the study with low platelets and positive malarial parasite (MP) or immunochromatographic test (ICT) malaria. Patients that were presenting with other causes of thrombocytopenia were excluded from the study including plasmodium falciparum or dengue fever.

Result: Total 97 patients were included in the study. Among them 63 (64.9%) were males. Mean age was 33.15±8.513 years. In our study none of the patient develops bleeding or required platelet transfusion.

Conclusion: Thrombocytopenia is now commonly seen in plasmodium vivax infection but usually do not lead to bleeding like dengue fever or plasmodium falciparum infections.

Key Words: Malaria, Thrombocytopenia, plasmodium vivax, malarial parasite (MP), immunochromatographic test for malaria (ICT MP), Platelets

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INTRODUCTION

Malaria is a disease of global importance. The WHO has reported a worldwide annual incidence of 247million cases and malarial mortality of one million per year.[1] Comparing the non falciparum species, plasmodium vivax has the greatest geographic range and burden of disease. Plasmodium vivax infections throughout the world ranges between 130 and 390 million, with 2.6 million individuals living at risk of infection.[2,3] Infection with plasmodium falciparum is mainly associated with thrombocytopenia, and other severe complications of malaria, though recently it has been seen with plasmodium vivax infection as well. With the help of advanced molecular diagnosis it became evident that major complications may also occur with plasmodium vivax mono infection and are encountered in endemic settings nearly as commonly as falciparum malaria.[4]

All the complications are almost equal in both falciparum and vivax malaria. A retrospective study of hospitalized individuals in Papua Indonesia suggested that plasmodium vivax is a major cause of morbidity in early infancy. Among 187 infants aged <3 months, admitted during a four year period with thrombocytopenia. Death rates among these patients were comparable between viax and falciparum infection.[5] A study from Venezuela reported thrombocytopenia in 58.9% children with vivax malaria, with 25.6% requiring platelets transfusion.[6] Another study done in pediatric population at Bikaner in North West India, showing thrombocytopenia in 61.5% of children and bleeding symptoms in 10.8% cases.[7]

Although many studies have been done among the pediatric population, but there is still a lack of studies assessing thrombocytopenia and its severity in relation to bleeding in adult population. Hence this study is conducted to see the effect of thrombocytopenia due to vivax malaria in adults and requirement of platelets among them.

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MATERIALS AND METHODS

It was a prospective, cohort study conducted at Trauma and General Hospital Karachi, during the period of July 2013 to October 2014. Prior permission for the study was taken from the patients and Hospital management. The statistical analysis was done on SPSS version 16.

Inclusion criteria: All patients with an age range of 15 to 55 years coming with high grade fever with positive vivax malaria either on peripheral smear or ICT malaria and low platelets were enrolled for the study. Thrombocytopenia was defined as platelet count <150,000.

Exclusion criteria: Patients that were co-infected with falciparum malaria, falciparum alone or with dengue fever were excluded from the study.

Patients with underlying conditions with low platelets like chronic liver disease, autoimmune illnesses, sepsis or DIC were also excluded from the study.

All patients were subjected to routine laboratory investigations like complete blood count with platelets, urea, creatinine, electrolytes, ALT, blood sugar, M.P, ICT MP. Patients with suspected chronic liver disease also had hepatitis B and C serology.

RESULTS

Ninety seven patients were included in the study. Among them 63 (64.9%) were male. Mean age was 33.15±8.513 years. The youngest patient was 18 years and eldest was 55 year old. All patients had low platelets ranging from 7000u/L to 147,000u/L (table 1). In 97 patients MP was positive in 25, while ICT MP in 72 patients with negative MP (Table 2). Total leucocyte count was low in 76 patients with a minimum of 1.5×10^3 /L, and maximum of 5.4×10^3 /L. Out of 97 patients 26 had increased ALT with a maximum of 146 IU. None of the patients included in the study had bleeding from any site or required platelet transfusion.

Table No.1: Different Pattern of platelet count n=97

Platelet count	Percentage
<5000 u/L	0%
5000-10,000 u/L	2.1%
10,001-20,000 u/L	18.6%
20,001-50,000 u/L	17.5%
50,000-100,000 u/L	38.1%
100.001-150,000 u/L	23.7

Table No.2: Total Positive MP and ICT MP n=97

	MP	ICT MP
Positive	25	72
Negative	--	25
Not done	72	--

DISCUSSION

Malaria is a major threat in many parts of Pakistan. Malaria is endemic in Pakistan, with 64% and 36% of malaria cases are due to plasmodium vivax and falciparum.[8] The clinical manifestations of malaria diversify with geography, epidemiology, immunity and age. In areas where malaria is endemic, children and pregnant women are at the highest risk of getting the infected. Malaria should be suspected in patients with febrile illness, if they have had exposure to a region where malaria is endemic. [9]The incubation period of vivax is usually two weeks, and relapses occur within three months. The symptomatology of malaria included fever, abdominal pain, cough, diarrhea or myalgias.[9] There are many hematological abnormalities including hemolysis, thrombocytopenia and leucopenia is present in falciparum malaria but recently during the last decade has been commonly seen in vivax malaria as well.[10] Many explanations have been given to these manifestations of decreased platelets, like; adherence of platelets stimulated by TNF to endothelium, [11] bridges formed by platelets between RBC'S and endothelial cells as in falciparum malaria [12] and stimulation of platelets by parasitized RBC'S triggering apoptosis in endothelial cells preheated with TNF in a pathway mediated by TGF β1.[13] Recently it has been seen in vivax malaria also and thus concluded to have same mechanism of low platelets as in falciparum. [14]Profound thrombocytopenia is a well known complication of falciparum malaria, but has been observed in vivax malaria too. In recent years its occurrence has increased, but most of the patients do not have major bleeding as in falciparum malaria or dengue fever. Most of the publications regarding relation of vivax infection with low platelets published in late 1990's, but regardless of being described as a complication by WHO, thrombocytopenia is not considered as a severity criteria,[15] due to inability to cause bleeding or death in any patient. Most of the studies have been done on pediatric population with severe thrombocytopenia, and none of them reported any major bleeding or complication, even on low platelets of<50,000/uL.[16,17] Most of the studies have also shown a negative co-relation between low platelets and parasitemia,[18,19] only one study done at Brazil shows direct co-relation.[16,17]

Thus there has been lack of studies on thrombocytopenia causing bleeding in adults. Our study included only adults with vivax malaria and excluded plasmodium falciparum, dengue fever and patients with sepsis as these are also common causes of thrombocytopenia. In our study none of the patients even on low platelets of 7000u/L had bleeding. Although there was a case reported from India in 2009, which had platelet count of 8000 u/L and had spontaneous bleeding from the gums.[20] Even though having low platelets of <10,000u/L among two patients in our study, platelets were not transfused and they had spontaneous recovery only with anti-malarial medication. The same observation is also noted in one study done in 2004, in whom 1.5% of the subjects had platelet count between 5000u/L to 20,000u/L, with no evident bleeding and none of them required platelets.[21]None of our patients were given folic acid or folinic acid as it is mostly given to patients with low platelets. Folate is essential for DNA synthesis and the survival and growth of the malaria parasite. There is a study done in 2007 which showed increased incidence of malaria in endemic areas if iron and folic acid are given together.[22] Another study done in 2007 which

showed failure rate of antimalarials if folic acid is given simultaneously.[23]

CONCLUSION

The trend of vivax malaria, has been changing. Similar incidence of complications including thrombocytopenia is seen in both faciparum and vivax malaria. Although the bleeding is not commonly seen in vivax, despite very low platelets. The level of parasitemia until now has no direct relationship with thrombocytopenia, but no studies have been done in adult population. It is recommended to do such study in adults which may help in treating such cases more easily and to make a guideline for management of plasmodium vivax infection with low platelets.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Mammography

Diagnostic Accuracy of High Frequency Ultrasound and Mammography in Breast Lump

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ABSTRACT

Objective: The study was conducted to evaluate the diagnostic accuracy of high frequency ultrasound and mammography in common breast lumps.

Study Designs: Observational study

Place and Duration: This study was carried at Radiology Department, LUMHS & NIMRA Jamshoro/Hyderabad and Isra University Hospital, Hyderabad from June 2008 to June 2012.

Materials and Methods: A sample of 520 female of age 20 - 80 years presenting with breast lumps after initial examination were evaluated for further benignity or malignancy using ultrasonography and mammography. The findings were then compared with both diagnostic modalities. Data were entered and analyzed by using SPSS 21.0. Continuous and categorical variables were analyzed by student t test and chi square test. A p value ≤ 0.05 was considered statistically significant.

Results: Mean ±SD of age was noted as 45.69 ± 10.77 years. Most of the patients were married (76.9%) and belonged to middle age group (51.5%). There were insignificant associations observed when we compared the underlying diagnosis with the diagnostic techniques used (p=0.075). On the other hand, the diagnosis in young age group was significantly made by using ultrasonography and in older group mammography was the diagnostic modality of choice (p = 0.020).

Conclusion: Non-invasive test such as ultrasonography should be the preferred technique in young patients who present clinically with abreast lump.

Key Words: Ultrasonography, Mammography, Breast lump

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INTRODUCTION

Benign or malignant breast lumps are quite common in younger and older women[1] and according to recent 2014 American cancer society estimates,9 out of every 10th women showing benign tissue changes and about 231,840 new cases of invasive breast cancer and about 60,290 new cases of carcinoma in situ (CIS) are being diagnosed in women and the associated mortality is about 40,290[2-4].

Ultrasound is the investigation of choice in young women with symptomatic breast lumps under the age of 35 years and for different cystic and solid masses and assessment of mammographic abnormalities. Mammography is used for both screening and diagnostic purpose in women aged 50 years and above. Mammography is a special x-ray used to image breast giving high quality image with optimum film density and contrast, high resolution, and low radiation dose[3-5].

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Clinical presentations of women with palpable lumps in their breasts are very common worldwide and most of them are generally benign. Three rules for the diagnosis of underlying pathology are very helpful, these are; a complete physical examination, imaging, and sometimes breast tissue is also needed for the definite diagnosis. Fine needle biopsy can also be used to differentiate the cystic or solid masses but for that there must be a trained physician available with adequate experience to perform this procedure.

Mammography screens presence of underlying malignancy in the same and also in the opposite breast in older women; the documented drawback of mammography in younger women is that it is less sensitive in women younger than 40 years. On the other hand, ultrasonography is very helpful in distinguishing cystic masses, which are common, and may be used to guide biopsy techniques. Tissue specimens obtained with core-needle biopsy allow histological diagnosis, hormone-receptor testing, and differentiation between in situ and invasive disease. Core-needle biopsy is more invasive than fine-needle aspiration, requires more training and experience, and frequently requires imaging guidance. After the clinical breast examination is performed, the evaluation depends largely on the patient's age and examination characteristics, and the

physician's experience in performing fine-needle aspiration[5-12].

The aim behind this study was to evaluate the diagnostic accuracy of high frequency ultrasound and mammography in common breast lumps.

MATERIALS AND METHODS

The present observational study was carried out at the Department of Radiology, LUMHS & NIMRA Jamshoro/Hyderabad and Isra University Hospital, Hyderabad from June 2008 to June 2012.

A total of 520 female patients presented with masses in the breast between the ages of 20 and 80 years after getting informed consent were included in this study. Patients with clinical breast masses were first examined by gynecologists and after that for further evaluation of benignity and malignancy the masses were then diagnosed using ultrasonography and mammography techniques. If the masses had 3 out of the 7 criteria of malignant masses such as depth, variability, irregularity in echogenic halo, hypogenicity with low-level marked and non-uniformity, the masses were recognized as malignant masses and rest were categorized as benign masses.

A preformed structured questionnaire was used to collect the relevant data such as age, marital status, diagnostic techniques used, and the final diagnosis made after using those modalities.

Data was entered and analyzed by using SPSS 21.0. Continuous and categorical variables were analyzed by student t test and chi square test. A p value ≤ 0.05 was considered statistically significant.

RESULTS

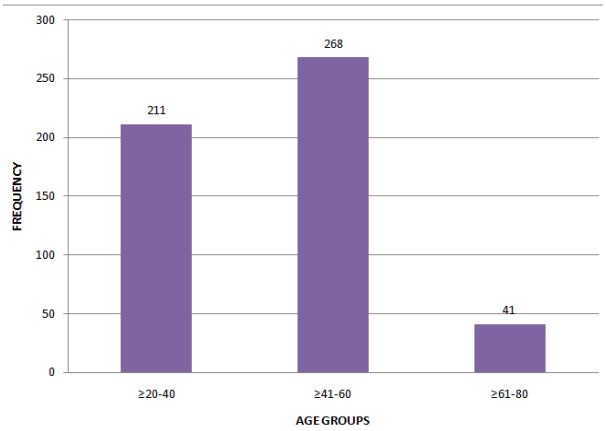
Out of a total 520 patients, the mean age and SD was 45.69 ± 10.77 years and the age ranging between 20 to 80 years. Among them, majority were married as compared with singles, 76.9% and 23.1% respectively (Table 1).

Table 1: Baseline demographic characteristics of study population

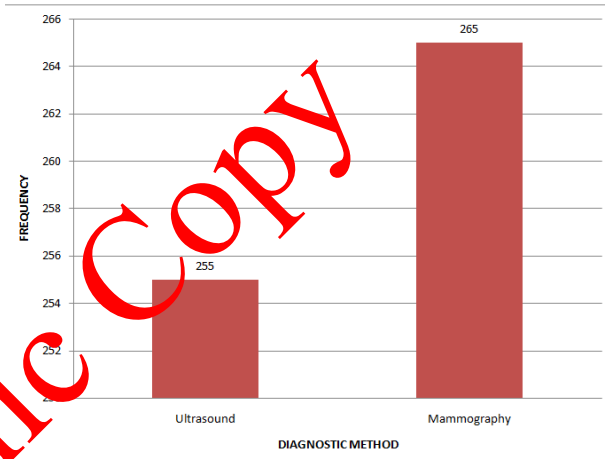
Age - Years		
Mean ± SD	45.69 ± 10.77	
Minimum	20	
Maximum	80	
Marital Status	**No.**	**%**
Single	120	23.1
Married	400	76.9

Table No.2: Comparison of Diagnostic Methods and Underlying Diagnosis

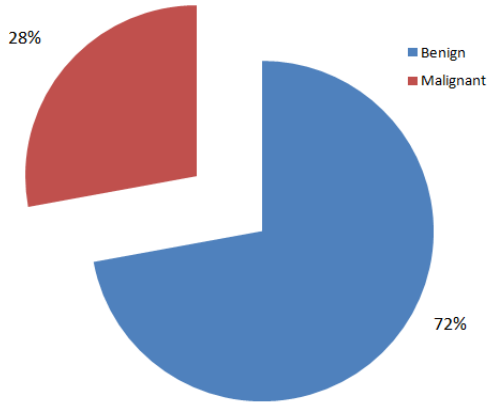
Diagnostic Methods	**Diagnosis**		**P Value**
	Benign	Malignant	
Ultrasound	193	62	0.075
Mammography	182	83	



Graph No. 1: Age Grouping of Study Participants



Graph No.2: Diagnostic Modality Used

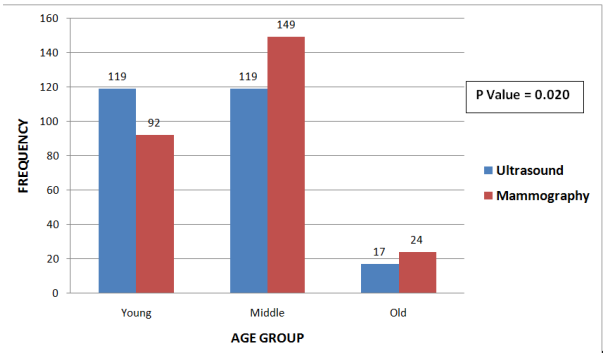


Graph No.3: Underlying Diagnosis of Patients

The age of the female patients in our study was divided in to three main categories. Young age group (≥20 – 40 years), middle age group (≥40 – 60 years), and old age group (≥61 – 80 years).In our study, middle age group comprised of main study participants (51.53%) as compared to young and old age groups (Graph 1).

Graph 2 shows diagnostic modalities we have used in our study. Mammography was the most commonly used diagnostic modality (N = 265, 55.38%) as compared with ultrasonography (N = 255, 49.0%). Among them,

benign breast lumps were diagnosed in 72% of the cases and rest of them were malignant, 28% (Graph 3) There were insignificant associations observed when we compared the underlying diagnosis with the diagnostic techniques used (p value 0.075). Table 2.On the other hand, the diagnosis in young age group was significantly made by using ultrasonography and in older group mammography was the diagnostic modality of choice (p value <0.020) (Graph 4)



Graph No.4: Comparison Between Age Groups And Diagnostic Modality Used

DISCUSSION

Breast lumps are the common findings observed in both younger and older women and sometime the initial presentation of malignant breast diseases[11]. In our study, most of the women presenting with clinically palpable breast lump were of middle age45.69 years. In a previously conducted study the same findings were observed[12-13]. Due to non-invasive procedure the ultrasonography was the preferred modality of choice to commence with. Although for the diagnosis of malignant breast diseases mammography is the preferred method but in our study we have found that ultrasonography can detect benign and malignant breast lumps in younger population but as the women ages, mammography will be used to diagnose the underlying pathology involved in causing breast lumps. When the data was compared to observe the diagnostic significance in both techniques, our data has shown no significant difference. That means, for the initial diagnosis of breast lumps non-invasive method such as ultrasonography can be used in younger and older population. A study conducted by Guila has shown that ultrasonography in diagnosing breast lumps was more than 80% sensitive and more than 95% characteristic in differentiating breast lumps[14-15]. Previous literature shows that with increasing age, the prevalence of malignant breast diseases also increases, that is why in older females according to the American Cancer Society guidelines, mammography should be done to screen the malignancy[16].

CONCLUSION

The findings show that the initial assessment of young patients who present with clinical breast lump, the ultrasonography is as sensitive and specific as the mammography. However, mammography may be preferred for both screening and diagnosis of benignity and malignancy in women.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Hemi-Hamate Arthroplasty

Hemi-Hamate Arthroplasty for Unstable Dorsal Proximal Interphalangeal Joint Fracture Dislocation of the Fingers

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ABSTRACT

Objective: To assess restoration of finger functions after hemi-hamate reconstruction.
Study Design: Experimental / Analytic study
Place and Duration of Study: This study was carried out at two different centres at Jinnah Hospital, Lahore and King Khalid Hospital, Najran KSA from between 2010 and 2013.
Materials and Methods: We performed hemi-hamate autograft arthroplasty in 20 patients age 16-45 years. All were having comminuted metaphyseal fracture of volar surface of middle phalynx involving more than 50% (55%-90% average 70%) of articular surface with dorsally displaced unstable proximal interphalyngeal joint. Functional outcome was assessed by grip strength, proximal interphalyngeal joint, distal interphalyngeal joint range of motion and residual pain and patient's satisfaction.
Results: At the end of average 24.4 months follow-up mean active range of motion for proximal interphalyngeal joint was 62 °(40°- 90°), distal interphalyngeal joint was 54°(40°-65°) and flexion contracture was 15°(0°-35°).Grip strength was achieved upto 95% (50%-95%) of opposite normal hand. Almost all patients were satisfied with functional outcome and appearance of the finger. We had not come across donor site morbidity, graft resorption, avascular necrosis, subluxation/dislocation, coronal/sagittal instability, infections except 4 patients, one scar tenderness, one ulnar digital nerve paresthesia and 2 with early osteoarthritic changes.
Conclusion: Non-vascularized hemi-hamate autogarft is a good treatment option for comminuted proximal interphalyngeal fracture dislocation having more than 50% volar lip involvement, resulting in satisfactory functional outcome as compared to other surgical treatments. We recommend it in patients of active age group.
Key Words: Hemi-hamte arthroplasty, Unstable, Proximal interphalyngeal joint, Fracture, Dislocation

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INTRODUCTION

Proximal interphalyngeal dorsal fracture dislocation is a rare injury but common in ball handling sports and trauma leading to direct force to finger tip with axial loading and hyperextension of proximal interphalyngeal joint.[1,2] This results in impaction of palmar lip of middle phalynx to proximal phalyngeal condyles.[3,4] This injury is highly unstable if more than 50% of volar lip is involved and further enhanced by comminution of fracture fragments.[5] Treatment options are limited with no role of conservative management. Surgery is mandatory to restore the joint functions. Different options are supported in literature with variable results like volar plate arthroplasty,[6] open reduction and internal fixation,[7] tenodesis of superficialis,[8] external traction system[9], silicon arthroplasty, arthrodesis and non-vascularized distal radius autograft.[10] Hastings[11] first introduced hemi-hamate autograft arthroplasty for comminuted proximal interphalyngeal fracture dislocation in 1999 while emphasizing anatomical resemblance of distal articular surface of hamate with base of middle phalynx and produced good results. Since then, several studies have been published from different hand centres of the world. As osteochondral hemi hamate autograft provides good mechanical stability for comminuted proximal phalynx volar lip fracture.[12] So we believe hemi-hamate resurfacing arthroplasty would restore better contour of proximal phalynx base and provide better functional outcome. Patients with dorsal fracture dislocation of proximal interphalyngeal joint having more than 50% volar lip involvement.

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MATERIALS AND METHODS

Twenty patients with proximal inter-phalyngeal unstable dorsal fracture dislocation were treated with hemi-hamate arthroplasty at two different centers, King Khalid Hospital Najran, KSA and Jinnah Hospital Lahore, Pakistan between 2010 and 2013. There were

15 male and 5 female patients with average age of 29 years (16-45). Long finger was affected in 40% of cases. Ball handling sports injury 35% was the major cause of trauma other than fight 25%, fall 20% and motor vehicle accidents 20%. All the patients presented within 11 days (1-21 days) of injury. Dominating hand was involved in 80% of cases. All were having unstable proximal inter-phalyngeal joint with dorsal fracture dislocation with average 70% (55-90%) of articular surface involvement confirmed with AP and lateral plain radiographs of injured finger. Patients with more than 90% anterior surface involvement of base of proximal phalynx, tendon injury, neurovascular injury, open fracture, failed previous surgery, presented later than 3 weeks, unable to comply with rehabilitation protocol, all were excluded from the study. All the patients and family were given detailed counselling about injury, surgical procedure and possible complications. Pre-operatively, AP and lateral plain x-ray centered over proximal inter-phalyngeal joints done for all the patients (Figs. 1-2).

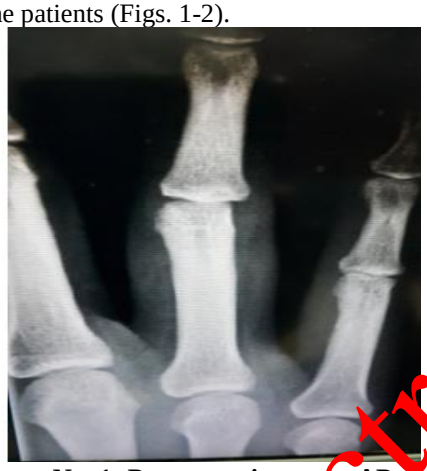

Figure No. 1: Pre-operative x-ray AP view

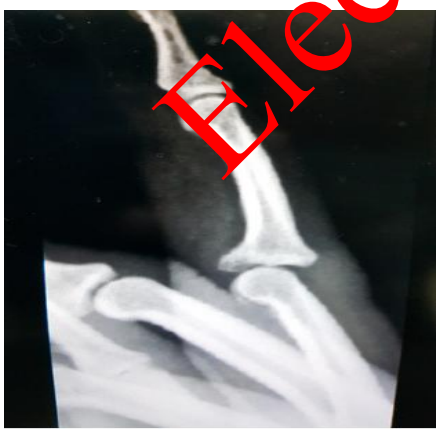

Figure No. 2: Pre-operative x-ray lateral view

All patients were operated under general anaesthesia or regional anaesthesia. Torniquet was used. A shotgun approach was used through volar zigzag skin incision. Flexor sheath was exposed, after identifying and protecting neurovascular bundle on either side, thin flexor sheath flap comprising of C1 and A3 elevated on one side saving A2 and A4 pulleys. Long flexor tendons were retracted to expose volar plate and incised from small displaced fragments of middle phalynx, along-with accessory collateral ligaments. The collateral ligaments elevated by dissection to expose the base of middle phalynx. The palmer lip is debrided removing free fracture fragments taking care not to damage the dorsal lip. 4 mm oscillation saw was used to create box-like recipient defect and measured in three dimensions with slight palmer slope.

Dorsal longitudinal incision made over 4th and 5th carpometacarpal joints after confirmation under c-arm. After mobilization the dorsal sensory branches of ulnar nerve, 4th and 5th carpometacarpal joint exposed between extensor digitorum communis of ring finger and extensor digitorum quantae tendons. The box shaped 4-mm hemi-hamate auto graft was harvested with oscillating saw according to dimensions of the recipient defect. The graft was secured with two or three lag screws (1.0 or 1.2 mm) after reconstructing the curved shape of the palmar lip. After reduction of PIP joint its stability and ROM were assessed under C-arm. Volar plate re-attached to middle phalynx at its distal lateral margins. Tourniquet deflated and haemostasis secured. Wound closed in layers. Dressing done with dorsal splint in 20° flexion. Sutures removed at 10 days and active flexion were encouraged. Extension of proximal interphalyngeal joint blocked for further 4 weeks. Full range of movements started at 6 weeks. X-rays were taken immediate after surgery on 2 and 6 weeks post operatively. Patients were followed up until radiological union of the graft.

RESULTS

Results of hemi-hamate arthroplasty were assessed in 20 pts with average follow up of 24.4 months. The average range of motion of proximal interphalyngeal joint at final follow up was 62° (40° to 90°) and distal interphalyngeal joint 54° (40° to 65°). Average recovery of grip strength on involved hand was 74.5% as compared to opposite normal hand.

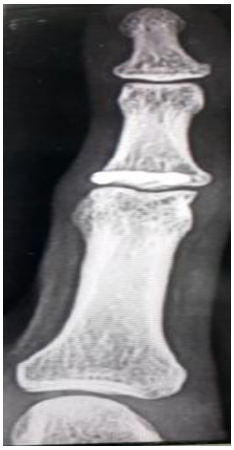

Figure No. 3: Postoperative x-ray AP view

Table No.1: Demographic information of the patients (n = 20)

Variable	No.	%
Age (years)		
16-25	9	45.0
26 – 35	4	20.0
36 – 45	7	35.0
Gender		
Male	15	75.0
Female	5	25.0
Finger involvement		
Rt. ring finger	6	30.0
Lt. small finger	3	15.0
Rt. long finger	3	15.0
Lt. long finger	8	40.0
Handedness		
Right	16	80.0
Left	4	20.0
Mode of Trauma		
Sports	7	35.0
Fight	5	25.0
MVA	4	16.0
Fall	4	16.0
Joint involvement (%)		
51-75	12	60.0
76-100	8	40.0
Grip strength (%)		
51 – 70	10	50.0
71 – 90	10	50.0

Table No.2: Outcome of hemi-hamate arthroplasty

Outcome	No.	%
Active range of motion		
PIP		
40-70	16	80.0
71-100	4	20.0
DIP		
40–55	15	75.0
56 – 70	5	25.0
Radiological osteoarthritis		
Yes	2	10.0
No	18	90.0

Mean fixed flexion contracture noted at proximal interphalyngeal joint was 14.75° (0°-35°) of involved finger. All of the patients were satisfied with functional outcome and appearance of fingers. Proper reduction and congruency of proximal interphalyngeal joint were noted both AP & lateral x-rays (Figs. 3-4). We had not come across any infection, joint subluxation, coronal/sagittal instability, dislocation graft resorption or AVN and donor site morbidity. Two patients were having early osteoarthritic changes on x-rays and complaint of pain off and on especially on exertional work. Two patients were observed, one with scar tenderness and one with ulnar digital nerve paresthesia (Tables 1-2).

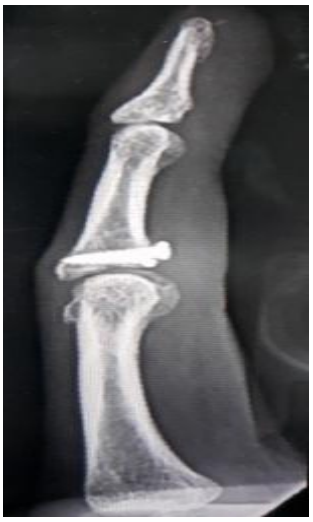

Figure No.4: Postoperative x-ray lateral view

DISCUSSION

Proximal inter-phalyngeal joint fracture dislocations are relatively uncommon and usually mismanaged while considering minor injuries especially in developing countries.[13] Available treatment options depend upon percentage of articular surface of proximal phalynx base.[1] Less than 30% is stable injury and can be managed with extension block splint.[14] Between 30%-50% need surgical stabilization and are effectively treated with volar plate arthroplasty[15-16], open reduction internal fixation[15,17] or external fixator.[18,19] Over 50% of articular surface involvement leads to instability and treatment is more demanding.[14] Open reduction internal fixation is not possible because of communition.[16] Literature does not support volar plate arthroplasty[14] and external fixator[15] because of high complication rate like persistent joint instability, inadequate arc of motion of proximal inter-phalyngeal and distal inter-phalyngeal joints and joint stiffness plus pin track infections respectively. Hasting hemi-hamate arthroplasty has the advantage of replacing the injured proximal phalynx base with hemi-hamate osteochondral fragment providing relative congruent joint for stability and immediate range of motion.[14] The results of present study are comparable with Afendras et al[20] who reported range of motion at PIP joint 67° and DIP joint 47°, which were 62° and 54° in our series.

The recovery of grip strength of our patient is inferior to Yang et al[21] 95%, Lindenblatt et al[22] 94%, Bigorre et al, 92%, because of less percentage involvement of articular surface which is 58%, 60% and 62% respectively in their series. None of our patients developed joint collapse, subluxation, severe osteoarthritis, cut out screws, graft loss which were reported by William et al[23], Afendras et al[2`] and Lindenblatt et al. However a large number of patients is recommended to assess long term results of hemi-hamate reconstruction.

CONCLUSION

Hemi-hamte resurfacing arthroplasty is useful procedure for dealing with proximal interphalyngeal fracture dislocations involving 50% of articular surface. It reproduces stable joint contour allowing early recovery. However, aggressive postoperative rehabilitation is advised to get maximum functional outcome. We preferably recommend this procedure for comminuted unstable proximal interphalyngeal dorsal fracture dislocations of the fingers over the other treatment options.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Open Renal Surgery

Comparison of Morbidity of Three Flank Approaches for Open Renal Surgery

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ABSTRACT

Objective: The aim of this study was to compare the morbidity of three flank incisions, subcostal, transcostal and supracostal for open renal surgery in terms of incision times, postoperative pain, postoperative hospital stay and long term complications.

Study Design: Prospective comparative and analytic study.

Place and Duration of Study: This study was conducted at Department of Urology, Nishtar Hospital Multan and Department of Urology, Ghulam Mohamed Maher Medical College/Teaching Hospital Sukkur from January 2007 to December 2011.

Materials and Methods: In this study twelve hundred sixty (n-1260) patients who underwent open surgical procedures over a period of five years are analyzed. Patients were studied in three groups. Group A, subcostal, (n-407) 32.3%. Group B transcostal (n-526) 41.7% and Group C, supracostal, included (n-327) 25.9%. Mean incision time in Groups A, B and C was 17.3 min, 21.08 min and 23.81 min respectively. Mean amount of injectable analgesic required in first three post operative days in Groups-A, B and C was 47.36 mg, 46.87 mg and 49.40 mg of Nalbin respectively. Mean Post operative hospital stay in Group A Band C was 4.63, 5 days and 4.64 days respectively.

Results: Pleural injury was none in Group A, thirty five (n- 35) cases (6.61%) in Group B and thirty nine (n-39) cases (11.9%) in Group C. Incisional hernia was noted in Group A 14 cases 3%, Group B 6 cases 1.1 % and none in group C.

Conclusion: With subcostal approach, incision time, dose of analgesia and pleural injury is minimum but high incidence of incisional hernia is there. In transcostal and supracostal approach the incision time, dose of analgesia and incisional hernia is minimum but incidence of pleural injury is relatively high.

Key Words: Transcostal, Supracostal, Incisional Hernia

Citation of article: Ghaffar A, Soomro AS, Chaudhary QA, Anjum R. Comparison of Morbidity of Three Flank Approaches for Open Renal Surgery. Med Forum 2015;26(4):37-41.

INTRODUCTION

Endourology and Laparoscopy have come to the forefront of urologic surgery for the management of various urological conditions. With this, an increasing number of urologists are performing routine and complex laparoscopic and endourologic procedures. The natural corollary of these developments has been the steady decline of open surgery in urology. Open surgery for stone disease is now used in less than 5% cases.[1] This also means that urologists in training presently and in the future will have a very limited exposure to open surgery. Both physicians and patients are likely to opt for open surgery as a failure of other minimally invasive techniques. On the contrary, there still exist some situations where open surgery may be the treatment of choice. This is not to say that open surgery is the "only option" but probably the "most suitable option". In developing world the main bulk of renal surgery is still based on open surgical procedures. This may be due to cost of equipments and disposables of minimally invasive surgery, patient's unwillingness and lack of significant surgeon training and experience. Open surgery is less expensive, more effective, more dependable and more easily available than minimally invasive alternatives.[2,3]

Basic principal of open surgery is adequate exposure to perform the operation and to deal with any possible complications. Kidneys are deeply located in upper retroperitoneum. Poor exposure can trouble the surgeon to complete the procedure and manage complications like injury to renal vascular pedicle. This also leads to excessive retraction, with consequent increase in postoperative pain and analgesic requirement. Factors which should be considered in selecting an appropriate renal incision include the operation to be performed, renal pathology, previous operations, extrarenal pathology that requires another simultaneous operation, need for bilateral renal operations, and body habitus.[4]

Open renal surgery may be carried out by four principal routes: extraperitoneal flank approach, dorsal lumbotomy, transperitoneal anterior abdominal incision, or thoracoabdominal incision.[5,6] The flank

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approach provides good access to renal parenchyma and collecting system, avoiding peritoneal contamination. The drawback is that exposure of renal pedicle is not as good as with anterior transperitoneal approaches. The most commonly used flank approaches are subcostal, transcostal and supracostal. Thorocoabdominal incision is used for suprarenal tumors and the renal tumors extending in the supradia phragmetic IVC. The choice of incision depends on renal position and on whether the upper or lower pole is the site of disease.

Sub-costal flank incision is indicated for surgery on lower renal pole or upper ureter, insertion of nephrostomy tube, or drainage of perinephric abscess.[7] It has the disadvantage of being rather low in relation to renal position. Care must be taken to avoid damage to subcostal nerve. Transcostal approach offers the best exposure to kidney with minimum chance of entering the pleura. It can be performed through any of the lower three rib beds by resecting the concerned rib. It gives good control of pedicle and approach to the pelvicalyceal system and upper pole. Resecting the rib while avoiding pleural injury and the neurovascular bundle needs expertise. Supracostal approach can be made more easily than transcostal incision and gives equal exposure. Based on the length of 11th or 12th rib and extent of exposure required, one can choose supra eleven or supra twelve incision. There is risk of injury to pleura while dissecting on the inner aspect of the rib. Rib is not resected; rather it is pivoted on costoverteberal joint and moved away from the field by a self retaining retractor.

Most important operative complication of flank approach related to incision is pleural injury. Due to close anatomical relationship between kidneys and costodiaphragmatic recess of pleural space, violation of thorax might occur during flank approach. It has been reported that rib resection might increase the risk of pleural injury via flank incision.[8,9] Pleural injuries that occur during renal surgery through flank approach can be diagnosed easily and can be repaired successfully by simple evacuation technique. However, a small percent of these patients might require postoperative chest tube insertion due to the presence of manifest pneumothorax although repaired intraoperatively.[10]

The aim of this study was to compare the morbidity of three flank approaches for open renal surgery in terms of incision times, complications, postoperative pain, & postoperative hospital stay.

MATERIALS AND METHODS

This study was conducted at Department of Urology; Nishtar Hospital Multan and Department of Urology, Ghulam Mohamed Maher Medical College/Teaching Hospital Sukkur from January 2007 to December 2011. It was prospective comparative and analytic study. Patients were studied in three groups. Group A having subcostal incision, Group B having Transcostal incision and Group C having supracostal incision All the patients undergoing open renal surgery through flank approach for any indication were included in the study.

RESULTS

Mean age in all the three groups was 40 years with range from 14 years to 72 years. Regarding male to female ratio in our study there is male predominance (Table-1). Procedure distribution is given in Table 2. Distribution regarding Incision is seen in table-3. Mean amount of injectable analgesic required in first three postoperative days in Group A was 41.36 mg, in Group B was 46.87 mg and in Group C was 49.40 mg . Mean Post operative hospital stay in Group A was 4.63 days in Group B was 5 days and in Group C was 4.64 days. Statistical difference between the groups is calculated by ANOVA test. Table-4.

Table No.1: Gender distribution in three groups

Group	No.	%	Incision	Male	Female	Ratio
A	407	32,3%	Sucostal	266	141	1.88:1
B	526	41.7%	Transcostal	372	154	2.41:1
C	327	26.0%	Supracostal	210	117	1.79:1

Table No.2: Distribution of procedures

Procedure	Right (n=649)	Left (n=611)	Total (n=1260)
Pyelolithotomy	447	377	824
Nephrolithotomy	63	86	149
Nephrectomy	101	105	206
Pyeloplasty	38	43	81

Table No.3: Distribution regarding Incision

Incision	Right (n=649)	Left (n=611)	Total (n=1260)	%age
Subcostal	298	109	407	32.30
Transcostal	221	305	526	41.74
Supracostal	130	197	327	25.95

Table No.4: Multiple comparison of incision time, dose of analgesia for 3 days and hospital stay

Group	Incision Time			Dose of Analgesia for 3 days			Hospital Stay		
	Range (minutes)	Mean (minutes)	Std. Deviation	Range (mg)	Analgesia Mean (mg)	Std. Deviation	Range (days)	Mean (days)	Std. Deviation
A	10-28	17.13	3.706	20-90	41.38	12.548	3-10	4.63	1.139
B	10-80	21.08	6.024	30-90	46.87	13.970	3-10	5	1.050
C	15-30	23.81	2.956	20-90	49.40	15.984	3-10	4.64	1.078

Postoperative long term complication like scar pain and Incisional hernia was noted on one year follow up .Only few patients came for follow up after one year and those were the patients who developed recurrent stones or incisional hernia. Persistent pain in the scar was also noted (Table 5).

Table No.5: Comparison of operative data

Parameter	Subcostal (n-407)	Transcostal (n-526)	Supracostal (n-327)
Plueral Injury	0	35 cases (6.61%)	39 cases (11.92%)
Incisional Hernea	12 cases (2.98%)	6 cases (1.14%)	0

p = 0.000

DISCUSSION

Renal diseases that need surgical treatment are very common. Urolithiasis or nephrolithiasis occur in 5% of the population[11]. Most renal calculi can be managed by ESWL or minimally invasive endoscopic techniques. Staghorn stone, stone associated with anomalies of the pelvicalyceal anatomy and dense hard stone not manageable by PNL/ESWL may need open surgery. The stone-free rate of open surgery is over 90%.[12] Open surgery maintains its important role for treatment of renal and ureteral calculi because of its safety and efficacy.[13] Partial nephrectomy or simple nephrectomy for non functioning kidney may require open surgery. Although laparoscopic nephrectomy is now an established procedure[14,15] but it may not be available or not feasible so open procedure is done. Anatomic abnormalities like UPJ obstruction, ureteral stricture or calyceal diverticulum are managed by open surgery. Paik, et al[16] noted that 24% of their open surgery cases were due to one of these conditions.

In this study we found male predominance in all the three groups with male to female ratio in Group A 1.81:1, Group B 2.41:1 and in Group C 1.79:1. Trinchieri et al[17] found male predominance with male /female of 2.1:0.9. Mean incision time in Group A was 17.3 min, in Group B was 21.08 min and in Group C was 23.81 min. We have assessed the incision time and not the operation time and there is no parallel study that compares the incision time only. We have found that the flank subcostal incision (Group A) takes minimum time to reach to Gerota's fascia from the skin as compared to transcostal incision (Group B) and Supracostal incision (Group C). This is comparable to the study of Shamim[18], where they have found that incision time was higher in patients with transcostal incisions; there is no data available on national or international database to compare the incision time at present. Short incision time in Group A may be because of the fact that in this incision, there is no threat of injury to the pleura and more so in Group B and C, surgeon is always careful for pleura due to its close proximity to the last rib.

Postoperative hospital stay in Group A was 4.63 days Group B was 5 days and in Group C was 4.64 days. This is comparable to that found by Paik of 6.4 days[19] and by Diblasio of 5 days.[20] Postoperative hospital stay is based on the type of surgery, comorbids and postoperative complications like infection and bleeding. This is not solely based on the incision that may be one factor. Srivastava in a series of 82 donor nephrectomies, via subcostal or transcostal mini-incisions, found rib sparing, subcostal mini incision donor nephrectomy has significantly less morbidity and a shorter hospital stay compared with the rib resection transcostal technique.[21] Post operative analgesic requirement was assessed in three groups in first three post operative days and it was found that patients in Group A required minimum analgesia where as the dose of analgesic required in group B and C where rib is manipulated is a little bit higher.

During open renal surgery through flank incisions there is risk of injury to pleura. This risk is increased if rib resection is also performed.[22,23] Atmaca et al in their study of 109 open nephrectomies have found pleural injuries in 18 cases (16.5%) with rib resection We have seen pleural injury in 35 cases in Group-B (6.6%) and 39 cases (11.9%) in Group-C. We did not encounter any pleural injury in Group-A where as Atmaca et al have encountered one case of pleural injury among 39 cases (2.6 %) without rib resection. Association of pleural injury with age , gender, type of surgery and site of surgery is not well studied and Atmaca et al did not detect any such association in their study. More so they did not observe significant association between the type of incision and pleural injury occurrence but in our study there is significant association of pleural injury with type of incision as there is no report of pleural injury in Group A (subcostal incision) where as the incidence of plural injury is well documented with rib resection as in Group B and Group C. Another important issue related to intraoperative pleural injuries is insertion of prophylactic chest tube routinely in addition to water tight repair of rent. If the rent is repaired adequately as in our study, the incidence of pneumothorax requiring chest tube insertion is very low.[24]

Similarly in our study where in we encountered pleural injuries in Group-B 6.61% and Group-C 11.92 % and we never required post operative chest tube insertion to manage the pneumothorax. More so complications like pneumonia and development of atelectasis are reported to be seen less with associated lower pain scores and shorter length of hospital stays in patients whose pleural injuries are repaired intraoperatively without chest tube insertion.[24]

Long term complication like incisional hernia was noticed on one year follow up. Unluckily the response to follow up was very poor. This may be due to poverty, illiteracy, lack of health education or failure on

our part to counsel the patients. Only those patients who developed incisional hernia, recurrence of primary disease like stone or chronic pain came for follow up. Only twelve (n-12) 2.9 % of group A and six cases in group B (1.1%) and none in group C developed incisional hernia that required proline mesh repair. They were admitted and with the help of general surgery colleagues, the hernia was repaired. Bayazit et al have reported high incidence of incisional hernia of 7% in their series of 100 cases of donor nephrectomies through flank incision.[25]

This may be due to the fact that they have not studied the patients separately in subcostal and transcostal groups. More so they have not felt the need of hernia repair. These patients have not complained any cosmetic problem. Some of the patients in groups A and B developed bulge of anterior abdominal wall beyond the incision line .This was not hernia in reality but weakness of abdominal wall muscles due to nerve injury during muscle cutting. This is mentioned in literature as abdominal asymmetry that does not need surgery but may cause cosmetic concerns. Anuar et al have mentioned high incidence of abdominal asymmetry in subcostal (59.4%) and trans costal groups (64.9%) which he says is undesirable in healthy kidney donor volunteers.[26] These rates are higher than the average of 48% reported in the literature.[27] The supracostal approach is considered as a better method with excellent exposure to the kidney and adrenal and is anatomically comprehensive.[28]

CONCLUSION

With subcostal approach, incision time, dose of analgesia and pleural injury is minimum but high incidence of incisional hernia is there. In subcostal and supracostal approach the incision time, dose of analgesia and incisional hernia is minimum but incidence of pleural injury is relatively high.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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Original Article

Paediatric Asthma

How Common is the Paediatric Asthma in Sialkot?

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ABSTRACT

Objective; This study was conducted to see the parental feedback regarding the prevalence of asthma symptoms in their children.

Study Design: A cross sectional study.

Place and Duration of Study: This study was conducted in a local school from December 2012 to March 2013.

Materials and Methods; This is a questionnaire based descriptive cross-sectional study. We selected a local school in which there are around 500 students.

Results: We had 238 questionnaires back out of 500, showing response rate of 47.6%. We found that 38 students had asthma, almost 16%, and there was male predominance. Night cough was the most common complaint in these students. Parental asthma was noted in 18% of the asthmatics.

Conclusion; This questionnaire based study revealed asthma to be more common in this part of Pakistan. More studies are required to see the validity of the observation. Asthma being more common and an important health concern, requires prompt health education of the public and health professionals as well as further research work.

Key Words: Asthma, wheeze, prevalence, incidence

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INTRODUCTION

Asthma is a major cause of childhood disability[1,2,3,4] as it has an acute and chronic nature of the disease. The suggested etiology of airway inflammation in asthmatic children has been described as variable, depending on the age[5]. Certain viral infections like rhinovirus and respiratory syncytial virus, are known to cause wheezing episodes and may lead to allergen sensitization [6]and subsequent asthma especially in younger age group. Sensitization and exposure to allergens is the major cause of allergic airway inflammation in older children. Recent evidence has been found in favor of synergistic effect between viral infections and aeroallergens exposure, leading to subsequent sensitization in genetically predisposed children[7,8]. In asthma, airway inflammation is characterized by infiltration of inflammatory cells, including mast cells, eosinophils and neutrophils. This cell infiltration subsequently leads to bronchial hyper responsiveness (BHR). Chronic inflammatory processes lead to persistent changes of the airways and airway remodeling. [9, 10]

Most of the children have mild or moderate disease, that can be managed by avoidance of triggering factors and with the help of medications, such as inhaled short-acting β_2-receptor agonists (SABA), inhaled corticosteroids (ICS), long-acting β_2-receptor agonists (LABA) and leukotriene receptor antagonists (LTRA) [11,12]. The aim of treatment is to achieve good asthma control by having minimum day and night symptoms ensuring a quality normal life. Asthma control is defined as "to which extent the manifestations of asthma have been reduced or removed by treatment" [13]. About 5% of all asthmatic children have chronic symptoms and recurrent exacerbations even with maximum treatment with conventional medications [14]. Such patients are termed as severe asthmatics. As there are no specific biomarkers of this disease, severe asthma is currently being defined on the basis of the intensity of treatment required to improve asthma control, and the level of control achieved [15,16]. In order to improve the asthma management, practice guidelines published by the National Heart, Lung, and Blood Institute (NHLBI) recommend that all patients should receive asthma education[17]. Establishing an ongoing partnership between physician and family is an essential component of the NHLBI guidelines[18]. Without appropriate self-management and asthma education, physician's recommendations are less likely to prevent asthma morbidity[19, 20.] In Pakistan there has been little work on the epidemiology of asthma, and we have done this study to help in this regard.

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MATERIALS AND METHODS

This is a questionnaire based descriptive cross-sectional study. We selected a local school in which there are

around 500 students. We modified the International Study of Asthma and Allergies in Childhood (ISAAC) protocol. The teachers were informed about the objectives of the survey as well as the parents. This study was completed in three months. Questionnaires were answered by the parents. Students were labeled as asthmatics that had one or more of the following features:

Diagnosed asthma by some physician, repeated attacks of shortness of breath, had ever been on nebulistaions/ inhaler, being wheezy/noisy breathings, chestiness, night time coughing, breaths difficulties, increased symptoms during winters and exercise induced dyspnea and coughing..

RESULTS

We received 238 questionnaires out of 500, showing response rate of 47.6%. Among these 57.6% were males and 42.4% were females. We labeled 38(16%) students as asthmatics. Mean age was 9.8 years. In these asthmatics 25 were males and 13 females. There were 5 students where parents were already aware of the diagnosis, made by some physician. Night time coughing was the most common symptom 57%, followed by winter associated exacerbations.

10 asthmatics had history of allergic rhinitis and 9 had history of skin allergies. We found that 18% of asthmatics had parental history of asthma.

Details of Asthmatic (38) students

Age	Minimum Maximum Mean	4 years 15 years 9.8 years
Gender	Males Females	25 13
Already diagnosed cases	5	13%
Repeated attacks of dyspnea	13	34%
Nebulistaions / inhalers use	8	21%
Wheezing attacks	8	21%
Chestiness	15	39%
Night cough	22	57%
Increased symptoms during winters	18	47%
Exercise induced dyspnea	14	36%
Skin allergy	9	23%
Allergic rhinitis	10	26%
Food allergy	3	7%
Parental asthma	6	15%
Parental allergic rhinitis	7	18%
Parental skin allergy	6	15%

DISCUSSION

Asthma affects >6 million children, of whom over half suffer from an asthma episode annually[21]. Preterm birth is associated with chronic lung disease in infancy and asthma like symptoms in later childhood[22]. The prevalence and morbidity of asthma, allergic rhinitis and atopic dermatitis are increasing worldwide[23]. The prevalence of wheeze in the past 12 months (current wheeze) ranged from 0.8% in Tibet (China) to 32.6% in Wellington (New Zealand) in the 13–14 year olds [24].

Asthma remains the most common chronic disease of childhood in the world[25, 26,] and is one of the leading causes of morbidity in children[27]. In inner-city schools in the United States of America, a survey using a brief questionnaire derived from the ISAAC wheezing questionnaire showed 60% under diagnosis of asthma. After validation of the diagnosis by a physician, it was concluded that school screening of asthma by a questionnaire is a valid tool even in deprived populations and regardless of the language [28, 29].

This study provides questionnaire based information on asthma. There have been local as well as international studies on such basis. Our study found frequency of asthma as 16% which may be a relative indicator of the prevalence. Similar results were seen in a study in Karachi[30]. However, this is higher than the other local studies[31,32]. The one in such age group found asthma (nocturnal) in 6% of the students[31] while the other found the frequency as 9.2% in adults aged 18-24 years[32]. There is wide variation in prevalence of asthma throughout the world ranging from 2.4% in Jodhpur (India) to 37.6% in Costa Rica[24]. There seems to be a rise in the number of asthma patients which may be multifactorial, like exposure to environmental tobacco smoke, industrial wastes and deficiency of vitamin D[27].

We also found in our study that nocturnal symptoms are the most commonly reported symptoms as was found in some other studies as well. As this was reported by the parents, it might have been the most disturbing feeling for them. The most common symptoms after night symptoms were increased symptoms during winters and chestiness respectively.

Our study found, increased number of male patients than female as in the other local study but parents were aware of the asthma in 13% of cases in our study while they were aware in 6% of cases in that study[31] .

A rising number of asthma patients can be the rising number of the acute severe asthma as well so more careful and large group studies are required to improve the awareness and education of community and health care professionals.

We also found a strong association of asthmatic individuals with allergic rhinitis, skin allergy and parental allergies. As the sample size was not that big in our study it might not be the real picture of the problem, so large scale studies will be more helpful. The study might have overestimated or underestimated the facts, as the questions were answered by the parents who might not have sufficient awareness of asthma.

CONCLUSION

Questionnaire based studies can be quite helpful to see the burden of the diseases like asthma in our country as

well. We found asthma to be a common problem in our study group. As the asthma is becoming more common such studies should be encouraged and should be of large scale. Similarly, asthma education should be spread more efficiently to help the community to understand and get proper treatment for this rising health problem.

Conflict of Interest: This study has no conflict of interest to declare by any author.

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