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on the

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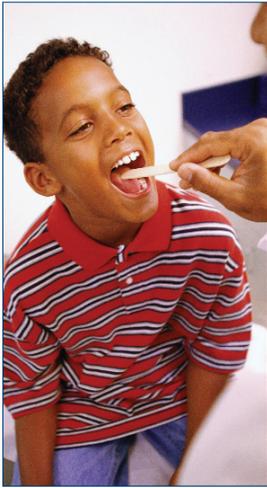
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Dr Abdulrazak Abyad, Chief Editor

This past year was a successful one for the MEJFM, due to the efforts of all associated with the journal - the production team, our readers, our contributors and the editorial team. Our web statistics show continuous improvement in hits, with now over 100,000 hits a month or 1.2 million every year.

This is the first issue for 2006. It is a special issue and will be distributed in hard copy at the First International Annual Primary Health Care Conference in the Emirate of Abu Dhabi, *The Challenges in Primary Health Care*. The conference is being organized by the Division of Health Affairs, General Authority for Health Services for the Emirate of Abu Dhabi, under the patronage of: H.E. Hamad Mohamed Al Hur Al Suwaidi, Chairman of the Board of Directors of the General Authority for Health Services for the Emirate of Abu Dhabi.

This issue has a number of studies and papers from different countries in the region. A study from Abu Dhabi reports on GP's knowledge and attitude towards anxiety and depression in Abu Dhabi. A quantitative cross-sectional descriptive method was used. The study group consisted of 90 GPs, who agreed to participate. The current knowledge and attitude of these GPs towards anxiety and depression was determined via a questionnaire. Regarding knowledge questions on anxiety and depression, 61.9% of GPs correctly answered the questions on anxiety and 50.6% answered correctly the questions on depression. It would appear that GPs in Abu Dhabi lack adequate knowledge about anxiety and depression.

A Study from Shiraz University on the Nursing Care of Cardiac Patients in C.C.U. and A&E, was carried out with the ultimate aim of preventing re-hospitalization, increasing functional ability and improving quality of life. The author discussed the following:

1. The nurses personal and professional difficulties resulting in their inefficiencies in C.C.U. and A&E,
2. The role of nurse authority and their weaknesses in different aspects of Cardiac Care Unit and Accident & Emergency, which may affect the quality of health services,
3. The role of education, effective training and utilization of new healthcare managerial techniques, in raising the quality of healthcare in both C.C.U. and A&E departments.

A well designed community study, from Iraq reported on the estimation of body mass index in Daquq District. The aim of this study:- is to know the trends and extent of the overweight, and examine the nutritional state of the community. The design of the study is cross – sectional with 17 clusters chosen from Daquq town and its villages. The author concluded that the study showed that high BMI and obesity is more prevalent among females, rural people, married, illiterate, housewives, diabetic, hypertensive, and those with a family history of diabetes and hypertension, and those with high bread consumption. Dr Yousif

recommended that care and attention should be taken toward risk groups and encouraging personal awareness about weight and physical fitness.

A study from the Royal Jordanian Medical Services, reported on vaginal birth after Caesarean section. In this study one hundred and ninety two women (70%) had a successful vaginal birth and forty-nine women (30%) had repeat caesarean delivery. Repeat caesarean deliveries were performed for failed progress and fetal distress in most caesarean births. This study indicated that vaginal birth after caesarean birth is safe if properly monitored. A study from Kuwait compared the use of two antibiotics for short – term therapy of uncomplicated acute cystitis in girls. In this study eighty two girls with uncomplicated acute lower urinary tract infection were included in a single center randomized study comparing Cefpodoxime suspension (5mg/kg) with trimethoprim – sulfamethoxzole. In conclusion, cefpodoxime treatment for 3 days was more effective than trimethoprim - sulfamethoxzole for 3 days, for the treatment of uncomplicated acute cystitis in girls.

A study from Turkey reported on 'How does family medicine clerkship affect the attitudes to family medicine specialization?'. The study aimed to investigate whether the attitude of final year medical students to family medicine specialization changes after family medicine clerkship. The authors conducted an analysis of data on 90 final year medical students who attended a 4-week family medicine clinical clerkship in Uludag University School of Medicine. The authors concluded that final year medical students' clerkship in family medicine clinical practice may encourage more medical school graduates to prefer family medicine as a career which in turn, may contribute toward establishing a sound healthcare system.

A well rounded review was presented by Dr Alsaedi on 'The management of the hospitalized patient with sleep disordered breathing'. This disorder frequently comes to medical attention for the first time when patients are hospitalized for diagnosis and treatment of an associated condition. The authors describe the condition, appropriate diagnosis and management. A case report from Iran reported on a case that described bilateral epistaxis after face-washing in a pond. The patient was a two year old boy who developed epistaxis, melena, fever and anemia. In otolaryngologist consultation a leech was seen in the nasopharynx. His face was washed in a pond 3 days prior to admission.

We thank those doctors who have responded to the appeal we have been running, to assist survivors of the recent earthquake in Pakistan. We particularly thank Dr Manzoor Butt of Rawalpindi, Pakistan, for coordinating the effort.

We welcome the University of London who are advertising postgraduate courses, offered by distance learning. The University has over 32,000 students studying in over 190 countries on over 100 different distance learning courses.

General Practitioners knowledge and attitude towards anxiety and depression in Abu Dhabi

Manal Saeed, Louise McCall

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Key words: attitude, recognition, anxiety, depression

ABSTRACT

Objective - This study aimed to explore the current general practitioner knowledge and attitude towards anxiety and depression in primary care in Abu Dhabi, the capital of United Arab Emirates.

Method - A quantitative cross-sectional descriptive method was used. The study group consisted of 90 GPs working as Ministry of Health employees in primary care/Abu Dhabi, who agreed to participate. The current knowledge and attitude of these GPs towards anxiety and depression was determined via a questionnaire.

Results - 82% of GPs felt competent in diagnosing anxiety and depression and can make a difference to their patients, but were more comfortable treating physical illness. 73% thought they did not get enough time to explore psychological issues during the consultation and were not frustrated in discussing mental disorders with their patients. Regarding knowledge questions on anxiety and depression, 61.9% of GPs correctly answered the questions on anxiety and 50.6% answered correctly the questions on depression. There was no significant difference in knowledge or attitude between GPs according to their demographic characteristics which included sex, first language and speciality.

Discussion - The results of attitude items showed some contradiction on the part of GPs regarding their perception of competence and role in diagnosing anxiety and depression. Although the attitude items were selected from international scales, factor analysis did not show specific relationship to the four identified factors. The knowledge items showed that GPs irrespective of their sex, first language (Arabic or non-Arabic) and speciality, need improvement of their knowledge in recognition of anxiety and depression.

Conclusion - GPs in Abu Dhabi lack adequate knowledge about anxiety and depression. Accurate determination of attitude requires construction of a local instrument as the international items were not completely reliable for local usage.

INTRODUCTION

About 50% of general practitioners working in Abu Dhabi come from other Arab countries (North Africa and Middle East) and the other 50% from the Indian Subcontinent (India, Pakistan and Bangladesh)[1]. This complex set up of different languages, cultures and health beliefs complicates the provision of care at all levels, especially primary care which is the interface between patients and the health system.

Mental health is an important area in primary care where, according to W.H.O., at least 24% of patients suffer some sort of mental disorder[2]. The most common are anxiety and depression. In order that GPs can properly recognize anxiety and depression, they need to be aware of the

prevalence to give it proper attention. The few studies conducted in the UAE were in the neighbouring area of Al-Ain where the Faculty of Medicine is situated. They showed a total prevalence of minor psychiatric disorders of 31.9% in women and 20.3% for men. The commonest diagnosis was depression 55%, anxiety-depressive states 13.3% and anxiety 11.7%.

There are different and complex barriers to recognizing anxiety and depression in primary care [4,5,6]. These are usually classified into patient, physician and health system factors. The patient may consider the symptoms as non-medical in nature and think that the GP cannot help. He/she thinks the problem is simple and can be handled by self bearing in mind the stigma of mental illness[4]. Physician factors include negative attitude toward mental

illness, deficient knowledge, lack of good communication and interviewing skills, medicalisation of symptoms and fear of offending the patient. This is complicated by co-morbidity with a medical condition and negative false perception about treatment, in addition to personal factors like discomfort in dealing with emotional and interpersonal issues⁴. Health system factors include time constraints, limitation on third party coverage, limited treatment resource availability, restriction on access to particular treatment and fragmentation of care [4].

METHOD

This was a quantitative, cross-sectional, descriptive study. Current GP knowledge of, and attitude towards, recognition of anxiety and depression was determined using a questionnaire constructed specially for the study. The study was approved by both Monash University Ethics Committee and Ministry of Health Ethics Committee in Abu Dhabi. All GPs working in Abu Dhabi primary care centers were invited to participate in this study. They were all Ministry of Health employees. A copy of the questionnaire (Appendix 1) was sent to GPs by routine mail in April 2004. Participants were requested to complete it and return it to the researcher in a reply paid envelope.

Development of the study questionnaire

The study questionnaire was designed to assess the GPs' knowledge and attitude toward anxiety and depression. It consisted of three parts exploring the demographic characteristics including specialty and interest in psychiatry, knowledge of anxiety and depression and management issues and attitude toward anxiety and depression. The knowledge questions consisted of 18 items related to anxiety and depression, nine for anxiety and nine for depression and two items on drug interaction. These two items were included because, although GPs do not prescribe antidepressants, they see patients who use them from the psychiatric hospital but consult their GP for other illness. Thirteen questions comprise a simpler form of some questions available online from Membership of the Royal College of Psychiatry (MRCP Psych) Part I & Part II. The other seven were formulated by the researcher after gaining knowledge on the subject from the Oxford Textbook of Psychiatry and literature review.

The ten attitude items were selected after careful review of The Depression Attitude Scale, The Physician Belief Scale and McCall attitude questionnaire taking into consideration local factors in Abu Dhabi.

Each item was rated on a Likert scale of four ranging from strongly agree to strongly disagree. The four point scale was chosen to avoid jeopardising the result with a

neutral response if it were selected by many participants, as it forces participants to choose. While this solves the problem of those who tend to choose neutral all the time, it forces them to either a positive or a negative end.

RESULTS

Most GPs were in the age group (46-55) years with an almost equal number of male (47.8%) and female GPs (51.1%). Arabic speaking GPs constituted about 65% of GPs and 10% had a family medicine specialty. About half of GPs (51.1%) said that they referred more than three patients to the psychiatrist per year and 45.6% referred one to three patients per year. Only 2.2% did not refer any patients to the psychiatrist per year.

The result of attitude items showed that a large number of GPs agreed with five of the items, which reflect negative attitude towards psychosocial aspects.

On the questions regarding anxiety disorders 54.4% of GPs were able to recognize the type of anxiety and only 42% recognized sleep deprivation as a cause of hallucination. Only 20% recognized the correct features of phobia and 42% identified the correct presentation of obsessive-compulsive disorder.

As for the questions on depression, only 33.3% of GPs were able to determine the correct type of depression. About 54% of GPs were aware of the correct relationship of depression to drugs and other diseases and 45.6% properly recognised the features of depression in the elderly. Only 56.7% were able recognise the presentation of postpartum depression. The question about factors that increase the risk of suicide in patients with depression warrants special notice. It was the least correct answer with 13.3% of GPs identifying insomnia as a factor which increases the risk of suicide. The review of all answers showed that 42 (56%) of the 75 GPs who answered incorrectly thought that suicidal ideas, increases the risk of suicide.

About 60% of GPs could not identify the discriminating feature between depression and anorexia and 85% did not recognise that cold cures interact significantly with antidepressants. More than 50% of the questions received a low percentage of correct answers. This shows that GPs lack important information required for anxiety and depressive disorders.

The comparison of the results of GPs according to sex, first language and specialty revealed a significant difference between the groups on few items. There was a statistically significant difference in attitude according to gender in the two items concerning GP perception of their

role (first & fourth items in the table). For the first $t=2.61$, $df=86$, $p=0.01$ and second ($t=2.49$, $df=87$, $p=0.02$).

A significant difference existed on the same items regarding specialty between GPs with no prior training and family medicine specialty ($t=-2.38$, $df=39$, $p=0.02$ and $t=-4.86$, $df=39$, $p<0.01$), and between GP with family medicine specialty and other specialty with significance ($t=1.95$, $df=54$, $p=0.05$), and ($t=5.34$, $df=55$, $p<0.01$). There was no such difference due to first language. Detailed examination of knowledge questions showed a significant difference according to first language (Arab/Non-Arab) in question 36 on discriminating features between major depression and primary anorexia nervosa, $t=-3.01$, $df=82$, $p<0.01$. Regarding specialty there was a significant difference between GPs with no prior training and GPs with other specialty in one knowledge question (no 31) on elderly depression, ($t=2.25$, $df=75$, $p=0.03$). A second difference existed between GPs with family medicine specialty and other specialty on two knowledge questions. Question (18) on the types of anxiety was answered better by family specialty with significance ($t=1.99$, $df=55$, $p=0.05$). The other question (21) about phobia with significance ($t=2.02$, $df=54$, $p=0.05$). There was no significant difference on knowledge questions according to gender.

DISCUSSION

The study had a high response rate (81.8%). The relatively small number of GPs in Abu Dhabi (126) and continuous mobility between primary care centers, made all GPs acquainted with the researcher. Most GPs were aged 45 years. This is due to the fact that more than 95% of the GPs are expatriates. They require certain years of experience before they can apply for the license of medical practice in Abu Dhabi. There were almost equal numbers of male and female GPs unlike many western countries where male GPs outnumber females in full practice. The National depression study in Australia showed that more than half were male GPs. GPs who speak Arabic as a first language constitute about two thirds of GPs, which was not the case 10 years ago when Non-Arabic doctors represented the majority. This reflects the current policy of employing more Arab doctors for better communication especially with local patients. GPs with no prior training constituted one third of all working GPs. More than half of them were in the age group (46-55) and two thirds of them were females. About half of GPs said they referred more than three patients to a psychiatrist per year and only 2% said they referred none per year. This reflects the difference between what GPs think they do and what they actually do, as a previous pilot study using audit showed that no patient was referred to psychiatrist over a period of two years in one of the health centres.

Regarding attitude toward anxiety and depression in primary care, the majority of GPs disagreed with the statement that they cannot make a difference to patients with anxiety and depression and more than two thirds agreed that these patients should be referred to a psychiatrist. This showed that although GPs feel they can make a difference to patients with anxiety and depression, they do not consider it as a major role and that these patients should primarily be managed by psychiatrist.

The majority of GPs were more comfortable treating physical illness than emotional disorders, but less than one third said they felt frustrated exploring psychological issues with the patients. One possible explanation is the effect of medical school teaching which reflects the biomedical approach and the GPs comfort in dealing with physical illness, which they know best. GPs attitude towards competence, comfort or frustration in dealing with mental disorders raises the issue of GPs sensitivity towards issues that question their credibility and competence. More than two thirds of GPs said that they are too pressed for time to investigate psychological issues and that there are many issues to consider in the consultation. While this is true in busy primary care centers where GPs see 70-80 patients within seven hours, this is hardly the case in other centers where GPs see 20-25 patients within the same time range. On looking at all the attitude items the mean of all answers rated around 'agree' pointing to a possible response bias. This raises a lot of questions on whether the GPs put the scores as what they actually think, or what they are expected to think. Another factor which needs consideration is the unfamiliarity of GPs in UAE with surveys, especially those which need a rating on a scale.

The knowledge questions were structured in a simple direct way to explore basic knowledge in the area of anxiety and depression. However, more than half the questions were answered incorrectly by 50% or more of the GPs. The questions which received low correct percentage were those on the different types of anxiety, causes of hallucination, general features of phobia, presentation of obsessions in obsessive compulsive disorders, assessing the degree of depression and drugs that may cause it, depression in the elderly and postpartum depression, factors which may increase suicidal attempts, differentiation between depression and anorexia nervosa and depression and drugs which interact significantly with tricyclic antidepressants.

The simple form of the question construction lessens the doubt that questions were confusing or difficult to understand. The basic nature of the required information does not need extra expertise in the area of psychiatry, in fact this basic information can be found in medical

books and they could have looked items up as the survey was done at a time and place convenient to them. This deficiency in GPs' knowledge raises a lot of concern.

It will strongly affect GPs ability to recognise anxiety and depression and provide proper management even when these disorders are recognised. There were no previous studies in UAE exploring GPs knowledge and attitudes towards anxiety and depression to the best of the researcher's knowledge. International studies showed that GPs knowledge and skill in the area of anxiety and depression is inadequate, however the depth with which such studies were conducted is variable. On comparing this study to an international one, the Australian study by McCall, only three out of 23 questions were answered incorrectly by more than 50% of participating GPs in the pre-course questionnaire. This result showed that GPs had a good knowledge level and answered most of the questions correctly (86.9%) even before attending the course in psychiatry. However they maybe a biased group already interested in psychiatry or knew they needed to improve their knowledge.

CONCLUSION

GPs in Abu Dhabi lack important knowledge, which is needed for recognition and management of anxiety and depression. A proportion of GPs lack confidence in diagnosing anxiety and depression. GPs perceive that they have a role towards patients with anxiety and depression, but do not know what it is exactly. This means that a large proportion of patients suffering from anxiety and depression, who attend primary care clinics, will not be recognised and therefore do not get the required treatment.

Training courses for GPs in primary care psychiatry are crucial to improve GPs' knowledge and skills. These courses should meet GPs learning needs and upgrade their skills, and should be designed according to the most effective evidence-based strategies.

ACKNOWLEDGMENTS

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Lastly, I thank my family who tolerated my frustration during my study and had faith that I can succeed in achieving my goals.

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APPENDIX 1

Study questionnaire:

GP knowledge, attitude and demographic items. General Practitioner's knowledge and attitude about the recognition of depression and anxiety.

We are interested in understanding the current level of knowledge and GP's attitude towards the recognition of depression and anxiety disorders in Abu Dhabi. The results of this study will help in the future planning to improve knowledge and skill and we hope to enhance the positive attitude towards caring for patients with anxiety and depression.

Please circle

Are you in the age group:

- a) (25-35)
- b) (36-45)
- c) (46-55)

Sex :

- a) male
- b) Female

First Language:

- a) Arabic
- b) Non-Arabic

Speciality:

- a) GP with no prior training
- b) family medicine
- c) Other

How many patients do you refer to the psychiatrist per year:

- a) more than 3
- b) 1-3
- c) none

Do you have interest in psychiatry:

- a) yes
- b) no

Do you like to learn more in psychiatry? If yes how would you like it:

- a) From journal articles
- b) Lectures
- c) Others (please specify).....

Circle the response that best describes your agreement with each of the following statements.

Strongly agree = 1 Agree = 2 Disagree = 3 Strongly disagree = 4

8. I feel I cannot make a difference to patients with mental disorders.

1 2 3 4

9. I feel competent in diagnosing patients with anxiety and depression.

1 2 3 4

10. I'm more comfortable treating physical illness than emotional disorders.

1 2 3 4

11. Patients with anxiety and depression should be referred to a psychiatrist.

1 2 3 4

12. My patients do not accept questions about their feelings and thoughts.

1 2 3 4

13. I'm too pressed for time to routinely investigate mental health issues

1 2 3 4

14. I need a screening scale to diagnose anxiety and depression.

1 2 3 4

15. My patients feel that questions about their psychological well-being are irrelevant.

1 2 3 4

16. There are so many issues to be investigated when seeing a patient that I do not always consider psychological aspects.

1 2 3 4

17. I feel frustrated exploring psychological issues with the patients.

1 2 3 4

The following questions have one correct answer (please circle the correct answer)

18. The following are forms of anxiety except:

- a) Panic disorder
- b) Specific phobia
- c) Dysthymic disorder
- d) Post traumatic stress disorder

19. Key features of generalised anxiety disorder include:

- a) excessive worry and apprehension
- b) symptoms present for more than 6 month
- c) occurring on more days than not
- d) all of the above

20. Obsessive compulsive disorder is best described as:

- a) Repetitive intrusive thoughts that a person recognizes as his/her own and resists them
- b) Repetitive intrusive thoughts that a person does not recognize as his/her own but resists them
- c) Non-repetitive intrusive thoughts that a person does not recognize as his/her own and does not resist them
- d) Non-repetitive intrusive thoughts that a person recognizes as his/her own and resists them.

21. Which feature of the history is of particular importance in phobia patients:

- a) marital history
- b) social class
- c) school attainment
- d) detailed account of onset

22. A 20 year female college student presents with recurrent attacks of sweating, chest pain and palpitations. Her blood investigations, E.C.G and clinical examination are normal. She is probably suffering from:
- Specific phobia
 - Panic attacks
 - Generalized anxiety disorder
 - Obsessive compulsive disorder
23. Features of Post-traumatic Stress Disorder include:
- emotional numbness
 - situation-specific anxiety
 - a & b
 - None of the above
24. Hallucinations may be caused by:
- acute anxiety
 - cataracts
 - sleep deprivation
 - moderate depression
25. Which of the following is not true of phobias:
- they are entirely irrational
 - worse in trains than in cars
 - commoner in women
 - avoidance leads to isolation
26. Organic causes of anxiety include:
- phaeochromocytoma
 - hyperthyroidism
 - hyperventilation
 - all of the above
27. The following may present as obsessions in obsessive compulsive disorder:
- mental images
 - hallucinations
 - delusions
 - panic attacks.
28. Which of the following is not a symptom of depression:
- physical aches and pains
 - disturbance of sleep
 - disturbance of appetite
 - Dizziness
29. A 45 year diabetic, father of five suffers from low self-esteem, poor sleep, sadness and poor concentration now and then. He is probably suffering from:
- Mild depression
 - Moderate depression
 - Severe depression
 - Normal reaction to life events
30. Which of the following statements is true about depression:
- The symptomatic expression of depression in diabetics is different from that in non-diabetics
 - Depression increases morbidity and mortality from coronary artery disease
 - ACE inhibitors can be associated with depression.
 - Depression can be related to the use of digoxin
31. Which statement is not true about depression in elderly patients:
- can be confused with dementia
 - can present with disorientation and memory loss
 - usually needs hospitalization
 - None of the above
32. Regarding postpartum depression:
- Develops rapidly over the first 2-3 days
 - Typically occurs within the first 6 months
 - Has no effect on the baby's emotions and behaviour
 - Has a prevalence of 5%
33. Visual hallucinations in the elderly are common in:
- Untreated depression
 - Acute organic psychosis
 - Those treated with antihypertensive drugs.
 - Obsessive compulsive disorder
34. Suicide attempts in depression are more likely if there is:
- psychomotor retardation.
 - Obsessional traits
 - Insomnia
 - questions about suicidal ideas
35. Common side effects of tricyclic antidepressants include all except:
- fine tremor
 - urinary retention
 - postural hypotension
 - ileus
36. The following are good discriminating features between major depression and primary anorexia nervosa:
- distorted body image
 - low self esteem
 - early morning awakening
 - constipation
37. Drugs which interact significantly with tricyclics include:
- cold cures
 - morphine
 - propranolol
 - clozapine

Thank you for taking the time to complete this questionnaire.

Table 1. Number and percent of those who agreed and disagreed with each attitude item plus mean and standard deviation

Attitude item	Agree n (%)	Disagree n (%)	mean	SD
I feel I cannot make a difference to patients with mental disorders	15 (16.7)	74 (82.2)	3.01	0.63
I feel competent in diagnosing patients with anxiety and depression	74 (82.2)	14 (15.6)	1.98	0.59
I'm more comfortable treating physical illness than emotional disorders	74 (82.2)	16 (17.8)	1.88	0.72
Patients with anxiety and depression should be referred to a psychiatrist	68 (75.6)	2 (24.4)	1.99	0.83
My patients do not accept questions about their feelings and thoughts	17 (18.9)	73 (81.1)	2.90	0.70
I'm too pressed for time to routinely investigate mental health issues	66 (73.3)	21 (23.4)	2.11	0.80
I need a screening scale to diagnose anxiety and depression	66 (73.3)	24 (26.7)	2.09	0.70
My patients feel questions about their psychological well-being are irrelevant	32 (35.5)	57 (63.4)	2.67	0.65
There are so many issues to be investigated when seeing a patient that I do not always consider psychological aspects	65 (72.2)	24 (26.7)	2.20	0.62
I feel frustrated exploring psychological issues with the patients	26 (28.8)	63 (70.1)	2.78	0.70

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Vaginal Birth After Caesarean Section

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ABSTRACT

Objective: To determine the success rate for trial of vaginal birth in women with one prior caesarean delivery.

Materials and methods: Two hundred and sixty eight pregnant women who had one prior caesarean delivery were given a trial of vaginal birth spontaneously or after induction by oxytocin when indicated. The number of vaginal deliveries, caesarean births, and maternal and perinatal outcomes was recorded.

Results: One hundred and ninety two women (70%) had a successful vaginal birth and forty-nine women (30%) had a repeat caesarean delivery. Repeat caesarean deliveries were performed due to failed progress and fetal distress in most of the caesarean births.

Conclusion: Our study indicated that vaginal birth after caesarean birth is safe if properly monitored.

INTRODUCTION

It has been found that repeat caesarean births had a higher rate of early gestational age and respiratory complications. (1)

Because of the increased number of women with elective repeat caesarean delivery, a trial of labor was tried.

According to the American College of Obstetricians and Gynecologists Practice Bulletin in 1998, elective repeat caesarean delivery now accounts for approximately one third of all caesarean deliveries in the United States. The same applies for our department. The rate of vaginal birth after caesarean in USA in 1990 was 19.5% while in Norway it was 56.9%. (2).

Many studies have indicated the safety of vaginal birth after caesarean delivery. (3-6) But still there is much to be searched for to define this. This prospective trial was undertaken to define the success rate of vaginal deliveries and the maternal and perinatal outcomes.

MATERIALS AND METHODS

Between September 2003 and September 2004, two hundred and sixty two pregnant women who were followed up at our antenatal clinic at Prince Rushed Bin Al-Hasan Hospital were enrolled in the study. All of them had prior lower segment caesarean delivery for non-recurrent causes and had no high-risk pregnancy other than a caesarean scar. All of them were of the same ethnic group, aged between 20 and 30 years and parity of one to three and pregnant with an average size baby.

Twenty seven cases were excluded from the study because they had malpresentation (14 cases), placenta previa (5

cases) and contracted pelvis (8 cases). Once in labour, they were admitted to the labour room and offered a trial of vaginal birth after written consent and after being monitored carefully to avoid rupture of the uterus by monitoring the following signs: vital signs, suprapubic tenderness, fetal distress by electronic continuous fetal heart rate monitoring and the development of vaginal bleeding.

Seventy-two cases required oxytocin augmentation because of inefficient uterine contractions.

RESULTS

Out of two hundred and sixty eight cases, twenty-seven cases (10%) were excluded from the trial of vaginal delivery because they had caesarean section for the indications mentioned in Table 1.

Table 1: Cases excluded from study

Indication	Number of cases	Percentage
Malpresentation	14	51%
Placenta previa	5	18%
Contracted pelvis	8	29%
Total	27	

Two hundred and forty one cases were given a trial of vaginal delivery, out of whom one hundred and ninety two cases (80%) had successful vaginal delivery and in forty-nine cases (20%) the trial was discontinued because an emergency caesarean section was performed for the indications mentioned in Table 2.

Table 2. Cases in the trial which required Caesarean birth

Indication	Number of cases	%
Failure to progress	25	51%
Fetal distress	20	41%
Impending rupture of uterus	4	8%
Total	49	

One hundred and sixty nine cases (70%) delivered spontaneously without oxytocin induction, while seventy-two cases (30%) required oxytocin for induction of labor, out of whom forty seven cases (65%) had successful vaginal birth while twenty five cases (35%) required caesarean birth for failed progress.

DISCUSSION

Our findings of an 80% successful rate for vaginal birth are consistent with those of Loebel G et al (2004) who reported 81% successful vaginal birth after a prior Cesarean delivery (1). Several other studies indicated similar successful vaginal birth rate. (6-10)

Burrows LJ et al (2004) studied 32834 cases and found that 5656 cases required repeat caesarean section, which means a repeat caesarean section rate of 19%, findings similar to ours (20%). (11) Tongsong T and Jitawong C found a nearly similar repeat caesarean birth rate.(12)

Caesarean section was performed for the following indications in decreasing order of frequency: 25%

for failed induction, 20% for fetal distress and 4% for impending uterine rupture. Due to the proper monitoring of patients no single case of uterine rupture was observed, similar to what Tongsong T (2003) obtained in his study.(12) Comparatively, Durnwald C and Mercer B (2004) showed that uterine rupture occurred in 0.8% of his study group.(13) In their study, Lin C and Raynor BD showed that the rate of uterine rupture was increased in all inductions compared with that of the spontaneous labor group. They found that among patients with 1 prior caesarean, rupture rates with misoprostol and oxytocin induction were 0.8% and 1.1%, respectively.(114) No maternal or neonatal mortality or significant morbidity were found in our study, findings in accordance to Dizdarevic J et al (2004).(3,15)

CONCLUSION

Our study showed a good success rate of vaginal birth after one prior caesarean section, where 80% of cases in the trial had successful vaginal birth. Most of the cases, which failed to have vaginal birth, were due to failure to progress when given oxytocin, and fetal distress and these are non-recurrent causes of caesarean section.

This shows that we should encourage the policy of vaginal birth after previous caesarean birth for non-recurrent causes. This can prevent the postoperative maternal mortality and morbidity.

Future research should focus on an evaluation of both short-term and long-term consequences of vaginal birth after cesarean delivery compared with elective repeat caesarean section

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Cefpodoxime versus trimethorim - sulfamethoxazole for short-term therapy of uncomplicated acute cystitis in girls

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Key words: Antibiotic, girls, cystitis, E.coli, efficacy

ABSTRACT

Eighty two girls with uncomplicated acute lower urinary tract infection were included in a single Center randomized study comparing Cefpodoxime suspension (5mg/kg) with trimethoprim – sulfamethoxazole (6mg/kg TMP : 30/mg SMX) for 3 days. A total of 15 girls in both arms were excluded from the study for various reasons. At 4 to 7 days after the discontinuation of therapy 33 of 34 (98.4%) Cefpodoxime recipients, and 22 of 33 (66) trimethoprim-sulfamethoxazole patients, were clinically cured and demonstrated bacteriological eradication, respectively. At 28 days after treatment, 25 of 29 (87.3) and 23 of 26 (86%) cefpodoxime recipients as well as 15 of 28 (53.5) and 14 of 27 (52%) trimethoprim-sulfamethoxazole recipients, were clinically cured and demonstrated bacteriological eradication, respectively. With the expectation of two patients, in trimethoprim - sulfamethoxazole group, who discontinued therapy because of gastro intestinal pain, both antimicrobials were well tolerated. In conclusion, cefpodoxime treatment for 3 days was more effective than trimethoprim - sulfamethoxazole for 3 days for the treatment of uncomplicated acute cystitis in girls.

INTRODUCTION

Urinary tract infection is one of the most common bacterial diseases of childhood, with a reported prevalence in one study of 8.4% in girls by the age of 7 years [1]. Short term therapy advantages are based on increased patient compliance, with decreased adverse effects, decreased costs, and decreased rates of resistance development among the gut and vaginal flora [2]. However, the increasing rate of TMP- SMX resistance in the community world wide [3] as well as adverse effects of TMP-SMX [4] are causes of concern. Thus, alternative short-course antimicrobial regimens are required. Unfortunately, amoxicillin and cephalosporin are effective only when they are administered for ≥ 5 days. While nitrofurantoin requires at least 7 days of therapy [5].

Cefpodoxime is an orally administered prodrug which is absorbed and deesterified by the intestinal mucosa to release the advanced cephalosporin cefpodoxime, which has approximately 50% systemic bioavailability[6]. Cefpodoxime absorption is significantly increased by food, whereas it is reduced by agents that elevate the gastric PH.[7] It has a broad spectrum of anti bacterial activity encompassing both gram-negative and gram-positive bacteria and is stable against the most commonly found plasmid – mediated beta-lactomases including the TEM-2 and SHV-1 enzymes [8]. However, cefpodoxime

is hydrolyzed by SHV-2, which is produced by some klebsiella pneumonia and Escherichia coli strains and is also susceptible to hydrolyses by species-specific chromosomally mediated inducible cephalosporinases produced by strains of pseudomonas aeruginoses, Morganella morganii, serratia mercescens and enterobacter SPP [9]. The extended half life of cefpodoxime in plasma, which ranges from 1.9 to 3.7 hours, permits twice daily administration, while its elimination, primarily by renal excretion, renders cefpodoxime a promising candidate for therapy of UTI [10] The aim of the present study was to evaluate the efficacy and safety of 3 days regimen of cefpodoxime and to compare it with the established short course 3 day regimen of oral TMP-SMX for the treatment of girls with acute uncomplicated cystitis.

MATERIALS AND METHODS

This prospective, open, randomized study was performed at Aljahra hospital in Kuwait. Girls between the ages of 3 and 12 years who were referred to the Nephrology clinic because of symptoms compatible with acute cystitis were eligible for participation in the study. The diagnosis of uncomplicated cystitis was based upon clinical symptoms (i.e. dysuria, frequency, urgency, and burning pain on urination) as well as the absence of fever (temperature ≤ 37.5 c) or flank pain, laboratory findings (i.e., pyuria

in uncentrifuged urine of ≥ 8 leukocytes per mm³) and a positive urine culture yielding ≥ 10 cfu/ml within 48 hr before initiation of treatment [11]. Exclusion criteria were as follows: serum creatinine concentration of ≥ 88 Uml/L, the presence of a permanent indwelling urinary catheter, diabetes or any immuno suppressive disease, a history or evidence of a functionally or anatomically abnormal urinary tract, a symptomatic bacteriuria, known hypersensitivity to B-lactamas or TMP-SMX and any contraindication to the use of TMP-SMX (i.e., glucose-6-phosphate dehydrogenase deficiency), symptoms and signs of upper UTI, a history of acute pyelonephritis, previous UTI episodes with TMP-SMX treatment failure in the previous month or symptoms of lower UTI for longer than 3 days prior to presentation, any antimicrobial therapy within the previous 72 hours or therapy with any antimicrobial except in the study drugs during the trial, suspicion of non compliance, and the presence of urinary pathogens resistant to one of the agents used in the study.

Clean, voided midstream urine samples were collected subjected to urinalysis, and cultured by conventional methods. Treatment was given on an open randomized basis. Patients were assigned to receive either cefpodoxime (5 mg/kg b.i.d) or TMP-SMX (TMP 6 mg/kg, SMX 30 mg/kg B.I.D) for 3 days. Each patient was monitored clinically and bacteriologically at the baseline visit as well as at 4 to 7 and 28 days after the discontinuation of therapy. Before therapy and at the second follow-up visit, a clinical assessment and urinalysis were performed, urine was obtained for culture, and a blood sample was obtained for routine hematology and serum chemistry, while at the first follow-up visit, only the clinical evaluation and urinalysis were performed and urine was obtained for culture. Only patients who returned for at least the first follow-up visit were eligible for the study.

The effectiveness of the study drugs was evaluated as follows [12]. The patients were considered to be clinically cured when all symptoms had subsided and to have treatment failure when symptoms persisted during therapy or relapsed after the discontinuation of therapy.

Bacteriological cure was defined as eradication of the causative pathogen, with sterile urine at both follow-ups while isolation of any microorganism in urine cultures, as determined below, was considered bacteriological failure. Persistent was defined as the presence of the initial causative organisms at the first follow-up visit, super infection was defined as the isolation of a new pathogen from the cultures of urine obtained at first follow-up, relapse was defined as the presence of the initial causative pathogen at the second follow-up visit with sterile urine at the first follow-up visit, and re-infection was defined

as the isolation of a new microorganism at the second follow-up visit with sterile urine at the first follow-up visit. For bacteriological evaluation and whenever symptoms of a lower UTI were present, bacteriological failure was considered a cut off of ≥ 10000 cfu/ml, whereas in the case of asymptomatic bacteriuria, a cut off of ≥ 100000 cfu/ml was necessary. In the case of treatment failure, the patients were subjected to ultrasound of the urinary tract.

Side effects were recorded after each patient was asked at the follow-up visit about the appearance of any symptoms during the previous week(s) and specifically of symptoms related to the drug treatment, such as abdominal pain, nausea, vomiting, rash, and fever. Statistical analysis was performed by chi-square test, and a value of ≤ 0.05 was considered statistically significant [13].

RESULTS

A total of 82 girls entered the study. Of these girls, 41 received cefpodoxime and 41 received TMP-SMX. However, 15 patients were excluded: 6 patients in the cefpodoxime arm were excluded because pre-treatment urine cultures were negative, and one patient in the cefpodoxime arm was excluded because of unstable neurogenic bladder, whereas 4 patients in the TMP-SMX arm were excluded because the pre-treatment urine culture was negative and 4 patients, in the TMP-SMX arm were excluded because the isolated microorganisms were resistant to the drug tested.

The demographic and clinical characteristics of the evaluable patients in both treatment groups were similar (Table 1) clinical and bacteriological results, are listed tables (II+III). There were no statistically significant differences in either the clinical or bacteriological efficacies of the two drugs ($p=0.54$). Compared to those who were cured, all patients in the two treatment groups who failed bacteriologically had histories of two or more episodes of lower UTI, per year ($p\leq 0.001$).

Among the three cefpodoxime recipients who failed bacteriologically, E.coli persisted in one patient and in two patients a re-infection caused by enterococcus faecalis was observed. Thirteen patients, in TMP-SMX arm were considered bacteriological failures (all at the second follow-up visit). Among those thirteen patients, eleven had relapses caused by E.coli, one had a relapse caused by staphylococcus saprophyticus, and one was reinfected with E.fecalis. No super infection was observed in any of the individuals participating in the study (Table 2). It should be mentioned that all patients, who failed bacteriologically, had symptoms compatible with a lower UTI.

Table 1. Demographic characteristics of the two treatment groups

Characteristics	Cefpodoxime	TMP-SMX
No of patients	34	33
Age (yr) Mean	6	7
No. of episodes lower (UTI/ yr)		
0-1	8	10
2-3	5	11
≥3	11	12

Table 2. Clinical – bacteriological results at the first and second follow-up visits for the two treatment groups

Visits + treatment	Clinical evaluation (total No. of pt/ No. cured)	Bacteriological evaluation (total No. pt treated./ No. with bacteriological eradication)
<i>First follow-up</i>		
Cefpodoxime	33/34 (98.4%)	33/34(98.4)
TMP-SMX	22/33(66%)	22/33(66%)
<i>Second follow-up</i>		
Cefpodoxime	25/29 (87.3)	23/26 (86%)
TMP-SMX	15/28 (53.5%)	14/27 (52%)

Both drugs were well tolerated. In the cefpodoxime arm, one patient experienced an allergic maculopapular rash, but it did not discontinue therapy, whereas two patients, in the TMP-SMX arm stopped treatment because of intense epigastric pain and vomiting.

DISCUSSION

TMP-SMX is one of the most widely used antibacterial agents for short-term treatment of acute uncomplicated UTI in children [14]. However, hypersensitivity reactions and the emergence of resistant isolates worldwide necessitates the search for other short-term treatment options [15]. The recent advent of oral quinolones has provided physicians with a valuable weapon against gram-negative infection. Its use has been somewhat limited in the pediatric population because of its reported adverse effects on cartilage development in various animal studies [16]. This necessitated the evaluation of short term regimens with advanced cephalosporin. A 5-day treatment regimen with older B-lactamas such as amoxicillin and narrow-spectrum cephalosporins had

efficacy superior to that of 3-day regimen and there was an even greater risk of treatment failure with single day regimens [17]. In a multi center study, 3-day regimen of cefuroxime proved to be as effective as 3-day regimen of ofloxacin for the treatment of uncomplicated UTI, in 163 women [18]. In the latter study, clinical cure and improvement were registered in 84.8 and 95.2% of the patients, respectively, at 7 to 9 days post therapy, where as bacteriuria ($\leq 10/ml$) was eliminated from 80.3 and 89.1% of the evaluable patients, receiving cefuroxime and ofloxacin, respectively, with no statistically significant difference between treatment groups. On the other hand in a double-blind randomized study, a three day regimen of 400 mg of cefixime once daily was as effective as a 3-day regimen of 200 mg of ofloxacin twice a day for the treatment of 99 women with uncomplicated cystitis[19]. In the latter study, the respective clinical cure rates were 89% of 92% at early follow-up and 81% and 84% at last follow-up with bacteriological cure rate of 83% and 86%, respectively 7 days after the discontinuation of therapy and 77 and 80% respectively, 4 weeks after the discontinuation of therapy [19].

In the present study, cefpodoxime at a dose of 5 mg/kg has been shown to be more effective than TMP/SMX at dose 6/30 mg/kg when both regimens are given twice daily for 3 days. At 28 days after discontinuation of therapy, clinical cure was observed in 87.3% and 53.5% of the patients, in the cefpodoxime and TMP-SMX arms, respectively.

The fact that in this study short-term therapy with cefpodoxime was more effective than TMP-SMX could be, probably based on the slower elimination of cefpodoxime from urine because of its prolonged half life. Surveillance cultures for vaginal reservoir flora, which were not performed in the present study, could also offer another explanation for the low bacteriological failure rates observed in the cefpodoxime arm [12].

The tolerance of both antimicrobials was satisfactory. Only one patient in the cefpodoxime arm reported mild adverse events, whereas two patients in the TMP-SMX arm discontinued therapy because of gastrointestinal side effects. Hematological and biochemical results, did not show any important difference pre- and post therapy.

This study has reported for the first time in the available literature that a short 3-day course of therapy with cefpodoxime is more effective than TMP-SMX for treatment of acute uncomplicated UTI in girls.

Table 3. Bacteriological findings for the two treatment groups
No. of patients infected with the indicated species

Pre therapy isolates	Cefpodoxime	TMP-SMX
E.coli	30	29
protean microbilis	1	1
K.pneumonia	2	3
Enterobacter cloace	1	1
S. Saprophyticus	0	0
<i>Failure at follow-up</i>		
E.coli	1	1
E fecalis	2	1
S saprophyticus	0	1

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How does family medicine clerkship affect the attitudes to family medicine specialization?

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Keywords: Family medicine, clerkship, specialization, medical students

ABSTRACT

Background and Objectives - To investigate whether the attitude of final year medical students to family medicine specialization changes after family medicine clerkship.

Method - The authors conducted an analysis of data on 90 final year medical students who attended a 4-week family medicine clinical clerkship in the period between January and June 2004, at Uludag University School of Medicine. The change in preference for family medicine specialization was determined from the responses to the pre- and post-clerkship questionnaires. Statistical analysis of the results was conveyed by utilizing the SPSS 11.0 and Epi-Info 2000 software program.

Results - According to the answers given, rank of family medicine residency, which was 4.19 ± 0.10 before clerkship, increased to 3.88 ± 0.10 after clerkship. There was a significant difference in rank list between first and last test (before and after clerkship ($p < 0.05$)).

Conclusion - Final year medical students' clerkship in family medicine clinical practice may encourage more medical school graduates to prefer family medicine as a career, which in turn, may contribute toward establishing a sound healthcare system.

INTRODUCTION

Experience of medical students in their education is critical in their decision for specialization. It is hard to answer why medical students prefer some specialization programs to others more frequently [1,2]. There are several factors that play roles on career choices [2]. Investigations show that clerkships have an important effect on graduating medical students' specialty choices [3-7].

Healthcare system in Turkey, nowadays, is in need of a significant modification. As the importance of family medicine is appreciated, a great need for family medicine specialists exists since the success of a health system in a country, is dependent on a solid primary health care. In

our country, family medicine specialists have been trained in 3-year residency programs of 21 family medicine departments or clinics in 41 medical schools and some teaching state hospitals since 1984.

To increase the number of family physicians, we require a planned increase in the number of students who would show interest in family medicine [8]. In our school, the most important step of appreciation of family medicine specialization by medical students is a four-week family medicine field practice in the final year of medicine. Field practice is crucial in choosing family medicine specialization [9]. We expect students to foster their experience and knowledge on preventive health services, patient management, consultation, organization, disease diagnosis-treatment-survey protocols and patient-

physician interaction in primary care during the field practice. Family medicine clinical training period is a good opportunity for medical students to realize the importance of family medicine representing primary care [10].

Many studies reveal that family medicine training could be helpful to encourage students to choose careers representing general medicine such as family medicine or primary care [3,5,8,10,11]. In this study, we aimed to investigate if a career in family medicine is preferred by final year medical students, reasons for the preference, and if family medicine clerkship may influence the preference of a career in family medicine.

METHODS

We asked the whole (n: 93) final year medical students who attended a 4-week family medicine clinical clerkship between the months of January and June 2004 to fill the pre- and post-clerkship questionnaires and our study consisted of 90 students who answered both questionnaires. In the prior questionnaire, we aimed to receive answers to the following topics: Demographic characteristics, time spent in medical school education thus far, presence of a health problem in their families, first three choices for residency education, attitude to family medicine residency and its reasons, rank of family medicine in their residency education preferences and would they have chosen family medicine residency had it been on a volunteer basis or had its residency entry been an easier process. At the end of clerkship, we asked the same questions on the prior questionnaire and also the effects of this clerkship on the choice for residency education preferences and its reasons.

Statistics

For statistical comparison, we performed the McNemar-Bowker Test and Wilcoxon Signed Ranks Test according to data in dependent groups. In independent groups we utilized Mann-Whitney U test and compared categorical data by Chi-square and Fisher’s Exact tests. Statistical significance was considered to be $p < 0.05$. Statistical analysis was performed by SPSS 11.0 and Epi-Info 2000 software.

RESULTS

The mean age of students included in the study was 23.9 ± 1.5 years. 54.4% (n:49) of the study group was male and 45.6% (n:41) was female. Mean time in medical school was 6.2 ± 0.8 years. The ratio of students with health problems in family was %23.3. As Table 1 shows, the ranking of family medicine residency, which was 4.19 ± 0.10 before clerkship increased to 3.88 ± 0.10 after clerkship. There was a significant difference in the

preference list between the first and the last test (before and after clerkship ($p < 0.05$)).

Table 1. Attitudes of final year medical students to family medicine before and after clerkship

		Before clerkship	After clerkship
Do you want to apply to family medicine residency?	No	11.1%	26.7%
	Yes	61.1%	48.9%
	Indecisive	27.8%	24.4%
How do you rank family medicine residency program in your choices?	1	1.1%	2.2%
	2-3	4.5%	10.1%
	4-5	17%	22.5%
	Last	28.4%	27%
	Not in the list	48.9%	38.2%

(Table 1) There was no significant difference in attitude to family medicine as a medical career between before and after clerkship ($p > 0.05$). We found no statistical significant difference between indecisive students before clerkship and after clerkship. When indecision was scrutinized in itself, students who were indecisive before clerkship gave a “yes” answer in 36% after the clerkship, a “no” answer in 24%, and 40% remained “uncertain”. There was a significant difference when we analyzed “yes” and “no” responders with respect to “indecisive” students before clerkship, however.

“Yes” ratio increased to 37.5% in “indecisive” students before clerkship, while a 13.6% shift from “no” responders to “indecisive” group was observed. We considered this difference to be important ($p < 0.05$).

As we asked students to list their first three preferred residency programs before and after clerkship, they didn’t list family medicine. However, ranking of family medicine as a career was not different before and after clerkship, while the number of family medicine preferring students doubled (n:6-n:12). Most of the students who chose family medicine as a career before clerkship were female (66%). After clerkship, the percentage of females decreased (58%). Although female students preferred family medicine more frequently, we determined that male students change their choice of career relatively more frequently.

Attitude to family medicine specialization between answers on pre- and post-clerkship questionnaires was not considerable when compared by McNemar-Bowker test ($p > 0.05$). Table 2 summarizes the reasons why final year medical students choose family medicine as a career or not. (Table 2)

Table 2. Reasons of “Yes” and “No” responder students for family medicine as a career

Yes	No
Good working environment	I prefer surgical sciences.
More comfortable facilities compared to other branches	Interested in another branch
May enjoy it. Very interesting.	Financially not very satisfactory
Interested in clinical sciences	Prefer a more specific branch
Have a special interest in family medicine	Not much cared about.
A new branch, a different style. Promises a future.	Uncertain future
Related to many clinical branches	Not pure medicine
One-to-one personal interaction is possible	Not interested in

We asked the students whether they would choose family medicine residency had it been on a volunteer basis or had its entry been easier. As Table 3 indicates, volunteer ratio significantly increased after family medicine clerkship ($p < 0.05$). (Table 3)

Table 3. The effect of volunteer-based simplified exam on preference of family medicine

	Pre-clerkship	Post-clerkship
Definitely preferred	2.2%	6.7%
Preferred	30%	35.6%
Indecisive	36.7%	30%
Not preferred	26.7%	24.4%
Never preferred	4.4%	3.3%

The ratio of change in attitudes of students on the choice of a family medicine career after clerkship was remarkable. Table IV exposes the reasons for the preference change. (Table 4) As we investigated factors affecting the changing of minds, we found statistical significance in clerkship enjoyment especially by students with health problems in their family, influence by teaching staff’s attitude, interest and compassion ($p < 0.05$). On the other hand, age, sex and time in medical education had no effect on the students’ attitude.

Table 4. Ratio of change of mind to “Yes” after clerkship and reasons

Causes	Percentage (%)
Influenced by clerkship	13.3
Influenced by working environment	11.1
Influenced by behavior, interest and compassion of teaching staff	11.1
Enjoyed it.	8.9
Liked the facilities	8.9
Promises a future	4.4
Branch is very efficient	2.2

DISCUSSION

In Turkey, family medicine specialization is a hot topic because of the problems in the health system. However, family medicine as a medical career is not a well-known concept by medical students. Studies propose that clerkship in a medical branch in the final year of medical education plays an important role in choosing this branch as a medical career [3-6, 9-17]. In particular, final year field practice is an important factor to encourage students to choose family medicine as a career [9]. Uludag University Medical Faculty enables students in their final year to get familiar with the family medicine program during a 4-week clerkship. This period is a perfect opportunity to present family medicine and encourage students to a family medicine career. To make an assessment, it is important to define the students’ characteristics and their attitude to family medicine specialization and categorize the data in order to plan our studies. Describing the factors influencing students’ career choices towards primary care in our school as already done in several studies, will show us how to encourage our students to contemplate a career in family medicine [8,11,12]. Such an approach can help training of compassionate and well-read primary care physicians in our country. Demographic characteristics are important in family medicine choice as a career [16]. As students preferring family medicine are scrutinized, despite the fact that more female students (66%) preferred family medicine initially, this ratio decreased to 58% after clerkship. However, taking into consideration the doubling of student numbers preferring family medicine, more male students showed preference after clerkship compared to previously. This result is parallel to results of Marrison et al’s study [1].

We gathered that older age and time in medical school does not affect the attitudes of graduating students. It may depend on the fact that the mean age and time in medical school was not high in our study group. We found more enjoyment of clerkship and greater influence by teaching staff’s attitude, interest and compassion in students with health problems in their family (23%); this is similar to Bland et al’s study [10]. Highlighted section: Should this be decreased from 4.19 to 3.88 OR increased from 3.88 to 4.19.

Although there was no significant difference in attitude to family medicine preference before and after clerkship, family medicine preference ranking increased from 4.19 to 3.88 after clerkship. Moreover, a shift to “yes” in 37.5% of “indecisive” and a shift to “indecisive” in 13.6% of “no” may imply a positive effect of family medicine clinical clerkship ($p < 0.05$). Family medicine had never been in the first three choices in residency program choices before and after clerkship. It may indicate that unfortunately, family medicine is not a priority in our students’ career choices.

Students described their reasons of preference for family medicine specialization as a better working environment, more comfortable facilities, more suitable branch for themselves, interest in clinical sciences, a new and different residency program, diversity in practice, personal patient interaction and lower exam grade for entry. We could make some adjustments on these factors to make family medicine more favorable. Students described their reasons of non-preference for a family medicine career, as interest in surgical sciences, poor financial satisfaction, low social prestige, no promise for a future and unfamiliarity with family medicine. We should keep in mind that if these suspicions could be overcome, choice of a family medicine career can be increased.

The shift to “yes” in 37.5% of the “indecisive” group and the shift to “indecisive” in 13.6% of “no” responders after clerkship, are considerable and may imply that primarily the “indecisive” group, and secondarily the “no” group, are influenced to move to one group above by family medicine field practice. An easier entry process is an important factor affecting career choices of final year medical students. In our study, decreasing the eligibility requirements for family medicine residency program or a volunteer-based residency program had an important effect on increasing the number of individuals preferring a family

medicine career.

In residency application process adjustments, these factors may need to be considered to increase the number of individuals preferring a family medicine career. Although the number of students preferring family medicine career doubled after the clerkship, family medicine was still not in the first three in the preference list and this may be due to its preference rate being already very low.

As we investigated the frequency of factors positively influencing entry into the family medicine residency program, leading ones were: enjoyment of the working environment, absorption of medical life style, influenced by behavior, interest and compassion of the teaching staff, and this result was similar to other studies [1-3,6,8]. Improvement of physical working environment conditions in which model education on family medicine is given, better representation of working environment and encouragement of competency and motivation of teaching staff, may lead more final year medical students to prefer a family medicine career.

To increase the number of students preferring family medicine specialization, family medicine clerkship in graduate medical education is important. We should take measures for more field practices, better working conditions and higher motivation of family medicine teaching staff to encourage students to choose a family medicine career.

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Management of the Hospitalized Patient With Sleep Disordered Breathing

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INTRODUCTION

Sleep disordered breathing (SDB) frequently comes to medical attention for the first time when patients are hospitalized for diagnosis and treatment of an associated condition (e.g., poorly controlled hypertension, myocardial infarction, congestive heart failure, stroke, or problems related to management of diabetes mellitus). Diagnosis of SDB is generally performed in a specialized facility, which is often inconvenient and expensive for the hospitalized patient. Expectant peri-operative management of patients with sleep apnea is critical, particularly if they are previously undiagnosed. An ideal diagnostic strategy for these patients has not been defined. Continuous positive airway pressure (CPAP) is the mainstay of treatment of patients with sleep apnea. Unfortunately, it is often difficult for very ill patients to tolerate CPAP, unless it is administered with a high level of expertise.

Sleep disordered breathing (SDB), particularly obstructive sleep apnea (OSA), is a prevalent condition that is often undiagnosed. The development of obstructive apnea events is related to upper-airway anatomy and function. The relative contribution of these factors may vary widely. Obstruction most often occurs when upper-airway muscle tone is decreased relative to wakefulness. The upper airway collapses, with inspiration leading to obstructed breathing. The patient restores breathing at the expense of sleep continuity only to enter another phase of obstruction as sleep returns. This repetitive cycle of disordered breathing often produces episodic hypoxemia, increased stimulation of the sympathetic nervous system, and poor sleep quality.[1] Other sleep-related respiratory disturbances include Cheyne-Stokes breathing and central sleep apnea (CSA), characterized by oscillation or absence of respiratory effort.[2]

Population studies of middle-aged adults indicate that approximately 9% of women and 24% of men have SDB.[3] It has been estimated that 5% of all adults in Western countries have undiagnosed sleep apnea.[4] Even a relatively mild degree of OSA may be associated with adverse consequences including excess mortality,[5, 6] coronary artery disease manifestation,[7] stroke,[8]

insulin resistance,[9] and increased risk of automobile accidents.[10] Studies have concluded that subjects with SDB are more likely to use health care resources and services before diagnosis.[11, 12] Therefore, incidental hospitalization of a patient with OSA may present a valuable opportunity for diagnosis. It also represents a potential challenge in management.

The impact of SDB on medical and surgical patients has not been rigorously investigated because it is largely speculative. Episodic hypoxemia and poor sleep quality may compromise recovery from medical illnesses. Furthermore, it is reasonable to assume that patients whose upper-airway patency is compromised during sleep are also at risk following administration of analgesia and anesthesia. This paper will briefly review data by which we may estimate the likelihood that OSA is present in association with commonly encountered medical conditions. Some reasonable precautions to avoid complications of SDB in medical and surgical patients will be presented. Finally, the inherent difficulties of diagnosis and treatment of a sick patient not previously known to have SDB will be discussed.

Obstructive Sleep Apnea in Hospitalized Patients

It has been suspected for many years that OSA is causally linked to cardiovascular complications. Until recently, investigations, purported to demonstrate this association, have been criticized for not meeting currently accepted standards of evidence.[13] The strengths and weaknesses of more recent studies have been discussed elsewhere.[14-17] It is clear, however, that groups of patients undergoing treatment for a variety of conditions demonstrate an increase in the occurrence of daytime sleepiness, snoring, and OSA. These studies are relevant because they highlight the likelihood that SDB will be encountered in hospitalized patients.

Hypertension

The relation between hypertension and OSA is now well established.[5, 18, 19] Even mild SDB is associated with an increased risk of cardiovascular disease.[20] The prevalence of OSA in hypertensive patients is not known. However, patients with hypertension that is difficult to control are particularly likely to have OSA.[21] Logan

et al.[22] found that 83% of patients with drug-resistant hypertension had apnea/hypopnea indices (AHI) \geq ten events per hour. Effective treatment of patients with sleep apnea may result in decreases in systolic and diastolic blood pressure.[23-25]

Coronary Artery Disease and Myocardial Infarction

Numerous studies have suggested that a high proportion of patients with coronary artery disease (CAD) have OSA. Using a non-laboratory based overnight recording device, Schäfer et al.[26] found a 30.5% prevalence of OSA (defined as an AHI \geq 10) in patients with angiographically proven coronary artery disease versus 19.7% in controls. Other studies have reported prevalence of OSA in patients with CAD ranging from 14-65%.[27-30] Peker et al.[31] highlight the potential importance of OSA in patients with CAD and conclude that the presence of OSA was independently associated with an increased risk of cardiovascular mortality. Death occurred in 37.5% of patients with OSA over a 5-year follow-up period compared with 9.3% in patients without OSA.

Stroke

There is a high prevalence of SDB after stroke. Dyken et al.[33] found OSA on polysomnography in 77% of men and 64% of woman with recent strokes compared with 23% and 14%, respectively, in controls. Studying patients with stroke and transient ischemic attacks, Bassetti and Aldrich[34] found an AHI \geq 10 in 62.5% of patients and only 12.5% of control subjects. Obstructive and central sleep apneas are common occurrences immediately following first time stroke.[35] Good et al.[36] reported 40% of stroke patients admitted to a rehabilitation unit demonstrated OSA identified by oximetry and confirmed with polysomnography. Parra et al.[37] reported that 71% of first time TIA and stroke patients had AHI \geq 10 in the acute phase. Wessendorf, Teschler, and Wang[38] reported prevalence of 61%, 44%, 32%, and 22% based on AHI cutoff points of 5, 10, 15, and 20 respectively. Good et al.[36] found functional outcome to be significantly worse in stroke patients with SDB. By contrast, Parra et al.[37] and Iranzo et al.[39] did not find a significant effect of OSA on functional outcome.

Recently, Wessendorf et al.[40] and Sandberg et al.[41] conducted treatment trials with CPAP in stroke patients. Improvements in depressive symptoms, sense of well-being, and nocturnal blood pressure were reported. Sandberg et al.[41] emphasized that compliance with CPAP is a problem for stroke patients especially in the presence of delirium and cognitive impairment.

Diabetes Mellitus

As a result of obesity or as an independent consequence of SDB, OSA has recently been linked to type 2 diabetes. Two recent studies have examined the relation between

OSA and insulin resistance. Punjabi et al.[42] found that an AHI \geq 5 demonstrated an independent relation to glucose intolerance and insulin resistance despite controlling for body mass index (BMI) and AHI. Ip et al.[43] confirmed this observation.

Al-Delaimy et al.[44] looked at the relation between snoring and diabetes in the Nurses' Health Study cohort. After adjusting for age and BMI, they found that, over a 10-year follow-up period, occasional and regular snorers demonstrated a significant increase in diagnosis with type 2 diabetes.

Gastroesophageal Reflux Disease

Many patients with OSA will experience painful heartburn and gastroesophageal reflux. The prevalence of this association has not been fully described.[45] Anecdotal experience suggests that patients with GERD frequently experience an improvement of symptoms with successful use of CPAP.[46]

Congestive Heart Failure

Up to 50% of patients with stable, medically treated heart failure will show signs of SDB, most often in the form of central sleep apnea.[47] Mortality in congestive heart failure patients with untreated SDB is much higher than in those with heart failure alone.[48] Treatment with CPAP has been shown to significantly decrease mortality in patients with end-stage heart failure and SDB.[49] A study by Sin et al.[50] showed that patients with central sleep apnea waiting for heart transplant treated with CPAP had a significant increase in transplant-free survival.

Effects of Analgesia and Anesthesia on Patients With Sleep Apnea

Several recent reviews have highlighted the importance of OSA as a potential risk for complications related to anesthesia and analgesia after surgery.[51-53] However, the magnitude of this problem has not been well defined.[54] One uncontrolled study found that 17% of patients with OSA receiving general anesthesia, developed complications related to airway management.[55] Many of the factors responsible for upper-airway compromise in sleep are also present with anesthesia.[56] Anesthetic agents and narcotic medications increase the tendency for the upper airway to collapse. Furthermore, these agents impair the arousal response that terminates an episode of apnea, thereby increasing apnea severity.[57] Anesthetic agents alter several characteristics of sleep but these effects are difficult to separate from the effects of pain, pain management, and sleep deprivation in the hospital.[58, 59] As pain decreases after surgery and the effects of sleep deprivation accumulate, many patients experience a rebound of REM sleep during which sleep apnea is often most severe.[60, 61] The relation between severity of apnea and risk of sedation is ill defined. Gupta

et al.[62] reported that even mild OSA represented a risk for orthopedic patients.

Prevention of Complications During Surgery for Patients With Obstructive Sleep Apnea

The greatest problem facing the anesthesiologist attempting to minimize complications related to sleep apnea is the fact that many, if not most, patients with OSA are undiagnosed.[4] Often, the anesthesiologist's contact with the patient before surgery is brief. Patients with known OSA should be advised to notify the surgeon and anesthesia personnel of that diagnosis. It is reasonable to consider postponing elective surgery for patients with historical and physical examination findings suggestive of sleep apnea until diagnosis and treatment can be accomplished. A high level of expectant monitoring is necessary for patients who must proceed with urgent or non-elective surgery. Of particular concern are patients who have previously undergone surgical therapy for sleep apnea because there is a significant tendency for relapse a few years after treatment.[63]

Preparation Before Surgery

Once it is established or suspected that the patient has sleep apnea, a number of precautions are essential. The hallmark of safety administering anesthesia to patients with OSA is the concept that the patient's airway must be controlled at all times. Unsupervised sedation before surgery should be avoided. The patient's airway should be secured with either an oropharyngeal or nasopharyngeal airway during induction. A 3-5 minute period of pre-oxygenation may provide a brief cushion of safety.

Anesthesia Management

A system for intubation over a fiberoptic scope should be available and used if there is any doubt regarding ability to intubate the patient. Paralyzing agents, even short-acting agents, should be used with caution.[64] A surgeon should be available to perform an emergency tracheotomy if necessary.

Problems with intubation may be avoided by use of local or regional anesthesia. However, sedation may be more dangerous than intubation with airway control in these patients. Extubation is perhaps the greatest danger for patients with sleep apnea. The patient must be sufficiently awake to protect his airway before extubation can be safely accomplished. If the possibility of the presence of sleep apnea has been overlooked, this may be the time when unexpected difficulties develop.

Management After Surgery

Patient-administered pain control systems should be used with caution. Orders for narcotic analgesics or sedative medications should not be written on an "as needed" basis. The patient using CPAP therapy at home should be

allowed to bring his own equipment to the hospital. Close observation remains important because his ability to use this equipment unaided may be impaired after surgery. Also, it is possible that the effects of surgery and analgesia may alter the appropriate CPAP settings. If the patient has not used CPAP previously, it may be necessary to initiate this therapy empirically.

Diagnosis of Sleep Disordered Breathing

Diagnosis of SDB is most often based on a polysomnography performed in a specialized facility.[65] For polysomnography to be effective, the patient must be able to sleep for extended periods of time. The sleep-disrupting environment of the hospital is well recognized. There is likely to be significant impact on sleep quality and continuity resulting from pain, anxiety, as well as patient-monitoring procedures, medication administration, routine nursing care, and hospital noise. Significant OSA can occur even in the absence of any suggestive physical findings or history.[66, 67] Limited sleep studies may have some utility but the role of this technology has been inconsistently validated. Oximetry alone is of little value because it is inadvisable to allow a patient under the stress of acute illness or surgery to become hypoxemic. Furthermore, there can be no certainty that the patient's sleep in the hospital is a valid reflection of sleep at home. Consequently, it may be necessary to initiate therapy for presumed sleep apnea on an empiric basis. It must be emphasized that the diagnosis must be confirmed when the patient has recuperated significantly.

Empiric Treatment With Continuous Positive Airway Pressure

Key features of successful use of CPAP include effective mask fitting, correct institution of an optimal pressure level, and adequate patient education. All of these keys are potentially compromised in the setting of care of an acutely ill patient. Patients clearly should be protected during nocturnal sleep as well as naps, which may occur anytime when a patient is hospitalized. Most CPAP masks are not designed to be worn 24 hours per day and may produce serious skin breakdown as well as discomfort. Recently introduced masks that cover the entire face, such as the Respironics Total (Respironics, Pittsburgh, PA) mask, have become popular for non-invasive ventilation in the critical care unit. It is surprisingly well tolerated and may represent a useful option for some patients. CPAP, or more specifically bi-level CPAP, is being used increasingly frequently for noninvasive ventilation. As a result, most respiratory therapy departments are familiar with mask ventilation. Unfortunately, long-term compliance with this therapy is disappointing.[68, 69] Most patients with sleep apnea do not require bi-level CPAP. However, it is very important that patients being started on CPAP therapy for sleep apnea begin treatment under the best possible conditions. Otherwise,

they are likely to discard the treatment when they return home and even refuse subsequent evaluation and management. Careful monitoring and support of patients treated with CPAP for OSA has been shown to improve compliance.[70, 71] Some attempt at titration of pressure to identify optimal CPAP settings should be performed. There may be a role for automatically adjusting CPAP devices. The potential benefits and limitations of this technology have recently been reviewed in detail.[72] It should be emphasised that auto-CPAP is not an adequate substitute for polysomnography testing when the patient has stabilized. Controlled studies of different CPAP modalities during the transition from hospital to home care are needed.

CONCLUSION

OSA is commonly encountered in patients hospitalized for conditions that may or may not be directly associated to SDB. This fact represents an opportunity for diagnosis and a challenge for management. Unfortunately, medical education has historically devoted minimal time to this aspect of human health and diseases.[73] Careful attention to reports of excessive sleepiness or other features of sleep apnea in the patient's history must be taken seriously.

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Physical findings that predispose to airway compromise should be noted. Major complications of surgery may well be prevented if health care providers exercise due caution regarding SDB. Acute medical or surgical illness, particularly if the level of central nervous system function is affected by the illness or its treatment, may amplify SDB manifestations.

The ideal approach to diagnosis and therapy under these circumstances is unknown. The relation between OSA in the hospital setting and persistent OSA at home "after the dust has settled" is often unpredictable and may vary greatly depending on specific circumstances. For example, episodic hypoxemia in a hospitalized patient receiving opiates may not be a valid predictor of the presence or severity of sleep apnea after recuperation. In most cases, a presumptive diagnosis of SDB made in a hospitalized patient should be corroborated by a standard polysomnography evaluation when the patient is stable. Empiric use of self-adjusting or bi-level CPAP may be helpful in some circumstances. An unfavorable initial experience with CPAP can complicate long-term compliance. Therefore, positive airway pressure therapy must be applied with a high level of expertise in sick patients who are naive regarding this treatment.

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Study of Nursing Care of Cardiac Patients in C.C.U. and A&E, and the role of Education and Effective Training in the Optimization of the Quality of Healthcare in both Departments

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INTRODUCTION

Heart Disease constitutes a major public health problem and it is the leading cause of morbidity and mortality in most developing and developed countries. Cardiac disease is actually a number of diseases and conditions of the heart, or affecting the heart, and the body's circulatory system. The diseases range from arrhythmia (irregular heart beat) to cardiac arrest (heart attack) and hypertension (high blood pressure). Each year cardiac (or heart) disease kills twice as many people as cancer and eight times as many people as car accidents or infections. Cardiac diseases have a great influence on health. Because of their nature, it should be noted that immediate diagnosis and management are key points in saving lives.

Accident and Emergency Nursing is devoted to accident and emergency nurses and their interests. A&E nurses need to be up-to-date on a wide range of topics. There are a wide range of situations with which the A&E nurse is expected to cope, such as cardiac care, and reflects the scope of the A&E nurse's responsibilities. The growing number of practical and personal skills needed in A&E nursing creates the many medico-legal issues in A&E nursing and caters for all levels of staff working in emergency settings throughout the world.

As the procedure of resuscitation of cardiac patients with pulmonary arrest are of high importance and are initially carried out in A&E department, therefore, nurses have to deal and face with many difficulties which may result in the low level of healthcare offered to those most in need.

The Effect of the Quality of Nursing Care in Health Services

According to Doughty and Marsh [1984: 11], C.C.U. & A&E nurses need to assure themselves and their patients that they are delivering a high standard of quality nursing care. Previously the health care industry was considered above being questioned about the quality of care, but nowadays, health care is a major industry and each hospital is accountable to its consumers. The availability and quality of health care is determined by the values and expectations of the consumers.

Consumers expect value for their money and count on the existence of services when needed. More and more patients are demanding to be informed partners in decisions regarding their health, and their concerns are now directed at the whole spectrum of their care whilst in a health care institution. As Doughty and Marsh [1984: 4] emphasise, patients now complain, demand, report and sue and have realized that the quality of nursing care is an important factor in patient outcomes.

From a historical perspective, the concern for high quality health care dates back to the 5th Century BC, when Hippocrates established a code of medical ethics, obliging future doctors to swear "never to do harm to anyone". The history of quality assurance activities in nursing can be traced back to Florence Nightingale's attempts to improve the conditions of care to the soldiers of the Crimean War in 1858. Her standards to assess the care of the soldiers has been established as one of the first documented efforts of quality improvement work, and since then, assurance of quality nursing care has remained a priority for nurses throughout the world [Kahn, 1987: 21]. Subsequently, nursing has developed into a profession with an emerging unique body of knowledge and this has resulted in a growing interest in the improvement of quality nursing care. Whilst this may be true, Cantor [1983: 3] maintains that nurses have not traditionally concerned themselves with the problems revolving around health care delivery nor the health needs of society as a whole.

Nurses have seen their role at the bedside, dealing with the needs of the individual patient, and were unlikely to consider whether their nursing care was delivered in the most effective and efficient way with the maximum utilisation of scarce resources. Therefore it is important that nurses understand the importance of one of the underlying concepts of quality care, and that is accountability.

Bennett [1989: 155] states that to be accountable, we must be answerable for our own decisions and actions, not only to other members of the health team, but to the consumers of health care, whether individual, family or

community. Donabedian's now classic work on quality assurance argues that the hospital is a major component of organized care in the health care system and therefore establishes the standards of care which safeguard the quality of care and is held responsible for the maintenance of those standards.

Bennett [1989: 158] defines standards as being desirable and achievable levels of performance consistent with quality, and if we are concerned with all aspects of quality care then three dimensions can be identified: structure, process and outcome. These dimensions are central to the definition of quality assurance developed by the Royal Australian Nursing Federation [RANF, 1985: 3] "A planned systematic use of selected evaluation tools designed to measure and assess the structure, process and/or outcome of practice against an established standard, and the institution of appropriate action to achieve and maintain quality."

Peters [1991: 1] describes quality as "elusive" and cites Donabedian as writing that quality represents our concepts and values of health, our expectations of the provider-client relationship, and our view of the role of the health care system.

Role of Education in the Quality of Health Services

Coronary artery bypass grafting (CAG's) is currently the most widely accepted and successful means of treating patients with coronary artery disease in the short term (Simons & Simons, 1987). Whilst this surgical procedure is not curative, when used in conjunction with coronary artery disease risk factor modification [Tirrell & Hart, 1980, Sivarajan et al., 1983, Scalzi, Burke & Greenland, 1980, Marshall, Penckofer & Llewellyn, 1986], it is a means of improving both the quality of life (Barbarowicz et al., 1980) and the prognosis of those suffering from this often crippling disease.

Most, if not all Cardiac Care Units must provide patients with some form of post-operative rehabilitation education prior to their discharge from hospital following initial recovery after cardiac surgery. This education takes the form of written information, informal or formal presentation of information. Tirrell & Hart [1980: 492], in a study of 30 post operative coronary bypass patients, reveal that an "in-hospital postoperative exercise training... helped", only two thirds of post cardiac bypass patients to maintain long term compliance with the exercise regimen provided, and suggest that a follow-up programme may help to overcome their non-compliance. Barbarowicz et al [1980: 128] studied patients who had been divided into two groups, one of which had attended slide-sound programmed teaching and the other "informal, unstructured and individualized contact with a nurse". Knowledge scores were obtained, and the mean difference

increase of the slide-sound group was found to be greater than that of the other group. They suggest that current education practices for CAG's patients require review, and recommend the use of slide-sound presentations which conserve staff time. Scalzi, Burke and Greenland (1980) studied two groups of coronary patients, an experimental one which received an organized education programme (designed to increase knowledge of coronary artery disease and methods of risk factor reduction), the other, education from health care individuals only on patient request. They found that patients' post test knowledge and compliance scores were not significantly improved in the experimental group, leading the researchers to conclude that patients' knowledge retention whilst in hospital is impaired, but that such programmes give a necessary opportunity to ask questions, thereby reducing anxiety. Marshall, Penckofer and Llewellyn (1986) assessed the effectiveness of a structured teaching guide used by nurses in educating the patients and their families about normal recovery postoperative to CAG's, comparative to an unstructured approach. Patients who had been presented with the structured teaching, showed greater total compliance with health risk factors. Wilson-Barnett (1981) reports that of 54 patients who had been employed preoperative to CAG's, 18 had returned to work within three months, 20 between four and eight months, and 16 patients did not resume.

Sivarajan et al., [1983: 72] studied 258 patients who had received varied programmes of rehabilitation education on smoking, diet and exercise following myocardial infarction. Results indicated that the group teaching programme on risk factors "demonstrated only limited effectiveness".

Nursing Care at C.C.U. and A&E

Adverse events in hospital associated with medical management are estimated to occur in 4%1 to 17%2 of admissions. Further analyses of such events found that up to 70% of them were preventable 3 4. One of the more serious and clinically important adverse events is unexpected cardiac arrest. Despite the availability of cardiac arrest teams and advances in cardiopulmonary resuscitation the risk of death from such an event has remained largely static at 50-80% [5, 6].Unexpected cardiac arrests in hospital are usually preceded by signs of clinical instability 7 8. In a pilot study we noted that 112 (76%) patients with unexpected cardiac arrest or unplanned admission to intensive care had deterioration in the airway, circulation, or respiratory system for at least one hour (median 6.5 hours, range 0-432 hours) before their index event9. Furthermore, these patients were often reviewed (median twice, range 0-13) by junior medical staff during the documented period of clinical instability. Despite this the hospital mortality for these patients was 62%. Such patients should receive better assessment either

for aggressive resuscitation and management or for clear institution of “do not resuscitate” orders with palliative care. A medical emergency team has been proposed as a pre-emptive response system to manage these patients[9, 10]. In this system when clinical observations reach certain predefined critical limits the primary care nurse or medical officer calls for the team, which responds immediately. Proof that a medical emergency team, most importantly nurses, can reduce the amount of incidence of and mortality from unexpected cardiac arrest is eagerly awaited, as such a proposal is intuitive. However, the number of such arrests can be influenced by several factors, including the number of “do not resuscitate” decisions made. Buist et al’s paper fails to take this into account, and suffers from other methodological errors too[11]. Some patients receive cardiopulmonary resuscitation despite it being futile, and thus the resuscitation status of critically ill patients must be established. However, any increase in do not resuscitate orders inevitably reduces the incidence of and mortality from unexpected cardiac arrests. The introduction of a medical emergency team increases the number of do not resuscitate orders[12].

Buist et al report that, in 1999, the medical emergency team made 13 such orders for patients who subsequently died but do not report the overall incidence of these orders in the hospital in either year studied. Buist et al [11] determined whether earlier clinical intervention by a medical emergency team prompted by clinical instability in a patient could reduce the incidence of and mortality from unexpected cardiac arrest in hospital. They found that early intervention by a medical emergency team reduced the incidence of unexpected cardiac arrest in hospital by about half. Furthermore, the subsequent mortality was reduced from 77% to 55% after the system had been introduced. In their hospital, this was a reduction in mortality by two patients per thousand hospital admissions. Critically ill patients may be identified by clinical signs of dysfunction of the airway, breathing, or circulation. At Dandenong Hospital[11], the “traditional” system of management of these patients was hierarchical and depended on the skill, experience, judgement, and timely involvement of relevant staff members. These factors varied considerably and resulted in a poorly standardised and unstructured approach[9].

Early intervention should prevent further deterioration to the point that a cardiac arrest call is made. The observed reduction[11] in calls and associated mortality is consistent with that conjecture.

The implementation of the response system[11] required considerable cultural change throughout the hospital with an education programme and audit process, which could explain some of the observed effects. On the other hand, the potential effect could have been underestimated. During

the early phase of implementation junior medical and nursing staff seemed unwilling to broach the traditional system of referral. There were probably still unexpected cardiac arrest calls and unplanned admissions to intensive care that could have been prevented by better use of the medical emergency team.

MATERIALS AND METHODS

The first questionnaires contained 50 questions; 48 multiple choice questions and 2 open questions. 25 nurses from both C.C.U. and A&E departments participated in the survey. To ensure anonymity, no names were required and the completed questionnaires were placed in a centrally located box.

The areas of questions and the scores given to each area can be summarized as follows:

- 1-crisis management in both units (23%)
- 2-daily care in both units (27.4%)
- 3-patient education (37%)
- 4-pharmacological cover in the two units (44.8%)
- 5-job description and getting acquainted with job goal (43.1%)

The second set of questions was meant to study the demographic information and different aspects of personal experiences. The results were gathered in two separate questionnaires and then evaluated. After that the answers were compared with chi-square Fischer and other tests.

DISCUSSION AND CONCLUSION

The Discussion on the results and the literature review, the conclusions drawn from this investigation and the recommendations, can be listed as follows:

1. A co-ordinated disease management approach may be implemented that includes early assessment in the hospital, comprehensive education, and behaviour modification in order to improve disease management and improve patients’ quality of life.
2. In order to obtain better outcomes for the patient, to control and reduce costs and to take the work load off the A&E unit, the further care of cardiac patients after resuscitation in A&E should be moved to specialists in C.C.U. or heart failure clinics.
3. A staff nurse as part of a multi-disciplinary heart failure team has an important role in educating patients and their families on the disease process, management and control of symptoms and also providing support following diagnosis of cardiac disease.
4. Nurses are the integral providers involved in educating, coaching, monitoring and supporting patients and their families during the cardiac disease process. The staff nurse can assess the signs and symptoms of cardiac

destabilization, provide emotional support, counseling, develop behaviour modification techniques, monitor therapy compliance and also act as the healthcare liaison for the patient and their family. This will add extra pressure on nurses. In order to take some work load off nurses, counselors can be a good idea to deal and offer support emotionally to the patients and their families.

5. Scalzi, Burke & Greenland (1980) propose that patients' knowledge retention whilst in hospital is impaired. Simons & Simons (1987: 580), in a study of 97 post CAG's patients revealed that only 20% had attended a cardiac rehabilitation service and recommend that "a closer partnership needs to be forged between cardiac rehabilitation services and general practitioners, so that the risk factors can be monitored carefully throughout the first year after coronary artery bypass graft surgery and followed by further dietary or drug therapy as indicated". Hart and Frantz (cited in Marshall, Penckofer and Llewellyn, 1986) indicate that "failure of the physician to support the role of the nurse as a patient educator" is one of the impediments to an effective teaching programme.
6. In order to reduce the amount of work load pressure on nurses, and consequently offer better healthcare, nurse triage can be developed to classify patients into those with problems that are of a primary care type and those with accident and emergency needs who are more likely to require investigations, procedures, referral, or admission. By developing a triage decision tree, more authorities are given to nurses to decide and differentiate between accident and emergency and general practice patients. Those presenting with minor injuries considered to be unlikely to require radiography were channeled to see a general practitioner, while those likely to need a radiographic investigation were directed to an accident and emergency doctor. This scheme will increase the standard of healthcare and give more incentives to the nurses to present their ultimate ability to deal with all difficult aspects of patient care.
7. Cardiac failure is a major public health problem. Hospital admissions are often unplanned readmissions have a high mortality rate. The departments of C.C.U. and A&E are the most important life saving departments within a hospital. The majority of cardiac failure patients need to be resuscitated and stabilized in the A&E before transferring them to the intensive care unit at the cardiac care unit. Therefore, the level of organizations and management are required to be of high standard to ensure the best care for the patients.
8. With regard to personal qualities of nurses, no significant evidence of any lack of personal characteristics of nurses (such as education, knowledge professional skills and training), in any of these two departments was found, and elimination of personal characteristics did not reveal any significant statistical evidence in the quality of service offered.
9. Significant statistical difference between the nurse's motivation, concepts and the Dean's support was apparent ($p < 5\%$).
10. In response to the second questionnaire distribution, more than half of nurses in both departments were found to face some kind of difficulties such as daily work load and poor management, which has affected their healthcare efficiency.
11. Further observation was found to be that any big gap between the training periods and practice can have some damaging consequences and it can affect their continuity of care, performance, motivation, decision making and most importantly their nursing concept during their practice.
12. Rather than employing a new system of nurse practitioners it would be cheaper to refer the patient directly to primary care services in the community after triage provided that those services are adequate.
13. With regard to the staff nurse recruitments, proper consideration and criteria are taken into account in the selection procedure of staff nurses for either of the two units under investigation.
14. Regular education, job training, meetings and seminars need to be provided as they are essential to keep their professional knowledge and performance up to date and at a high standard level.
15. Interval tests and training may be necessary for those nurses failing to meet the standard criteria in order to ensure a high quality of health care.
16. Like Buist et al,³ we have recognized that care preceding admission to the A&E care unit can be improved.⁴ To do this, a combination of a bedside physiology based scoring system is required to be chosen,⁵ increased education of nurses in the recognition of critically ill patients, and use of "outreach" nurses with skill in intensive care who can both support patients on the ward and help with their admission to the intensive care unit.
17. Unexpected cardiac arrest is a serious and clinically important adverse event that carries a high mortality.^{5 6} Such an event is often preceded by signs of physiological deterioration,⁷⁻⁹ which indicates that it is often neither a sudden nor an unpredictable event. Early intervention¹¹ when a patient shows signs of clinical instability could reduce the incidence of cardiac arrest and hence mortality.

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Estimation of Body Mass Index in Daquq District

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ABSTRACT

Background - Belgian astronomer Quetelet observed in 1869 that among adults of normal body mass, weight was proportional to the square of height. In 1972 Keys and colleagues made a similar observation and named it body mass index (BMI). This index is a measurement of choice for most physicians and researchers. A BMI between 20-25 kg/m² is regarded as a good weight for most individuals. Overweight is defined as BMI above 25 kg/m² and obesity defined as BMI above 30 kg/m². BMI less than 20 kg/m² is considered as insufficient weight.

The aim of this study - is to learn the trends and extend of the overweight, obesity and to examine the nutritional state of the community. We also wanted to estimate the prevalence of obesity, malnutrition and study the association of high BMI with diabetes, hypertension and a family history of hypertension and diabetes. Additionally we wanted to study the association of BMI estimation with dietary habits, smoking, physical activity, ethnicity, educational status and other factors.

Methodology - Is a community based cross-sectional study, in the period 1st to 31st of August , 2003, 17 clusters had been chosen from Daquq town and its villages, ncluding 89 families and 424 persons above 13 years of age. We measured the weight and the height of the subjects and calculated the BMI of each subject, A self-determined questionnaire had also been answered by the subjects.

Results - We found that obesity is more prevalent among females of all age groups, e.g. 50% of females above 64 years of age have a BMI of > 30 in comparison with males 16% for same age group. Also rural subjects have higher BMI than urban subjects. Mean of BMI of married individuals (male 26.1, female 27.3) is higher than unmarried (male 22.7, female 23.3). Housewives have a highest BMI (23% of them have BMI equal or more than 30) while students have the lowest BMI (1.6% have BMI equal or more than 30). Illiterate people are more obese (22.6% of them have BMI equal or more than 30) than educated. There was no negative relation between smoking and obesity, but ex-smokers were heavier than non-smokers and those who never smoked. Ethnic variation showed that mean BMI in Turkman was (25.7), in Kurds (24.7) and in Arabs (23.8).

Diabetic and hypertensive people have a higher BMI. 67% of diabetic and 42.5% of hypertensive patients have BMI equal or more than 30. Those with a family history of these two diseases also have a higher BMI than others. Regarding dietary habits, the BMI increased by increase in the consumption of bread.

Conclusion and recommendation - This study showed that high BMI and obesity are more common among females, rural people, married, illiterate, housewives, diabetic, hypertensive, those with a family history of diabetes and hypertension, and those with a high bread consumption, and we recommend that care and attention should be taken toward risk groups and encouraging awareness in people about their weight and physical fitness.

INTRODUCTION

Belgian astronomer Quetelet observed in 1869 that among adults of normal body weight, weight was proportional to the square of height. In other words W/H^2 was constant. This useful index is therefore called Quetelet's index (QI). Keys and colleagues in 1972 made similar observation, and named it body mass index. [1]

This index or formula is now the most widely used method for estimating body weight of the population. A BMI between 20-25 kg/m² is usually considered a good weight for most individuals. Overweight is defined as BMI above 27 kg/m², and obesity defined as BMI above 30 kg/m². BMI index less than 20 kg/m² is regarded as insufficient weight, indicating malnutrition or chronic disease. Weight gain may confer increased health risk; in women a weight gain of more than 5 kgs is associated

with increased risk of diabetes and heart disease. In men any weight gain after the age of 25 appears to carry increased health risks. [2]

The determinants of weight gain and obesity have proven to be multifactorial but inconsistent. In follow-up studies of factors predicting weight change, for example, fat intake, physical activity, smoking, alcohol consumption and other factors have yielded no conclusive evidence that these factors either promote or prevent weight gain.

Our society is becoming increasingly obesogenic, thus although obesity has a strong genetic background, environmental factors are regarded to be the underlying cause of an increase in obesity by promoting the problem. In Britain, for example, the increase in the prevalence of obesity was attributed to a reduced level of physical activity rather than intake of energy dense food. Analysis

of these studies are usually based on population level estimates of environmental factors. Studies in which an increase in BMI is examined in relation to other variables within the same population, are scarce. [6]

AIM OF THE STUDY

To study the trends and extent of overweight, obesity and examine the nutritional status of the community.

OBJECTIVES

Our objectives are to:-

1. Estimate the prevalence of obesity in the population.
2. Estimate the malnutrition state in our population and effect of the socio-economic situation.
3. Study the association of BMI with diabetes, hypertension, and other disease.
4. Study BMI association with family history of diabetes and hypertension.
5. Study BMI association with dietary habits, smoking, physical activity, employment, ethnic groups, educational state and other factors.

SUBJECTS AND METHODS

Subjects:

Daquq is one of the districts of Kirkuk governorate. It lies 40 kilometers south of Kirkuk, 220 kilometers north-east of the capital Baghdad. Its geographical area is composed of a small town and about 90 villages. Inhabited by 50,000 citizens of multiple ethnic groups, they work mainly in agriculture and trading.

In a community based cross-sectional study, in the period from 1st to 31st of August-2003, we took 17 clusters; seven of them are from all the quarters of the town, and ten from the villages. Each cluster composed of 5 families selected in a systematic random way; we included all the members of the families above 13 years of age excluding pregnant and handicapped persons. The villages were selected for the study by dividing the geographical area into 5 sectors according to transportation way. From each sector we chose 2 villages in a simple random way. The total subjects were 424 persons from 89 families, 216 males and 208 females. 200 were from the urban area and 224 from the rural area.

Setting:

Urban area: Al-resala, Door al-mazraa, Al-qadisea, Al-hurea, Al-yarmook, Al-naser and 17th – July quarters in Daquq town.

Rural area: Zend bin ez, Zend mulla yousif, Albu najim, Albu shihab, Sumaga ulia, Zaglawia, Tobzawa, Al-wahda, Abdulla ghanim sagher, Al-emmam villages.

Measurements:

For each subject we measured weight by electronic weight scale, which was adopted from UNICEF for the primary health centers. The subjects wore light clothing and no shoes. Weight was measured to an accuracy of 100 gm and height measured by tape method. BMI was computed as weight/height² in meters. We used BMI mean and BMI of 30, 25 and 20 to investigate the association with other variables.

For each subject we prepared a set of self-administered questionnaires including personal data about age, sex, occupation, residence, marital state, ethnicity, smoking, educational state, history of general diseases, family history of general diseases, physical activity, leisure time spending, dietary habits, tea consumption, alcohol consumption, and subjects' perception about their current health.

Regarding smoking, the subjects were defined as smokers, never smoked, and ex-smokers, ex-smokers defined as those who gave up smoking for at least 6 months, those with less than 6 months regarded as smokers.

In physical activity questions we divided subjects according to activity in their employment and out of employment activities, for example, farmers, laborers, are regarded as being involved in heavy physical activity, housewives, students, non-sedentary governmental employees would be regarded as being involved in moderate physical activity. Unemployed, retired, and sedentary governmental employees are regarded as light physical activity.

In leisure time activities we asked about sports activity, TV watching, reading and others. Those with regular daily sport activity were regarded as engaging in high physical activity.

Questions regarding dietary habits were about meat, milk, fruit and vegetables dessert and its consumption daily, weekly, and monthly. Regarding bread consumption we asked about the number of slices consumed per day.

Tea consumption questions determined how many cups were consumed per day by each subject. We asked finally, each subject's opinion about his health status as bad, moderate or good.

Statistical analyses:

The two statistical tests t-test and chi-square were used in analyses, in addition to the SPSS version 10 software.

Figure.1. Daquq district quarters

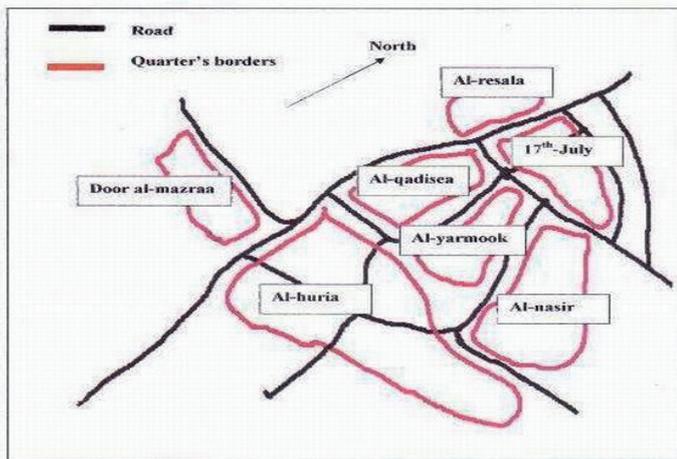
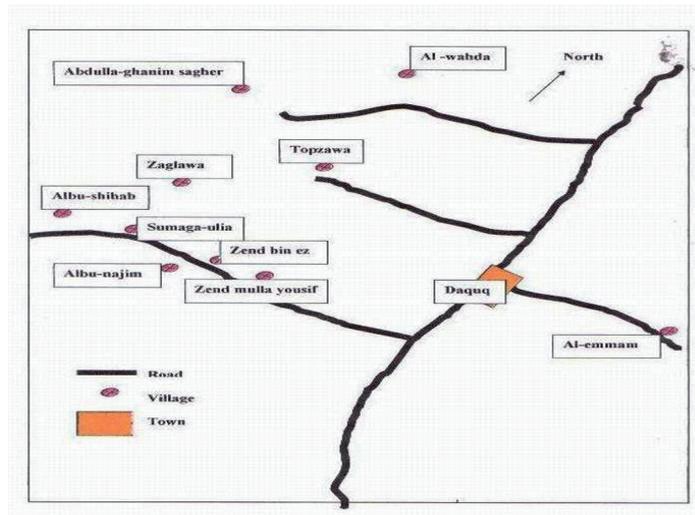


Figure 2. The villages of the samples



RESULTS

- Obesity was more prevalent in females than males of all age groups especially older age groups both in urban and rural areas. (Table 1)
- BMI was higher in rural area than urban areas, for both sexes. (Table 2, Table.3)
- Overweight (BMI 25-29.9) was more in males, while obesity (BMI equal and more than 30) more prevalent in females. (Table.4)
- The results of marital states show that 54.3% of the populations are unmarried and 42% are married. BMI mean was higher among married than unmarried for both sexes. (Figure.3)
- Married female n=59, mean BMI=27.3, SD=5. Unmarried female n=78 mean BMI=23.3, SD=5.4. Married male n=71, mean BMI=26.1, SD=4.6. Unmarried male n=113, mean BMI=22.7, SD=4.
- The occupations of the sample population (Figure.4) were 38.9% housewives, 17.9% free business, 14% students, 12.5% governmental employees, 6.3% retired, 4.4% farmers, 2.3% unemployed and others.
- The obesity was more prevalent among housewives 23%, and less in students 1.6%. (Table 5)
- Educational state results revealed that 36.5% of the population are illiterate, 35.6% with primary school education, 7.8% with intermediate education, 9.4% with secondary education, 10% with college education and 0.4% with higher education (Figure 5). The BMI relation to the educational state seems to be high among illiterate and those with college educational states. (Table 6)
- There was no significant difference in BMI mean between smokers and those who never smoked, but the mean was high in ex-smokers. (Table 7)
- Regarding the ethnic groups in Daquq we found that Turkman BMI mean (25.7) was higher than Kurds

- BMI mean (24.7) and Arabs BMI mean (23.8). (Figure 6)
- The BMI was significantly high in hypertensive, diabetic and those people who have both hypertension and diabetes. (Table 8)
- The BMI was also high significantly in those with a family history of hypertension and diabetes. (Table 9)
- Physical activity relationship with high BMI was not significant regarding the degree of physical activity whether light, moderate or heavy activities. (Table 10)
- Most people 64% (272, n=424) spent their leisure time watching television and others unfortunately have not many other choices as to how to spend their leisure time. Among TV watchers 15% had a BMI of more than 30.
- We found in the results of dietary habits of the sample, that more than 95% of have at least one serving of milk products, fruits and vegetables per day for.
- In meat consumption there was no strong association between frequent meat consumption and high BMI (Table 11). Most of the sample 73% (310, n=424) have at least one meat meal per week.
- Tea consumption has no significant relationship with high BMI. (Table 12)
- In dessert consumption the association was also weak. (Table 13)
- In bread consumption there was a remarkable increase in BMI with increase in bread consumption. (Table 14)
- The people's awareness about their health differs. The results of the questions about every subject's evaluation of their own health show that a significant percentage feel good although their BMI was above and below the normal ranges. (Table 15)

Table 1. The frequency distribution of BMI of > 30 in males and females of multiple age groups in Daquq

Gender	Age groups										Total	
	14y-24y		25y-34y		35y-49y		50y-64y		>64			
	n	%	n	%	n	%	n	%	n	%	n	%
Male	1	1.1	9	18	5	16.6	3	15	3	16.6	21	33
Female	6	7.5	10	18.5	11	26.8	11	42.3	4	50	42	67
Total	7	11	19	30	16	26	14	22	7	11	63	100

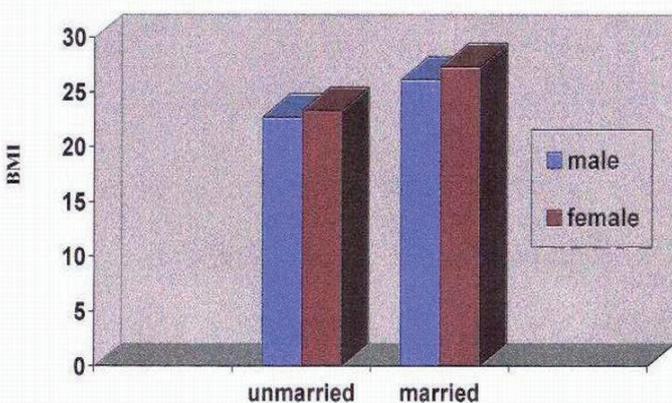
Table 2. Frequency distribution of BMI of > 30 of males and females in rural area

Gender	Age groups										Total	
	14y-24y		25y-34y		35y-49y		50y-64y		>64			
	n	%	n	%	n	%	n	%	n	%	n	%
Male	1	1.7	7	29.6	4	19	2	20	1	10	15	43
Female	4	10.5	6	24	4	19	6	42	-	-	20	57
Total	5	14	13	37	8	23	8	23	1	3	35	100

Table 3. Frequency distribution of BMI of > 30 of males and females in urban area in Daquq

Gender	Age groups										Total	
	14y-24y		25y-34y		35y-49y		50y-64y		>64			
	n	%	n	%	n	%	n	%	n	%	n	%
Male	-	-	2	7.6	1	6.2	1	10	2	25	6	21
Female	2	4.7	4	13.7	7	35	5	41.6	4	100	22	79
Total	2	7	6	21	8	30	6	21	6	21	28	100

Figure 3. BMI means for married and unmarried subjects of both sexes



t-test=4.54 df=153 p < 0.005 for females
t-test=5.15 df=182 p < 0.005 for males

Figure 4. the percentages of the occupations of the sample

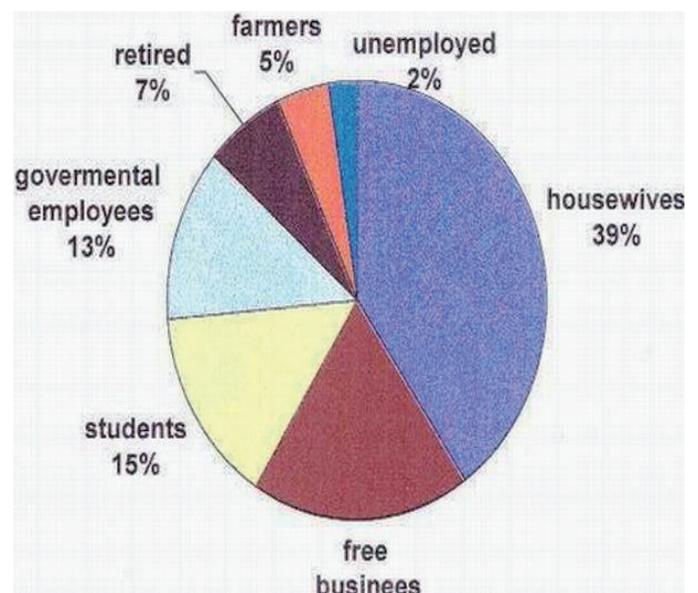


Table 4. Prevalence of overweight and obesity in Daquq

BMI	Gender				Total	
	Male		Female			
	n	%	n	%	n	%
Overweight (BMI 25-29.9)	29	31.9	48	23	117	64
Obese (BMI 30 and more)	21	9.7	44	21.2	65	36
Total	90	49	92	51	182	100

Chi-sq=11.7 df=1 p < 0.005

Table 5. The relation of the BMI to the occupations in Daquq district

Occupations	BMI<30		BMI>or=30		Total	
	n	%	n	%	n	%
Housewives	123	77	37	23	160	53
Governmental employees	43	81	10	19	53	18
Students	59	98.4	1	1.6	60	20
Retired	24	89	3	11	27	9
Total	249	83	51	17	300	100

Chi-sq=15.04 df=3 p < 0.005

Figure 5. Percentages of the educational state of the population in Daquq

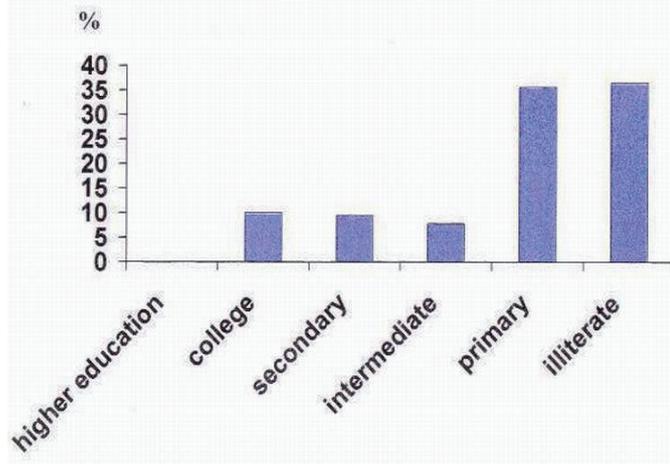


Table 6. BMI estimation and educational state of the population in Daquq

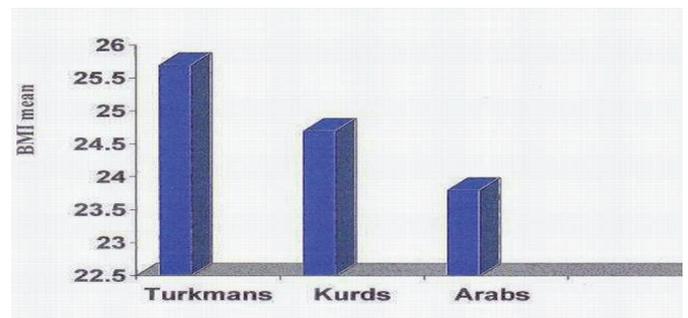
Educational state	BMI<30		BMI>or=30		Total	
	n	%	n	%	n	%
Illiterate	120	76.4	35	22.6	155	36
Primary	136	90.1	15	9.9	151	36
Intermediate	32	97	1	3	33	8
Secondary	37	91.9	3	8.1	40	9
College and higher education	39	85	6	15	45	11
Total	364	86	60	14	424	100

Chi-sq=16.38 df=4 p < 0.005

Table 7. BMI among smokers, those who never smoked and ex-smokers

	n	Minimum	Maximum	Mean BMI	S.D
Never smoked	341	15.4	43.7	24.7	5.3
Smokers	68	15	46.4	24.5	5.1
Ex-smokers	15	18.5	35.6	27.5	3.9

Figure 6. Ethnic groups BMI means in Daquq



t-test=2.4 df=214 p < 0.001 regarding comparison between Arabs and Turkman.

Turkmen (mean 25.7, n=107, SD=5.7)

Kurds (means 24.7, n=208, SD=5.2)

Arabs (mean 23.9, n=109, SD=5.3)

Table 8. The BMI in hypertensive, diabetics and those who have both diabetes and hypertension

BMI	Hypertensive		Diabetic		Hypertensive and diabetic		Total	
	n	%	n	%	n	%	n	%
< 30	15	58	1	33	2	33	18	51
> or = 30	11	42	2	67	4	67	17	49
Total	26	74	3	9	6	17	35	100

Chi-sq=5.426 df=1 p < 0.05

Table 9. BMI of those with family history of hypertension and diabetes

BMI	Hypertension		Diabetes		Total	
	n	%	n	%	n	%
< 30	60	84.5	17	63	77	79
> or = 30	11	15.5	10	17	21	21
Total	71	72	27	28	98	100

Chi-sq=5.39 df=1 p < 0.025

Arabs. This may be due to racial difference, and it may be that Turkmans are concerned about their food more than Kurds and Arabs. [3]

Obesity and overweight was higher in rural areas than urban. This may be explained by the fact that the people's incomes were remarkably higher than in the urban area in the last decade.

The occupation effect on body weight revealed, as mentioned before, that housewives carried the highest risk of obesity and its complications. [22, 29] Next to that is the sedentary life of employees and other jobs, which lack physical activity.

Illiterate people seem to be heavier than others, maybe due to lack of nutrition knowledge and its effect on health. [18] Most studies and literature agreed that hypertension and diabetes are strongly associated with obesity. Our results were significantly consistent with this theory and we found that those with a family history of these two diseases are more obese than those without a family history. [21] Unfortunately most Iraqis have not many choices on how to spend leisure time; this may be an important factor that affects people's health.

Most of the people may not have the opportunity to buy or to eat meat daily. This may affect other aspects of their health, and make it difficult to study its association to obesity. In a cross-sectional study with 7,410 males and 7,257 females, Jacobson BK, Thelle DS, found that a weak positive association was present between fish and ground meat consumption. This was true in our study too. [25]

Jacobson also found that high BMI was most strongly associated with low bread consumption and this result was reached by many other studies in western countries. But in our study we found that BMI increased with high consumption of bread. This may be due to the difference in the dietary habits between our country and western countries, by the fact that bread is the main item in the menu of the majority of Iraqis and there is no substitution for this item. While this is not true in a western food menu, where bread may be substitute for heavy dense food items. [26,28]

Macdiarmid JI, Vail A, Cade JE, Blundell JE, found that a high BMI was positively associated with a high intake of dessert or high fat sweet products (chocolate, cakes, biscuits), but in this study we found a weak association. It may be due to low consumption of these products in general, because of the socio-economic state. Only 60% of the sample can buy these products or prepare them once a week, and 27% can do that monthly. [18]

In tea consumption we found a weak negative association with high BMI. Many studies in the west support the theory of this association. [31]

People's perception about their health reflects knowledge, concern, and education. When we asked the subjects' opinion about their health status we evaluated their judgment about their health, and also looked for social and cultural facts and beliefs that make people think that obesity is a sign of health. We found that only 23.2% of those with BMI of equal or more than 30 think that their health state is bad, and only 31.8% of those under BMI of 20 think that their health is bad. This makes a conclusion that our people not concerned or ignore their body weight and its relation to health and disease. [18]

We asked about alcohol consumption throughout the study but fortunately we did not find any subjects.

CONCLUSIONS

- High BMI and obesity were more prevalent among females.
- High BMI and obesity were higher in rural area than urban.
- BMI was variable among ethnic groups.
- Housewives were heavier in weight than other occupation groups.
- Unmarried people have lower BMI than married.
- Illiterate people have higher BMI than other educated groups.
- Smoking has no association with BMI, but ex-smokers are heavier than smokers and non smokers.
- Diabetics, hypertensives, and those with a family history of diabetes and hypertension have higher BMI than others.
- Meat, dessert, and tea consumption have a weak association with BMI.
- Increase in bread consumption leads to increase in BMI.
- Most people do not care about their body weight.

RECOMMENDATIONS

- Attention should be taken towards those who are at high risk of developing, obesity, i.e. females in general, and housewives particularly, by adopting prevention programs and extensive health education programs, including healthy nutrition and adequate physical exercise.
- Sedentary lifestyles must be improved by physical activities, by exercise programs and encouraging public efforts towards establishing fitness centers and support clubs to improve health and quality of life.
- Changing community attitudes and beliefs about obesity and health, by defeating the idea that the

obesity is a sign of healthy living and replaced it with the fact that ideal weight is a sign of mental and physical wellbeing.

- This subject needs more studies and research in the future in our country, because by preventing obesity we prevent a list of killer diseases in the community.
- Recently another chart of BMI was adopted with percentiles for children above two years of age. This needs study in our country in order to depend on one index of nutritional assessment throughout life.

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Bilateral Epistaxis after face washing in a pond in a two year old child

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Key words: leech, epistaxis, melena, anaemia

ABSTRACT

We report a 2 year old boy with epistaxis, melena, fever and anaemia. In an otolaryngologist consultation a leech was seen in the nasopharynx. His face was washed in a pond 3 days prior to admission.

CASE REPORT

A two year old boy was admitted to the pediatric ward, in Imam Hospital, Ilam, in the west of Iran with nose bleeding, for 3 days prior to admission.

The boy was well until 3 days prior to admission when he developed nose bleeding that was intermittent and from both nostrils 3-4 times per day.

He had also passed a black stool 2 days prior to admission. The boy's medical history was normal. His vaccination was up to date. His parents and siblings were normal. His father was a farmer and raised cattle.

There was no history of allergic rhinitis, rhinorrhoea, bruising, chills, animal bite, insect bite, eruptive disease, ingestion of unsafe water, or nose picking.

His temperature was 38.5 oC, his pulse was 92, and respirations were 20. His blood pressure was 90/50 mm Hg. His weight was 13 kg.

On examination, the patient appeared mildly pale and listless. There was cloth in both nostrils and active bleeding in the nasopharynx. Rectal examination was positive for melena. The remaining examination did not reveal any abnormalities in particular, no lymphadenopathy, hepatosplenomegaly, petechiae or ecchymoses.

The following results were obtained:

White blood cell count was $6.7 \times 10^3/\text{mm}^3$, haemoglobin concentration 9.2 mg/dl, Platelets $218 \times 10^3/\text{mm}^3$, Creatinine 0.6 mg/dl. Because there was active bleeding in the nasopharynx and appropriate equipment was not available, a otolaryngologist consultation was therefore not done.

A leech was seen in the nasopharynx behind the uvula. The leech was removed by applying forceps to the middle of the body and giving a quick pull. Bleeding stopped and the patient was discharged. On further questioning it became apparent that his face was washed in a small pond 3 days prior to admission.

DISCUSSION

Nose bleeds are rare in infancy and common in childhood. Diagnosis and treatment depend on location and cause of bleeding.[1]

The differential diagnosis should include both local and systemic causes (Table 1).[2] Leech infestation has not been mentioned as a cause of epistaxis in common textbooks.

Leeches are annelids or segmented worms. The bodies of all leeches are divided into the same number of segments [34], with a powerful clinging sucker at each end. The medicinal leech is amphibious, needing both land and water, and resides exclusively in fresh water.

Leeches usually have three jaws and make a Y-shaped incision. Leeches can vary in size from about 7 mm long to as much as 200 mm when extended.[3] after a full meal of 10ml to 15 ml of blood. The medicinal leech may increase 8 to 11 times its initial body size.

Hirudo medicinalis is parasitic and the adults feed on the blood of mammals. It attaches to the host by means of its two suckers. Simultaneously, the leech injects an anaesthetic so that its presence is not detected, and an anticoagulant in order for the incision to remain open during the meal.[4]

Hirudin is the active anti-coagulant in *Hirudo medicinalis*, the common leech. LEPIRUDIN is the recombinant form of Hirudin recently approved for use as an anti-coagulant. The exact mechanism of action of Hirudin is not known. It acts independently of AT-III. It may, unlike heparin, inhibit thrombin that is already bound to fibrinogen in a forming clot, thus inhibiting fibrin and subsequent clot formation.[5] Beside this class of molecules, factor Xa inhibitor, platelet aggregation inhibitors have also been isolated from leeches.[6]

Hirudin produces a dose dependent increase in the activated partial thromboplastin time, prothrombin time and thrombin time.[7]

Kruger[25] report a 15 years old girl with leech infestation and fever (38.5)oc. Our patient was febrile too. This was possibly due to immunological reaction to Hirudin or other substances in the saliva of leeches but it needs more evidence .

Aquatic leeches have been described in sites like conjunctivae [8, 9], nose [10], mouth/pharynx/larynx [11,12,13,14,15,16,17,18], Trachea/bronchi [19,20,15], oesophagus [21], vagina [22], bladder [23], and rectum [24]. Removal of the leech is curative.

CONCLUSION

Leech infestation should be considered in the differential diagnosis for epistaxis, particular in endemic areas. Every attempt should be made to locate the source of epistaxis that does not respond to simple compression.

If appropriate equipment such as a headlamp and a nasal speculum for optimal visualisation are not available, an otolaryngologist consultation should be performed.

Causes of Epistaxis[2]

Common Causes:

- Allergic rhinitis
- Repeated sneezing
- Secondary to dryness and crusting over anterior portion of nasal septum

Trauma:

- External
 - Self-inflicted (nose picking)
 - Upper respiratory infection

Uncommon Causes:

- Factor XI deficiency
- Hypertension
- Platelet dysfunction syndromes
- Sickle cell anemia
- Thrombocytopenia (any cause) Von Willebrand disease

Rare Causes:

- Angiofibroma
- Ataxia-telangiectasia
- Congenital syphilis
- Ehlers-Danlos syndrome
- Foreign body
- Malaria
- Measles
- Nasal angiomas
- Nasal diphtheria
- Nasal polyp
- Oral contraceptives
- Osler-Weber-Rendu disease
- Pertussis
- Rheumatic fever
- Scarlet fever
- Scurvy
- Typhoid fever
- Varicella
- Wegener granulomatosis

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Childhood Emergencies

Mei, aged 2, presents because of a harsh cough and difficulty breathing.

She developed a cold with a runny nose three days ago and has been unwell. Her mother said that she was awake most of the previous night with a barking cough and noisy breathing.

Examination reveals an otherwise healthy child with persistent inspiratory stridor and lower rib retraction at rest.

Her vital signs are:

Pulse 130

Respiration 40/min

BP 90/60

Temperature 37.2

There is no cyanosis and no other abnormal physical signs.

Circle True or False and compare your response with the author's answers on the inside back cover

Question 1

The probability diagnosis is laryngo-tracheo bronchitis (croup).

T / F

Question 2

The condition is usually caused by Haemophilus influenzae type B.

T / F

Question 3

This clinical presentation would be classified Grade 1 for this disorder.

T / F

Grading system for croup

Croup score:

Grade 1 Stridor at rest without retractions and no distress

Grade 2 Stridor at rest with sternal chest wall retractions

Grade 3 Marked respiratory distress indicated by irritability, pallor, cyanosis, tachycardia and exhaustion, i.e. impending obstruction.

Question 4

The condition usually runs a self-limited course.

T / F

Question 5

The child should be admitted to hospital.

T / F

Circle the correct answer

Question 6

You are required to commence treatment for Mei in the emergency department of the local hospital. Which of the following treatment options would you recommend?

- Provide a humidified air atmosphere such as a steam tent.
- Arrange for observation for 24 hours.
- Prescribe antibiotics
- Administer inhaled budesonide or oral prednisolone.
- Administer oxygen

Question 7

Following administration of corticosteroids Mei's respiratory distress persists after 4 hours with persistent sternal and chest wall retraction and irritability.

Your next step in management should include:

- Increase oral corticosteroids
- Administer intravenous dexamethasone
- Administer nebulised adrenaline
- Arrange intubation.
- Admit to intensive care.

Further reading and reference:

Griffin S, Ellis S, et al. Nebulised steroid in the treatment of croup: a systematic review of randomised controlled trials. British Journal of General Practice 2000; 50 (451) : 135-41

ANSWERS - CHILDHOOD EMERGENCIES

Question 1 - True

Question 2 - False

The most common cause is parainfluenza type 3, but other respiratory viruses such as influenza, adenovirus and respiratory syncytial virus can cause identical illnesses. Haemophilus influenza causes the very serious illness of epiglottitis, which has a different presentation including a soft stridor and drooling.

Question 3 - False

There is a three grade system for croup (see Table following) and this presentation is Grade 2.

Question 4 - True

The serious symptoms usually settle in about 3 days but during that time airway obstruction is a potential problem. The cough may persist for a week.

Question 5 - True

Maintenance of nutrition and hydration is the cornerstone of management.

Question 3 - True

The condition is highly infectious and children should be isolated from others until the diarrhoea has ceased. Advise about hygiene, including hand-washing and napkin disposal.

Question 4 - False

Hospital admission is not necessary at this stage and is reserved for deterioration with evidence of dehydration. The vast majority can be managed successfully with good home care.

Question 5 - False

Children with stridor at rest, or other signs of respiratory distress require hospitalisation.

The main indications for hospitalisation are:

- Respiratory distress or stridor at rest
- Uncertainty of diagnosis
- Social reasons

Question 6 -

a) The authors disagree.

Humidified air or 'mist' therapy is no longer recommended for croup as recent studies have not demonstrated any significant benefit

b) The authors agree.

It is generally accepted that observation for 24 hours for Grades 2 to 3 croup is appropriate with one or both parents present. A minimum observation of 24 hours time for Grade 2 (moderate) croup is recommended

c) The authors disagree.

Antibiotics are not indicated for treatment as it is a viral infection.

d) The authors agree.

Persistent inspiratory stridor at rest is an indicator for corticosteroids. Oral, intravenous, intramuscular and nebulised corticosteroids are all effective. Oral corticosteroids (prednisolone 1 mg/kg or dexamethasone 0.3 mg/kg) are given as a once daily dose for one or two days. Nebulised budesonide is recommended for children who have vomited after taking oral steroids. However some children are upset by the administration process of nebulisation.

e) The authors agree.

Oxygen should be given to all children with severe croup and also probably for moderate croup.

Question 7 -

a) The authors disagree.

The child has had a reasonable trial of oral corticosteroids and further doses are unlikely to help.

b) The authors disagree.

Although intravenous dexamethasone may help, it is unlikely to significantly improve the clinical response.

c) The authors agree.

Nebulised adrenaline should be used for Grade 3 croup and Grade 2 croup not responding to corticosteroids. The dose is 5 ml of 1 : 1000 adrenaline nebulised with a repeat dose if no response at 10 to 15 minutes. Some experts regard nebulised adrenaline as first line therapy.

d) The authors disagree.

Intubation is not indicated at this stage. One may expect a positive response to adrenaline. Resuscitation is reserved for children who are cyanosed or fatigued as total airway obstruction is imminent.

e) The authors disagree.

If there is a good response to adrenaline and corticosteroids (which should be maintained to reduce the risk of a rebound effect from adrenaline) intensive care admission is unnecessary.

The University of Sharjah in collaboration with Monash University will be holding a Post-Graduate Certificate Course in Paediatrics. 8 credit points of the Diploma/Masters in Family Medicine Programme (Monash University, Australia). Tutorials every Thursday starting 23rd March 2006. For 8 weeks, fees are 3500 dirhams/delegate. A summative examination will be held at the end.

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