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# Contents



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This is the second issue for 2006 and it is a rich edition, with papers from all over the region and the world. A study from Turkey described attitudes of patients with gynecological cancer and determined the type of complementary and alternative methods used by them. It was found that the most frequent alternative method used by patients after the diagnosis of cancer was herbal therapy ( 44.0%), special diet ( 24.0 %) and herbal therapy and special diet together ( 32.0%). The authors concluded that patients with gynecological cancer also believe that alternative interventions are not superior to medical therapy. but use alternative methods.

A paper from the department of pediatrics, Princess Haya hospital reports on
Microbiological study of urinary tract infection in children at Princess Haya hospital in the south of Jordan. In this paper data was collected on one hundred patients, ages 0-15 years of age, suffering from urinary tract infections. The data shows that the majority of bacterial urinary infections were in the 1-5 year-old age group (49%) and the lowest in the 0-1 year-old age group (5%). E.coli accounted for the vast majority of infections (72%). The authors concluded that the diagnosis of UTI in young children is important as it is a marker for urinary tract abnormalities. It was stressed that a child with a suspected UTI should have a urine culture and colony count performed in order to identify organisms for confirmation of diagnosis and recommend prompt treatment to reduce UTI related morbidity and mortality in children.

Dr Javid F, explores the current practice of general practitioner detection and management of cardiovascular risk in their patients. This was done through a retrospective audit of medical records. Among twelve CVD risk factors blood pressure was well monitored and recorded in 97% of the patients, blood sugar in 35%, Cholesterol in 25%, BMI/Weight in 12% of the patients. All other risk factors were recorded in less than 10% of patients. This audit shows that cardiovascular risk assessment by general practitioners in this health centre was less than optimal. The author stressed that in order to ensure optimal risk assessment and management of cardiovascular diseases, general practitioners should identify all people at significant risk of CVD and offer them comprehensive advice to reduce their risk.

Beyaztas FY et al presented a review of five case reports on child abuse. The authors stressed that child abuse and neglect has been recognized as an important public health problem in the west since the 1960s. They added that the risk factors setting up the stage for child abuse and/or neglect may be extra-familial or intra-familial. Economic, social, environmental, and cultural risk factors including poverty, low educational level, unemployment, violence, and substance abuse may lead to child abuse and neglect. In their paper, they present five cases diagnosed with child abuse and neglect, two of which had a fatal course. Therefore these cases should alert physicians in developing countries to be more diligent about the signs of child abuse and neglect.

Barnes G et al presented a case report on a 49-year-old male presents with a 2-month history of a painless mass in the upper part of the right neck. The authors reviewed in their paper, primary care management of adult lateral neck masses

A study from Iran evaluated the outbreak of cigarette smoking and age distribution of the first smoking experience among high school and pre-University students. The author stressed the fact that smoking is a worldwide health problems these days, and may lead to the death of human being even more than AIDS . He added that the prevalence of smoking among the people of developing countries is increasing. Cigarette smoking is addictive .

There are two papers in this issue related to ophthalmology surgery. Al-Nawaiseh B et al, investigated the relationship between central and branch vein occlusion and certain factors. A total number of 96 patients with retinal vein occlusion (52 branch, 44 central) were investigated for certain factors. Hypertension and smoking were significantly associated with BRVO while glaucoma, APC-R,

factor V mutation, and the methylenetetrahydrofolate reductase mutation (MTHFR) were significantly associated with CRVO. The authors concluded that there are variable risk factors for both central and branch retinal vein occlusion. Also it is important to investigate young patients for coagulation abnormalities. Jayousi NA et al , investigated the efficacy and safety of a low dose of droperidol for the prophylaxis of post operative nausea and vomiting following vitrectomy in diabetic patients. This was done through randomized placebo controlled double blinded study . 75% of the group receiving droperidol did not experience post operative nausea or vomiting while 41.7% of the control experienced it. The authors concluded that low dose droperidol is considered to be effective and safe in vitreoretinal surgery.

**Dr Abdulrazak Abyad**
*Chief Editor*

# Microbiological study of urinary tract infection in children at Princess Haya Hospital in south of Jordan

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ABSTRACT

Objective: The aim of this study was to obtain data about different types of organisms and their respective frequencies causing urinary tract infection among children presenting to princess Haya hospital in the south of Jordan.
Patients and Methods: Urinary specimens were collected from one hundred patients, ages 0-15 years of age suffering from urinary tract infections, who were either inpatients or outpatients. A urine culture and colony count was performed combined with a full report of urine to establish the diagnosis.
Results: The data shows that the majority of bacterial urinary infections were in the 1-5 year-old age group (49%) and the lowest in the 0-1 year-old age group (5%); the number of the patients was less in the neonatal period and the cases increased with the increasing age and declined after the thirteen years of age till fifteen years. E.coil accounted for the vast majority of infections (72%), while Klebsiella pneumonia was isolated in 14%, Proteus species (9%), Staphylococcus (4%) and Pseudomonas in (1%).
Conclusion: The diagnosis of UTI in young children is important as it is a marker for urinary tract abnormalities. A child with a suspected UTI should have a urine culture and colony count performed in order to identify organisms for confirmation of diagnosis and recommend prompt treatment to reduce UTI related morbidity and mortality in children.

Key words: urine culture, Urinary tract infections, pathogens

## INTRODUCTION

Urinary tract infections (UTIs) represent the commonest genitourinary disease in children, and are the second commonest infection, which affects them[1]. Urinary tract infections in children are particularly important because their occurrence may be associated with some congenital abnormality of the urinary tract or an error in management. If not corrected, these may lead to recurrent infections causing damage to the urinary tract[1,2].
Urinary tract infections occur in as many as 5 percent of girls and 1 to 2 percent of boys.[3] The incidence of UTI in infants ranges from approximately 0.1 to 1.0 percent in all newborn infants to as high as 10 percent in low-birth-weight infants.[4] Infection of the urinary tract before age one occurs more frequently in boys than in girls.[4] After age one, both bacteriuria and UTI are more common in girls.
In preschool-age children, the prevalence of asymptomatic infections diagnosed by suprapubic aspiration in girls is 0.8 percent, compared with 0.2 percent in boys.[5] In the school-age group, the incidence of bacteriuria among girls is 30 times that among boys (1.2 versus 0.04 percent).[6]
Approximately half of girls and two thirds of boys experience high fever with these infections. In fact, UTIs have recently been described as one of the most common serious bacterial illnesses among febrile infants and young children with a reported prevalence ranging from 4.1% to 7.5%. These figures suggest that the true frequency of UTIs in children have been underestimated in the past[7]. It

is more common in the uncircumcised male infant.
Infection may occur at many places along the genitourinary tract: urethra, bladder, ureter, renal pelvis, or renal parenchyma.[1,8] It is assumed that the short urethra in girls predisposes them to ascending infection, because, for example Escherichia coli serotypes from bowel flora are the same as those that infect the urinary tract. However, factors other than the proximity of gut flora to the short urethra are likely because the female to male ratio in urinary tract infection varies directly with age [1,9].
Most infections are due to colonic bacteria and are due to invasion up the urethra. Of these, E.coli is by far the most commonly isolated organism, being responsible for approximately 80% of UTIs7. E.coli has recognized virulence factors which aid in the persistence of bacteria in the urinary tract and induce inflammation. Such factors include the presence of pili or fimbriae, K antigen in bacterial capsule, haemolysin and colicin production and the ability to acquire iron etc[7].
Microbiologically, urinary tract infection exists when pathogenic microorganisms are detected in the urinary tract[6,10]. The infection is considered significant and requires treatment when more than 105 microorganisms per milliliter of urine are present in a properly collected specimen.[6,10] Gram-negative bacteria such as E. coli, Proteus spp., Klebsiella spp., Enterobacter spp., Serratia spp. and Pseudomonas spp. are usually detected in recurrent infections, especially in association with stones, obstruction, urologic manipulation and nosocomial catheter-associated infections.[2,6,11]
The aim of this study was to obtain data about different types of organisms and their respective frequencies causing urinary tract infection in children.

## PATIENTS AND METHODS

The sample of this study was conducted in the Department of Pediatrics, Princess Haya hospital (Aqaba- south of Jordan).
After institutional ethical committee clearance and written informed consent, urinary specimens were collected from one hundred patients, ages 0-15 years of age, suffering from urinary tract infections, who were either inpatients or outpatients.
The majority of patients were self-referrals, while others were referred by general practitioners. They presented with a variety of complaints and if a urinary tract infection was suspected, a urine culture and colony count was performed, combined with a full report of urine to establish the diagnosis.

Of the one hundred children, 41% were males and 59% were females.

A detailed history was taken and complete clinical examination was carried out for each case of urinary tract infection. Every patient had urine microscopy, ultrasound of kidneys and urinary bladder, urinary colony count and urine culture investigations.

A diagnosis of a UTI was made when the colony count was over 105 organisms/ml and microscopic finding of more than 5 white blood cells per high power field on urine microscopy. A patient with UTI may not have leucocytes in the urine; leucocytes may be found in urine in the absence of UTI eg. Acute glomerulonephritis. The amount of leucocytes found in urine would be determined by the speed and time of centrifugation and the depth from which the deposit is taken. In an uncentrifuged sample of urine the detection of >10 leucocytes per mm3 is thought to be significant[12].
In Neonates the urine was collected through supra pubic approach. In uncooperative and moribund patients the urine was also collected through the supra pubic puncture or urinary catheterization. In infants and older children the urine was collected in urine collecting bag or sterilized container, after washing the genital region with soap and water. Mid stream, clean catch, early morning specimens were collected in a sterilised container. Instructions were given to transfer the urine from the bag to the culture bottle soon after collection. All urine cultures at the time of initial diagnosis were collected after stopping antibiotics for at least 72 hours. Urine sample was delivered to the laboratory within 1 hour of collection. Urine specimens that were not examined within six hours of collection were stored at +4 °C, because at 0-4 °C the bacterial count will remain unchanged for 24-48 hours [13]. About 5ml of urine was centrifuged, the super-natants tipped off and the deposit resuspended in the urine that drained back (about 0.1ml). A wet film of the suspension was examined microscopically with the ´40 and the ´100 objectives. More than two or three white cells per field with the ´100 objective were regarded as abnormal. The presence of any red cells was regarded as abnormal[13].

For bacteriological examination, the urine samples were cultured in 5% sheep blood agar and MacConkey's media. Inoculation was done with the help of a 0.001ml caliber loop. All the sample plates were incubated for 48 hrs at 37oC in 5-10% carbon dioxide for anaerobic growth. Bacterial identification was done by examination of the overnight culture with a hand lens and also by a standard biochemical and sensitivity test to antibiotics using a disk diffusion method (Kirby-Bauer)[13]. All cultures were performed in one laboratory and by a consultant microbiologist. If the growth revealed more than one type of organism the culture was repeated. Colony counts of <104 organisms/ml were disregarded; counts between 104 to 105 organisms/ml were repeated.

## RESULTS

There were 41(41%) boys and 59(59%) girls giving a total of 100 patients. The data shows that the majority of bacterial urinary infections were in the 1-5 year-old age group (49%) and the lowest in the 0-1 year-old age group (5%); the number of patients was less in the neonatal period and the cases increased with increasing age and declined after thirteen years of age till fifteen years. There were more boys in the under 1 year age group and more girls in the older age group. Pathogens isolated in different age groups are given in **Table I**.

The pathogens isolated at initial diagnosis are given in **Table II**. E.coli accounted for the vast majority of infections (72%), while Klebsiella pneumonia was isolated in 14%, Proteus species (9%), Staphylococcus (4%) and Pseudomonas in (1%).

**Table 1:** Pathogens isolated in different age groups

| Age Group | Escherichia coli | Klebsiella pneumonia | Proteus | Staphylococci | Pseudomonas | Total |
|---|---|---|---|---|---|---|
| 0-1 Year | 3 | 1 | Nil | 1 | Nil | 5(5%) |
| 1-5 Years | 34 | 7 | 6 | 2 | Nil | 49(49%) |
| 5-10 Years | 27 | 4 | 2 | 1 | 1 | 35(35%) |
| 10-15 Years | 8 | 2 | 1 | 0 | Nil | 11(11%) |
| Total | 72(72%) | 14(14%) | 9(9%) | 4(4%) | 1 | 100(100%) |

**Table II: Pathogens isolated at initial diagnosis**

| **Pathogen** | **No** |
|---|---|
| **Escherichia coli** | **72** |
| **Klebsiella pneumonia** | **14** |
| **Proteus** | **9** |
| **Staphylococci** | **4** |
| **Pseudomonas** | **1** |
| **Total** | **100** |

## DISCUSSION

Urinary tract infection in children is a significant source of morbidity. It is generally agreed that children with UTI require further investigation and continuing urinary surveillance to minimize future complications. [14]

Although the drug treatment of urinary tract infection is simple, the disease is still largely misdiagnosed and mismanaged. Studies have shown that the early phase of tissue invasion by micro-organisms is the critical determinant in the pathogenesis of kidney lesions following urinary tract infection and therefore early diagnosis with prompt and effective antimicrobial therapy for acute renal infection will prevent or significantly inhibit the development of renal damage. [15]

The only reliable method for precise diagnosis of UTI is the demonstration of bacteria by appropriate culture methods. Bacterial counts greater than 105 organisms / ml in urine samples and pure growth of a single type of organism is found in the majority of cases. Escherichia coli is the commonest organism infecting the urinary tract. Others include Klebsiella sp., Enterobacter sp., Serratia sp., Pseudomonas aeruginosa and other Pseudomonas sp., Enterococci, Staph.saprophytics, S.aureus, S.epidermidis, Acinetobacter sp., B haemolytic streptococci group B&D, Candida albicans, Salmonella sp., and Mycobacteria.

In our study the organisms infecting the urinary tract were E.coli (72%), Klebsiella pneumonia (14%), Proteus species (9%), Staphylococcus (4%), Pseudomonas (1%). These results are similar to many recent published articles.[16, 17]

Several studies in children above one year of age till fifteen years reported female predominance, with a variable ratio ranging from 6:1 to 1.33:1, depending upon the different sample size, and difference in age groups being studied.[16-20]
In the present study Most of the infections were observed in the female patients with an overall male to female ratio of 1:1.4. Males outnumbered females during the first year of life with a ratio of 1.5:1; this is in full agreement with other studies.[21-24]

## CONCLUSION

The diagnosis of UTI in young children is important as it is a marker for urinary tract abnormalities.

A child with a suspected UTI should have a urine culture and colony count performed in order to identify organisms for confirmation of diagnosis and recommend prompt treatment to reduce UTI related morbidity and mortality in children.

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# An Audit for Cardiovascular Disease Risk Assessment and Management in a Rural Primary Health Center in Abu Dhabi

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## ABSTRACT

**Objective:** To explore current practice of general practitioner detection and management of cardiovascular risk in their patients.
**Design:** Retrospective audit of medical records.
**Setting:** A rural health centre serving a population of approximately thirty five thousand people and staffed with six general practitioners.
**Subjects:** Medical records of hundred patients aged 25-65 years who attended the health centre between 11.11.2002 to 25.11.2002 for routine consultation.
All records were scrutinized for twelve CVD risk factors and extracted information was entered in the audit sheet.
**Results:** Among twelve CVD risk factors blood pressure was well monitored and recorded in 97% of the patients, blood sugar in 35%, Cholesterol in 25%, BMI/Weight in 12% of the patients. All other risk factors were recorded in less than 10% of patients.
**Conclusion:** This audit shows that cardiovascular risk assessment by general practitioners in this health centre was less than optimal. In order to ensure optimal risk assessment and management of cardiovascular diseases, general practitioners should identify all people at significant risk of CVD and offer them comprehensive advice to reduce their risk.

## INTRODUCTION

Cardiovascular disease is the most important cause of death in world today with life time risk at 40 of 1 in 2 for men and 1 in 3 for women in developed countries1. It is also emerging as a leading problem in the developing world and it is expected that by 2010 cardiovascular diseases will be the leading cause of death in developing countries2. W.H.O has drawn attention to the fact that C.H.D is our modern epidemic i.e. a disease that effects the population and not an unavoidable attribute of aging3. The number of people who suffer from heart diseases in United Arab Emirates is not known and only some data is available. However coronary heart disease has been established as a number one killer in United Arab Emirates and number of deaths attributed to C.A.D. is 25%. This is expected to increase to 35% during the next 5 years if there is lack of concentrated effort to contain this disease.

Cardiovascular disease is non-communicable, preventable, predictable and curable. The etiology of C.H.D is multi-factorial. Apart from obvious ones such as increasing age and male sex, studies have identified a number of modifiable risk factors which could be managed by primary prevention strategies. Presence of anyone of the risk factors places an individual at high-risk category for developing CHD. The important thing about risk factors is that they are identifiable and manageable prior to the event they predict. Recent trials in high-risk subjects demonstrated dramatic reduction in risk of approximately 35 %- 55% in 5 years with risk reduction therapies. This provides strong support for the concept that coronary artery disease and its complications can be prevented by therapeutic lifestyle changes along with the medical therapy.

The need for the preventive strategies to overcome the growing menace of CHD is well recognized. General practitioner's role in meeting this challenge is to identify patients at risk and provide comprehensive advice and

appropriate management to reduce their risks. Although general practitioners appear to be in an excellent position to offer preventive care, there is evidence that they currently don't detect or intervene for common risk behaviours4. The aim of this study is to explore the current practice of general practitioner detection and management of CVD risk factors in their patients, in one of the rural health centers in Abu Dhabi.

## MATERIAL AND METHODS

This study was conducted in one of the rural health centers in Abu Dhabi. This is a government run health center staffed with six general practitioners and serving a population of approximately 35 thousand people.

## SUBJECTS

One hundred medical records of all the patients (male & female) in the age group of
25-65 years who attended the Primary Health Centre for routine consultation from
4-11-02 to 25-11-02.

The medical records were scrutinized for detection and management of 12 CVD risk factors and the extracted information was entered in the audit sheet. Scrutinized files were marked with my personal signature at the back so that the same files are not audited again in the study. Audited patients were not seen by a single general practitioner but shared by various general practitioners who worked in the Primary health centre from time to time during the last 2 years.

The target standard set was that risk factors will be recorded in all patient files at least once in last 2 years.

## RESULTS

**Table - 1** shows the total number of risk factors recorded as present or absent, risk factors present, risk factors managed, risk factors not recorded. Out of twelve cardiovascular risk factors for which a hundred files were scrutinized, blood pressure was well monitored and recorded in 97% of patients at least once during last two years. Hypertension was found to be present in 15 patients and managed in 12 patients. Blood sugar was recorded in 35 patients and Diabetes Mellitus was noted in 19 patients out of which 15 patients received drug treatment.

Cholesterol, smoking and BMI /weight was checked in 25, 19 & 12 patients and risk factor was present in 9, 10 & 6 patients respectively.

All other risk factors were recorded in less than 10% of the patients.

**Table - 2** shows risk factors recorded in different age groups. In group 1 (25 - 34 years) 33 risk factors were recorded in 31 patients (approximately 1 risk factor per patient). In group 2 (35-44 years) 61 risk factors were recorded for 35 patients. (1.75 per patient). In group 3 (45-54 years) 88 risk factors were recorded for 27 patients (3.25 per patient). In group 4 (54-65 years) 38 risk factors were recorded for 12 patients (3.1).

**Table 1**

| Risk Factor | Risk Factor Recorded | Risk Factor Present | Risk Factor Treated | Factor not Recorded |
|---|---|---|---|---|
| Hypertension | 97 | 16 | 12 | 3 |
| Diabetes Mellitus | 35 | 19 | 16 | 65 |
| Cholesterol | 25 | 9 | 3 (drug treatment) | 75 |
| Smoking | 19 | 10 | ? | 79 |
| Weight/BMI | 12 | 6 | ? | 88 |
| Other Risk factors Recorded in less than 10% of patients | | | | |

**Table 2**

| Age Group | No. of patients | Risk Factor Recorded | Risk Factor Recorded per patient |
|---|---|---|---|
| 25 - 34 years | 31 | 33 | 1(appr) |
| 35 - 44 years | 35 | 61 | 1.75 |
| 45 - 54 years | 27 | 88 | 3.5 |
| 55 - 65 years | 12 | 38 | 3.2 |

## DISCUSSION

This is a small retrospective clinical audit of medical records of 100 patients in one of the health centres in Abu Dhabi and was subject to the limitations that affect all such studies. The aim of the study was to explore current practice in general practitioner detection and management of CVD risk factors in their patients. The major problem of assessing level of preventive practice by auditing medical records is that only a proportion of what takes place in the consultation is documented in the records5 and this leads to under estimation of preventive activities in the practice. The result of this study seems to follow the same pattern.

Among 12 cardiovascular risk factors (Age, sex, personal history of CVD, diabetes, family history of AMI < 60, smoking, blood pressure, cholesterol, alcohol, physical activity, diet, weight/BMI ) Blood Pressure was well monitored with 97% of patients aged 25-65 years having their Blood Pressure taken and recorded in their files. Diabetes mellitus, Cholesterol, smoking and weight was recorded in 35, 25%, 19% and 12% of patient files respectively. All other risk factors were recorded in less than 10% of patients.

Thus the common important and remedial risk factor of Blood Pressure was well recorded. This is consistent with recommended practice of assessing blood pressure of all adults. It is worthwhile to mention here that blood pressure is recorded by the practice nurse. General practitioners do not have the policy of performing routine risk assessment of all adult patients, however guidelines do exist for the detailed risk assessment of high-risk patients. Among the risk factors recorded hypertension was noted to be present in 12 and Diabetes Mellitus in 19, smoking in 10 patients and hyperlipidaemia in 9 patients.

In our practice population, almost all of our 25-65 old patients have a high fat diet, the vast majority do not exercise, significant numbers are overweight and indulge in smoking, yet these important & remedial risk factors are poorly documented in medical records. Personal history of CHD which increases the risk of future coronary event 5-7 fold and family history CVD before the age of 60 which doubles the risk of CVD, were hardly documented in the medical record.

One cannot assume that because risk factors have not been documented General practitioners are unaware of their existence and indeed the problem has not been adequately managed during the consultation6. However good records are fundamental for good patient care and greatly facilitate the practice of prevention.

**Role of General Practitioner in prevention**

General practitioners have ready access to a wide section of the community and can therefore deliver preventive care to the majority of the population.

The people who visit general practitioners are relatively representative of the general population. There is evidence to suggest that general practitioners can be instrumental in bringing change in patient's risk behaviour. It has been seen that general practitioners are seen by their patients as a credible source of information and are receptive to their advice7. Thus general practice has great potential to be an effective setting for delivering preventive care.

**Barriers to Prevention**

Despite the fact that disease prevention is an integral part of the good medical practice by general practitioners there is evidence that their detection or intervention for common risk behaviour is less optimal8. However various studies have identified several barriers to adequate practice of prevention by the general practitioner.

A useful classification of the barriers to the implementation of the clinical prevention has been devised by Frame9. He has divided barriers into issues related to:

- Patient barriers
- Physician barriers
- Health system barriers (Details appendix A)

Most important barriers which operate in our health centre are :

(i) Lack of time.
(ii) Lack of updated guidelines.
(iii) Lack of patient motivation.
(iv) General practitioner attitude towards practice of prevention.
(v) Disorganized medical records.
(vi) Frequent shifting of doctors from one health centre to other.
(vii) Patients with multiple physicians.
(viii) Population mobility.
(ix) Social and Cultural norms of the patients.

**Over coming the barriers**

Strategies need to be developed to overcome these barriers in order to ensure effective practice of prevention in general and cardiovascular disease risk assessment in particular.

Following recommendations are made

1. Programs should be developed which encourage general practitioners to routinely assess CVD risk factors and provide advice about lifestyle factors to the patients especially those at high risk.

2. Provide ongoing education and training programs to develop general practitioner counselling and health promotion skills.
3. Develop guidelines on prevention of coronary artery disease and monitoring the use these guidelines by general practitioner.
4. Maintaining a practice CVD register which is actively used to provide structured care to people with coronary artery disease.
5. Introducing an appointment system to overcome time constraints of the consultation.

## Implications of this study

This clinical audit has identified numerous deficiencies in cardiovascular risk assessment and management.

In order to meet the challenge of the growing epidemic of CHD, general practitioners and primary health care teams should identify all the people at significant risk of CHD as well as established CHD and offer them comprehensive advice to reduce the risk..

General practitioners should engage more and more in clinical audits. Results of various studies suggest that clinical audit can produce significant improvement in practice among family physicians as well as encourage them to reflect on their practice[10.]

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# ATTITUDE OF PATIENTS WITH GYNECOLOGIC MALIGNANCIES IN SELECTING ALTERNATIVE AND COMPLEMENTARY THERAPIES

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**ABSTRACT**
**ATTITUDE OF PATIENTS WITH GYNAECOLOGIC MALIGNANCIES IN SELECTING ALTERNATIVE AND COMPLEMENTARY THERAPIES**

**Objective:** Our objective was describing attitudes of patients with gynaecologic cancer and determining the type of complementary and alternative methods used by them..
**Design:** Patients who had completed their therapy at least three months ago were included in the study. For twelve months, all patients with cancer who completed their therapies were invited to fill in a questionnaire. The questionnaires were composed of questions about demographic characteristics (educational and marital status, income, age), diagnosis and their previous cancer therapy. Complementary and alternative therapy methods used by patients both before and after the therapy were investigated. Fishers exact test was used to compare the collected data.
**Results:** Fifty-two patients with gynaecological malignancy who have completed their therapies were recruited. The most frequent alternative method used by patients after the diagnosis of cancer, was herbal therapy (11 patients 44.0%), special diet (6 patients 24.0 %) and herbal therapy and special diet together (8 patients 32.0%). Urtica dioica was determined as the common herbal therapy and special diet and herbal therapy. This plant was also used together with honey.
**Conclusion:** We concluded that Urtica dioica alone or with honey were the most frequently used alternative therapy and it was used with conventional therapies. Patients with gynecological cancer also believe that alternative interventions are not superior to medical therapy, but use alternative methods.
Key words: Urtica dioica L, gynaecological cancers, complementary and alternative medicine

## INTRODUCTION

Diseases that are difficult to cure, chronic and progressive, lead to the use of complementary and alternative medicine (CAM) in varying rates. CAM interventions may also be an adjunct to medical therapy (1). The general proportion of patients using CAM interventions are reported to be 40-60 % and it is common among women,(2,3) and physicians' reactions to alternative medicine may not be positive when compared with other health care workers (3). The rapid growth in CAM use is the result of the popularity of alternative methods among the patients and because of out-of-pocket payment.

Patients do not give information to their doctors about the alternative methods that they have used or are actually using, unless their doctors investigate. (4). Complementary and alternative therapies may sometimes be a reason for delay in seeking medical therapy.

Consumption of some kind of food and herbal products that are cheap and easy to reach is popular in Turkey. Certain types of herbs are also used for certain diseases. Oncologists' lack of reliable information about herbal

remedies or products, and their belief that these products are ineffective, leads to lack of communication with their patients.

The extent and type of complementary and alternative therapy for specific diseases is unknown in Turkey. Cancers and chronic diseases are considered to be the well-known causes of CAM use. This study was conducted to evaluate the attitudes of patients with gynaecological cancer, on alternative and conventional therapies and detect the type of herbal remedies used.

## METHODS

### Selection of patients

Participants of this study are all patients with gynecological malignancy and who have completed their surgical therapy, chemotherapeutic or radio-therapeutic cures and who are followed up by the department of Gynecologic Oncology in Erciyes University at least 3 months ago, over twelve consecutive months. Residents of the gynaecological oncology department filled out the research questionnaires after receiving oral informed consent from patients. Participants were asked the diagnosis of their disease and this was checked later from their patient files to determine if they knew the exact diagnosis. Patients were considered to be aware of their diagnosis if a doctor or their relatives knew that they had a malignant disease and if possible prognosis of this disease was explained to them intentionally. Patients were considered to be unaware of their diseases if they were not informed by anybody intentionally that they had a malignant disease, but just given indirect information about their disease and prognosis.

The questionnaires were composed of questions about demographic characteristics (educational and marital status, income, age), diagnosis and therapy of cancer, details about CAM methods used before and after having the diagnosis. A list of alternative therapy methods was given and patients were asked to choose which methods they have used or used to use, before and after their diagnosis was made. These alternative methods were all kinds of herbal medicine, acupuncture, spiritual or faith healing, special diets, spa. In the same question there was another open-ended choice in which patients asked to write down any other method that they had used.

Statistical analysis

X2 test was used and p values equal to or less than 0.05 were accepted as significant.

## RESULTS

Fifty-two of 63 women who have the diagnosis of gynaecological cancer and who had completed their therapy gave consent and were recruited in this study. They were 52.92±12.86 (Mean: 53 Minimum 27-Maximum 80) years old. Thirty of these patients (56.6%) were aware of their diagnosis and 23 (43.4%) of them were not aware of their diagnosis or they were informed about the characteristics of their illnesses but the specific diagnosis was not mentioned by their doctors or relatives.

Five patients (9.6%) were found to use alternative therapies before they were diagnosed as having cancer. The alternative methods that were used by cancer patients before their diagnosis was established were herbal medicine, spiritual or faith healing and special diets. Thirteen patients who used CAM therapy after the diagnosis of cancer considered that this therapy would be useful for their diseases (25.0%).

There was non significant difference between patients who have a monthly income of more than $200 and less than $200 in using alternative methods (X2 =0.432, p=0.511). Educational level was not detected to be a significant factor in using alternative methods (X2 =0.408, p=0.523). Awareness of the diagnosis as a malignant disease was detected to be significant in using alternative methods (X2 =7.248, p=0.007).

Patients were asked if their doctors investigated if they are receiving CAM therapy and just four of them (%7.7) said that their doctors investigated for CAM therapy. Five of the patients also informed their doctors that they have used CAM therapy after they were informed about their diagnosis. The alternative method that was used by patients was herbal therapy (11 patients 44.0%), special diet (6 patients 24.0%) and herbal therapy and special diet together (8 patients 32.0%). Urtica dioica L was the choice of ten patients out of eleven, who used herbal therapy and special diet and herbal therapy was detected to be the mixture of honey and urtica dioica L. When this herb was used alone, patients stated that it was boiled in water and they consumed the boiled water of Urtica dioica The main reason that was mentioned by cancer patients for using alternative methods, was supportive therapy and increasing hope for cure (17 patients 63.7%).

## DISCUSSION

Complementary and alternative medicine is used widely for various kinds of disorders in similar rates (5,6,7). Studies conducted on unconventional treatments used by patients with cancer are focusing on gathering information of user profiles and the type of the therapy used, since local properties may have influences on the type of the selected therapy. Conventional medical therapies are not satisfying patients and expenditure of these subjects is growing substantially [8]. Either the medical physician does not ask his/her patients or their

Table 1. Characteristics of the study population

| Patient characteristics | n (%) |
|---|---|
| Diagnosis<br>Ovarian malignancy<br>Uterine malignancy<br>Cervical malignancy<br>Vaginal malignancy | <br>26 (49.1 %)<br>20 (37.7 %)<br>6 (11.3 %)<br>1 (1.9 %) |
| Patients awareness of the diagnosis<br>Yes<br>No | <br>30 (56.6 %)<br>23 (43.4 %) |
| Educational level<br>lliterate<br>>8 years | <br>23 43.4 %)<br>30 (56.6 %) |
| Marital status<br>Married<br>Married, divorced or other | <br>38 (71.7 %)<br>15 (28.3 %) |
| Monthly income<br><200 $<br>>200 $<br>Missing* | 16 (30.2 %)<br>32 (60.4 %)<br>5 (9.4 %) |
| Use of alternative or complementary therapy after the diagnosis of malignant disease<br>Used<br>Not used | 25 (47.2 %) 28 (52.8 %) |
| Giving information to doctors by patients about the alternative methods that they are using<br>Yes<br>No | <br>5 (9.4 %)<br>19 (90.6 %) |
| The alternative method used<br>Herbs<br>Diet<br>Herbs and diet | <br>11 (44.0%)<br>6 (24.0 %)<br>8 (15.1 %) |

* They did not give information about their monthly income

patients do not give information to their physicians about the alternative therapies that they are receiving. Although there are continuing advances in conventional medicine a great proportion of cancer patients reported to be using unconventional therapies (13-63%)[9]. Physicians are offering just a limited proportion of these therapies, or they may not be aware if their patients are using some kind of therapy, which can interfere with their conventional therapy [9]. The main reason for planning this study was to detect the extent and types of unconventional therapies in patients, who have gynecological cancer.

Female patients reported to using CAM therapies more often than male patients so we planned to perform our study in the gynaecology department [6]. In a study performed in oncology and hematology departments it was revealed that the majority of patients (61.0%) use CAM therapy and these patients are born in rural areas, have less education and live in large families. These findings are inconsistent with some other studies in the world [2,7] since more educated patients are more prone to use alternative therapies. Patients desire to get involved in their therapy; intense Internet marketing efforts and dissatisfaction with conventional cancer therapy may be some important reasons for unconventional interventions. Patients' consideration that alternative treatments have fewer side effects may also be the reason for choosing these methods [10]. Ethnicity, marital status, religious affiliation, educational level, place of residence., were found to be not important in CAM use but age, sex, financial income and the type of previous therapy, are found to be important in CAM use [11].

We consider that interactions of conventional therapy and CAM therapies, are very important, since if physicians are not informed about these interventions morbidity and mortality rates can increase [3]. Interactions may sometimes not be important. Also physicians must be aware of the product used and to be able to communicate with his/her patient and give information which would satisfy his/her patient. Herbs used by patients in unconventional therapies, must be defined to inform doctors dealing with cancer patients.

In this study one out of five patients were using Urtica dioica and more than one third of them were using this herb with honey. Urtica dioica is a common plant in temperate climates. Fresh leaves of this plant contain acetylcholine, serotonin and histamine. Antirheumatic antiarthritic and immunostimulating abilities were demonstrated [12,13]. Mode of administration is infusions and other galenic preparations of both the root and flowering plant [12,13]. Adverse effects reported for Urtica dioica were gastric irritation, gingivostomatitis and strong diuretic effect [12,13]. Tannin content of this plant can result in unabsorbable complex with iron. This therapy is mentioned in publications of folk medications and endemic medical herbs [14,15]. Boiled extract (infusion) of Urtica dioica in water is used for cancer therapy and it can be supplied (grown) even in patients' own gardens. Physicians must take into consideration that herbal therapies with conventional therapies are common and are readily available. Patients must be investigated for non-conventional therapies to plan their medical therapy. In the Turkish population Urtica dioica is a common plant used for both its immuno-stimulating and anti-inflammatory effects

Physicians or relatives of cancer patients used to conceal the diagnosis from patients. This is consistent with our study and 42.3% of patients were not aware of their exact diagnosis. This may sometimes be considered as denial of the disease by patients but sometimes their relatives' decision to keep the diagnosis as secret.

Although other types of CAM therapies were mentioned in the questionnaire, interestingly, we determined that Urtica dioica alone or Urtica dioica with honey, was used in our study group. These interventions are also used along with their conventional therapies and none of the patients in the study group stated that they gave up medical therapy to use alternative interventions. They also do not believe that alternative interventions are superior to medical therapy. Increasing hope for cure and considering it as supportive therapy was the major reasons for using CAM therapy in conjunction with medical therapies and this is consistent with other studies [2,10,16].

Alternative,complementary or unconventional medical interventions do not appear in Turkish medical curriculum. Adverse effects and drug interactions also do not appear in the medical curriculum also. Description of these common interventions may lead us to understand patients' agenda more comprehensively, and plan our therapy more accurately than before.

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# Study of Evaluation of Outbreak of Cigarette Smoking and Age Distribution of First smoking Experience among High School and Pre-University Students

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## Introduction:

Smoking is one of the world's leading health problems these days, and may lead to a higher death rate than AIDS [1]. Unfortunately the prevalence of smoking among the people of developing countries is increasing. Cigarettes are addictive [2]. Withdrawal from cigarette smoking is very difficult and that is the reason for preventing and reducing this worldwide problem. An overview of previous studies shows that most cigarette-smokers started smoking under the age of 18 and in the teenage period [3]. This shows the necessity of providing programs and taking preventive measures on this problem in the mentioned age groups.

The prevalence of smoking is different in different parts of the world but the age of first smoking is somehow the same. Some examples can be shown in the following studies:

In a study done by Ford and his colleagues on 3,432 New Zealand young adults (14 and 15 years old) showed that one third of them were smokers.

In the year 1994, in Düsseldorf of Germany, a study showed that most of the fellows among 12-16 years old smoke at least one or two cigarettes among their friends and beyond the eyes of spectators mostly for satisfying their curiosity [5].

Bank and his co-workers during a study on 6330 students between 11-16 years old found out that 6% of males and 2.5% of females smoke more than a cigarette during a week [6].

Barruelo and his colleagues in the year 1999 during a study on high school students found out that 68% of males and 50.7% of females smoke and also the age of first smoking among males is much lower than females [7].

Widespread studies focusing on the prevalence and the pattern of smoking among young adults have not been conducted in Iran. But some scattered studies were done in different parts of Iran:
In a study done in the year 1367-68 (1988-89) in Esfahan in the 3rd stage of high school students showed that 22.5% of them were smokers and the first smoking age was among 10-13 years old [8].
In the year 1363 (1984) in Kerman, Jamalian and his colleagues during a study using a questionnaire on 387 males and 324 females of the last stage of high school students and 83 male-scholars in arts studying in the last stage of industrial school, got these results: 40.54% of boys, 13.81% of girls and 45.22% of male-scholars were smoking at least a cigarette every week during a 3 month period [9].
Based on the study done in the year 1372 (1993) by Dr.Mohammad and his colleagues with the aim of determining the pattern of smoking in the country, 66.3% of smokers (70.6% males and 34.4% females) stated that the age of first smoking was between 15-24 years old, i.e. during the age of their high school, serving in the army and university period. Their conclusion was the necessity for programming on the mentioned periods [10].
In a wide study done by Dr.Mohammad and Noorbala in the framework of Health and Disease Project working on these two items in the year 1378 (1999) including the pattern of smoking, paid attention to the first smoking age among smokers of Tehran province which is said to be 20 years old [11].

## Method:

In this cross-sectional study 4023 pre-university students including 2018 females and 2005 males were studied, using a questionnaire. School and classes were selected by systematic cluster method. Co-workers had the psychiatric license and had participated in special courses. In each class at first they insisted on the privacy of the information gathered from students and the importance of their true answers. They explained the aim and the pattern of the study. Also they explained how the students must fill in the questionnaire. The questionnaires were handed out among the students and they were asked not to write

their names on it.

The questionnaire was self-made and its validity and reliability was searched. It contained 58 questions, designed for studying the prevalence of first smoking age, and related factors to smoking, among students.

So the prevalence of smoking and the age of first smoking were determined.

In this survey the individuals were put into 3 categories based on their experience of smoking:

1. Smoker: an individual who smokes at least a cigarette once a week.
2. Experienced smoker: an individual who has smoked cigarettes at least once until now, and is not included in the upper category.
3. Non-smoker: an individual who didn't smoke a cigarette even once.

## RESULTS

These results were obtained after analyzing the data:

35% of boys and 26.9% of girls in this study had an experience in smoking cigarettes and 7.2% of males and 1% of females were smokers.

Among the individuals who had experience in smoking before entering the pre-university period, the possibility of becoming smoker was 20% for boys and 3% for girls. This shows a significant difference between males and females ($P<0.0001$).

The mean age of starting smoking in female-smokers was 14.3 while it was 14 for females who had experience in smoking.

9% of the females who were smokers or had experience in smoking had their first experience before 6 (before schooling age)

The mean age of starting smoking in males was 14.4 while this was 13.7 in males who had experience in smoking. 4.5% of these two groups had their first experience before schooling age (i.e. before 6 years old).

The time pattern of having experience in smoking, separating the sexes is shown in Figure 1

## DISCUSSION

According to information released by C.D.C., most of the adult smokers started smoking less than 18 years old and in adolescence (3). In comparison with a study done by Ford and his colleagues in the year 1997 in New Zealand (4), which indicates that 1/3 of adolescents of 14-15 years old are smokers in New Zealand, the prevalence of new smokers in our study group is less than that in New Zealand. In this research the prevalence of being smokers is 1% among females and 7.2% among males.

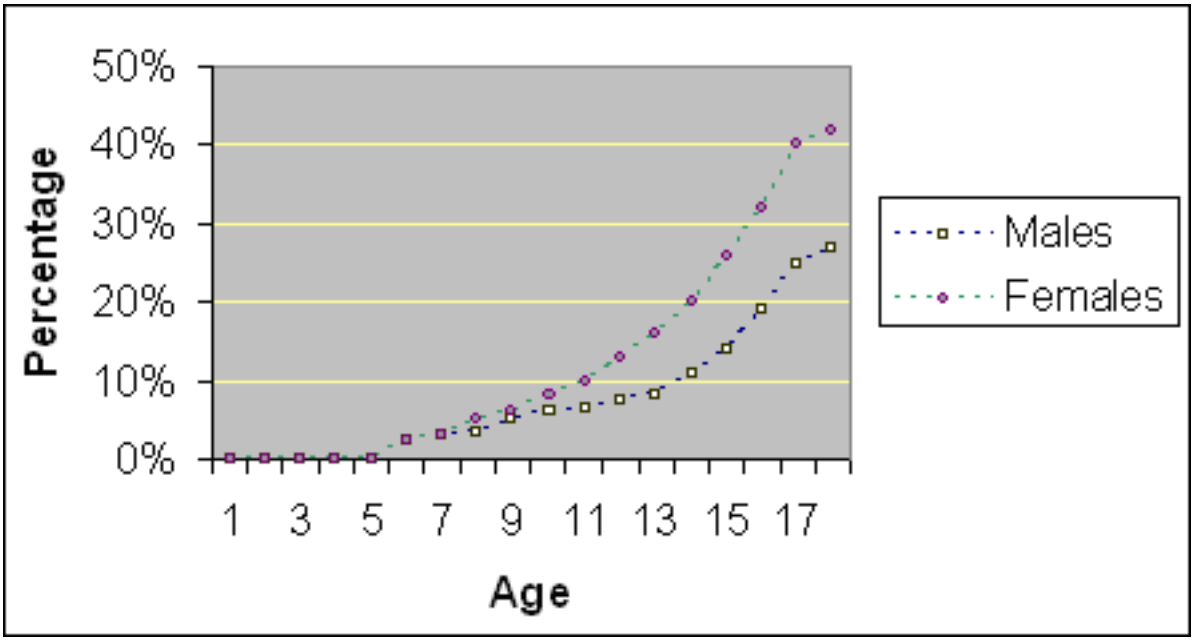


Figure (1): Cumulative Frequency of Experience of Smoking based on Timing and Separating the Sexes, in all of the Experienced Individuals (Smokers and Experienced Smokers)

Table 1. Shows the Age Distribution of First Smoking among Smoker and Experienced Smoker Students Separating their Sexes

| Starting age | Female students(n= 1966) | | Male students(n= 1969) | |
|---|---|---|---|---|
| | State of Being Smoker | | State of Being Smoker | |
| | Experienced Smokers | Smokers | Experienced Smokers | Smokers |
| <5 | 24 | 0 | 13 | 3 |
| 6 | 16 | 0 | 18 | 0 |
| 7 | 9 | 0 | 20 | 4 |
| 8 | 11 | 0 | 27 | 4 |
| 9 | 16 | 0 | 25 | 2 |
| 10 | 24 | 2 | 47 | 4 |
| 11 | 7 | 0 | 23 | 2 |
| 12 | 19 | 1 | 62 | 7 |
| 13 | 20 | 2 | 47 | 9 |
| 14 | 45 | 5 | 72 | 18 |
| 15 | 50 | 1 | 110 | 24 |
| 16 | 102 | 2 | 125 | 31 |
| 17 | 102 | 4 | 126 | 19 |
| 18 | 37 | 0 | 51 | 10 |
| Total | 482 | 17 | 766 | 137 |

· 1996 out of 2013 female students, who were studied, answered the question
· 1969 out of 2005 male students answered the mentioned question

In this study it can be understood that there are two peaks, for the first experience of smoking cigarette in the ages of 9 and 13 years old. Fig and Table 1 show that the experience of smoking is increased about 13 years old. Because this study is focused mostly on 17 year olds, nothing can be said about their future smoking trends. In different studies this figure is drawn for only smokers. According to the Table 1 if Fig.1 is drawn only for smokers, the mentioned frequency is decreased. This information is gathered according to the proportion of smokers, to all of the experienced smokers, which is about 1/5 in boys and approximately 1/20 in girls. The pattern of smoking in this study is similar to the one done in Düsseldorf in the year 1994 (5). In Düsseldorf's study, the first experience of smoking cigarette is mentioned to be between 12-16 years old. Bank and his colleagues in England in the year 1978 studied a population of more than 6000 students which showed 6% tendency in boys and 2.5% in girls for smoking more than a cigarette during a week (6). This finding is similar to our pattern of smoking more than a cigarette during a week which is 7.2% among the studied males, while it is 2.5 times less than the other study which was only 1% in females. In comparison to the other study done in the year 1995 by Barruelo and his colleagues in Spain on high school students (7), the rate of smoking among boys and girls was much higher than our results. Also the age of first smoking in boys was much lower than girls, which is different from our results.

A specific study focusing on the prevalence and pattern of smoking among young adults is not done in Iran but the results obtained from a few other studies were beneficial, including a study done in the year 1367-68 (1988-89) in Esfahan (8) 22% of studied male students were smokers, which is higher than our results but the age of the first experience in these two studies is the same.

In the study done by Jamalian and his co-workers in the year 1363 (1984) in Kerman (9) on last year high school students, the prevalence in two sexes is much higher than ours. Dr.Mohammad and his colleagues (10) studied the trend of varying prevalence of smoking between the years 1370 (1991) and 1378 (1999) but the number of 15-19 years old cases was very few and also the information on this age range was not released separately, so it cannot be a basis for comparison to our study.

In a report by Noorbala and Mohammad (11), the percentage of smokers in the 3 main districts of Tehran, which are under the supervision of Iran, Shahid Beheshti and Tehran University of Medical Sciences, in the year 1378 (1999) were 13.2%,13.3%, and 12.8%, respectively. In this report there was no categorisation according to age and sex but on the whole, the percentage given was more than 1% in girls and 7.2% in boys who were under study. Regarding the differences in the age groups of these two studies the mean age was 17.8 in our study but in Noorbala's was 15 and more). It can be understood that the trend of becoming a smoker is considerable in the ages above the pre-university ages.

The age median of starting smoking in smokers in the mentioned districts of Tehran was reported to be 20 years old (11). This means that at most, half of the smokers after 20 started smoking, but this is not the age median of smoking in the whole society, because a number of the smokers may start smoking in the ages more than the mentioned one. Also Dr.Mohammad and his colleagues in another study showed that in the range of 40-69 years old, 18% of females and 35.5% of males, and in the range of 25-39 years old, 37.3% of females and 45.5% of males started smoking at the ages lower than 20 (12). On the basis of different studies done in Iran, the age median of starting smoking is 20 (11, 12) and becoming smoker in the adolescence period and above 20 is very important, for instance the following can be mentioned:

Becoming a smoker is more dangerous due to its cumulative effect of smoking during a long period and can make the user more susceptible to different diseases.

Becoming addicted to cigarettes in these ages can pave the way for addiction to other drugs.

A smoker can make his or her friends become smokers in future.

According to all of the information gathered from different studies and comparing them with each other, this can be concluded that males are more susceptible for becoming smokers than females due to the fact that the …… (O.R) of becoming smoker and experiencing cigarette among males is much higher than females. Thus this shows the necessity to pay more attention to the danger of first experience in smoking and becoming smokers among males.

It can be seen that there are two jumps in the rate of first experience in smoking according to the age domain (the first one in 9 and the other one which is more obvious is about 13). These two periods can be made clear according to the known facts of these two ages (before and during the attaining puberty) in the life of children and adolescents (13, 14).

Children after passing a period of stillness and tranquility, which is between the years of late 6 to about 10 - Froyd names it the period of incubation- show the primary signs of puberty in the form of changing in moods and primary attempts for obtaining experiences like adults. The readiness for experiencing the cigarette and obtaining the experiences similar to adults can be interpreted to the basis of playing a role or imitating adults.

The early period of attaining puberty - about 13- shows great sensitivity of their life due to known factors resulting from physical, emotional, mental, and social changes.

The confusion of their behaviors, are known as the results of the four mentioned factors in this period (15). Considering the Crisis hypothesis or not, it is obvious that adolescents are more susceptible in this period (14). Becoming smokers in this phase, due to its age characteristics and susceptibilities resulted from special attention to giving information, strengthening and mental health is needed (Polygern) (15).

Also it is worthy of attention that the age of beginning the use of cigarettes among smokers (males and females) is a little bit higher in comparison to the others who just experienced it and did not become smokers. This pattern needs more studies in future.

LIMITATION AND PROPOSAL:

It can be definitely said that more attention and programming is needed for these two age ranges which are 9 and 13 and taking preventive measures should be considered. The reader should pay attention to this fact that the studied population was

only pre-university students who were studying in this stage. Thus the students who did not study in this stage due to any reasons such as being married, working or other limitations are not concluded in this population. This group could have a specific pattern and trend of smoking which may be similar to or different from the studied population and needs its own studying. It seems that the high risk ages of our adolescents needs its own information, preparation for encountering with their problems such as smoking. The youth need to be well-prepared with knowledge and information about their high risk behavior so it can protect them initially against threats and dangers.

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# Child Physical Abuse: A Five Case Report

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## INTRODUCTION

Child abuse and neglect has been recognized as an important public health problem in the west since 1960s (1). Child abuse and neglect is defined in different ways in various cultures. In general, any commission or omission of acts by adult caretakers that imposes a negative impact on physical, psychological, and social wellbeing of a child is considered child abuse and neglect (2,3).

Child abuse has existed throughout the history of mankind, but studies in this field have emerged since the last century. For the first time in 1962, a pediatrician, Henry Kempe, set forth a diagnostic category and coined the term "Battered Child Syndrome". After a 12 year contentious period, all 50 states in the USA passed child protection laws for the prevention of child abuse and neglect (1,4). Child abuse and neglect may take many forms from inflicted injuries to failure to thrive due to inadequate feeding, from sexual abuse to emotional abuse, all of which limit the child's physical and mental development (2,3).

The risk factors setting up the stage for child abuse and/or neglect may be extra-familial or intra-familial. Economic, social, environmental, and cultural risk factors including poverty, low educational level, unemployment, violence, and substance abuse may lead to child abuse and neglect. Intra-familial risk factors include parental physical or mental health problems, certain characteristics of the child, parent deprivation, and unrealistic expectations of the family about the child's capabilities (5).
Child abuse and neglect was recognised in developed countries during the latter part of the last century and prevention programs were established (2,4). Developing countries have joined the western countries in recognising this issue as a socio-medico-legal public health problem within the last couple of decades (6-8).

In Turkey, Turkish Society for the Prevention of Child Abuse and Neglect has led the way to increased professional awareness of this important entity. The medical field, however, has not been involved in these efforts to a desirable extent, until 1990s. As the medical field began to get more involved in the recognition of child abuse and neglect, physicians have started publishing on child abuse and neglect, as well (6). In this paper, we present five cases diagnosed with child abuse and neglect, two of which had a fatal course. We hope these cases will guide physicians in Turkey and in other developing countries to be more diligent about the signs of child abuse and neglect.

## CASE REPORTS

### Case 1

Two and a half year-old male, youngest child of a family with four children was brought to the emergency room of a University Medical School Hospital because of bleeding from the right ear and projectile vomiting after falling from a top bunk bed. Physical examination revealed no abnormalities except for bleeding from the right ear. He was observed for 24 hours after his vital signs were stabilised and was discharged to his parents with a diagnosis of head injury. Six days later, he returned to the same hospital complaining of right facial asymmetry while talking. Physical examination revealed superior posterior tympanic hematoma in the right ear. Computerised tomography (CT) of the head verified the tympanic hematoma and revealed right temporal linear fracture. Treatment for right peripheral facial paralysis was prescribed and he was again discharged to his parents.

Four months later, he returned to the hospital for a third

visit because of falling from a balcony, a distance of 3-4 meters. Physical examination revealed, left peri-orbital edema and red fresh bruising, superficial abrasions over the right temple and cheek, and deformity and pain on palpation of the left forearm, all of which indicated acute trauma. X-ray of the left forearm revealed acute spiral fracture of the ulna and the radius. His abrasions were dressed, and his forearm was cast in the emergency room. Since the attending physician suspected inflicted trauma, hospitalisation was suggested. The father refused hospitalisation and discharged his son against medical advice, which prompted a forensic report to the police department. The father was tried for abusing his son and sentenced to one year, six months of jail time. There was no report filed with the Child Protective Services. There was no recommendation to assess the other children in the family, either. No expert witness was invited to trial.

**Case 2**

Six year-old girl, the second of four children in her family, was brought to the University Medical School Hospital by her stepmother with loss of consciousness and a story of falling from a sofa. Physical examination revealed absence of pupillary light reflex with fixed, dilated pupils, and absence of breathing and pulse. She was intubated but did not respond to cardiopulmonary resuscitation. She was pronounced dead after thirty minutes of resuscitation. Postmortem examination of the child was performed one day after death, which revealed numerous different colored old and new bruising between 0.5-1 cm on her neck, chest, back, and lower extremities, a red-purple old bruise of 1 cm over her right eyebrow, another red-purple old bruise of 0.5 cm on the right side of her forehead, and an old wound with dried scabbing of 6 cm at the back of her left shoulder. In internal examination, there was a widespread red new ecchymosis on the internal surface of her occipital scalp and over the vertex, and a linear occipital fracture. There were also occipital subdural hemorrhage, subarachnoidal hemorrhage at the left temporal lobe, and brain edema. The cross sections of her lungs were edematous, and there was a laceration at the right renal capsule. The cause of death was brain damage due to blunt head trauma. The eyes were not removed for retinal examination. Forensic report was filed with the police department.

At the end of the forensic investigation, her stepmother confessed that she slammed the child against a wall because of bedwetting. After the stepmother hit the child's head against the wall, she also kicked her until the child became unconscious. To resuscitate her, stepmother took her to the bathroom, shook her by the shoulders and wetted her head by the use of a hose. The girl slipped from her hand and hit her head against the wall again, which started wheezy breathing but she did not gain consciousness. The stepmother was convicted with involuntary manslaughter in Criminal Court. On appeal, seven months later, she was acquitted. There was no report filed with Child Protective Services. None of the other siblings was assessed for possible abuse. No expert witness was invited to trial.

**Case 3**

Three month-old male infant, the only child of his family, was referred to the University Medical School Hospital from a local hospital. On admission, physical examination revealed confusion, bilateral peri-orbital red fresh bruise, 2 x 3 cm size blue-purple old bruise on his cheeks bilaterally, 1 x 2 cm size red, new bruise on his forehead, edematous swelling of his upper lip, 2.5 x 4 cm size collapsed vesicle on the big toe of his right foot, and 5x2 cm size scabbing old lesion with peripheral hyperemia on his left foot. The latter two lesions appeared to be healing burn lesions. At the university hospital, head CT revealed subarachnoid hemorrhage. One day later, repeat head CT revealed bilateral fronto-temporo-parietal subdural hematoma, right occipital subdural hematoma, and right temporal parenchymal hemorrhage. Abdominal CT revealed linear laceration of the spleen and minimal perisplenic fluid accumulation. Full skeletal survey and eye examination were not done. In two days, his respiratory status deteriorated and he was intubated.

His mother reported his father beat the child up. After his treatment in the intensive care unit was completed, he was discharged to his mother. The child was neurologically stable on discharge. Forensic report was filed with law enforcement. His father was arrested. There was no report filed with Child Protective Services.
His mother testified in court that his father physically abused the child on many occasions causing umbilical hemorrhage from a beating at two weeks of age, left subcostal and periorbital ecchymosis from a beating at two months of age, and inflicted burns by pressing his feet against a hot stove at 2.5 months of age. She denied any medical visits for any of these inflicted injuries. The father was convicted with intentional child endangerment and sentenced to two years, two months, and twenty days of jail time. No expert witness was invited to trial.

**Case 4**

A four year-old female child of a single mother with no other children who works as a prostitute was brought to the emergency room of a University Medical School Hospital five hours after she fell from a chair. On physical examination her vital signs were unstable, she was unconscious with a Glasgow coma scale of three and had low blood pressure (60/30 mmHg). She was immediately intubated. Head CT revealed 1.5 cm wide subacute

subdural hematoma around the right fronto-temporo-parietal convexity, which caused left midline shift. She was taken to the operating room for evacuation of the hematoma pressing on the right hemisphere. During the operation she had cardio-respiratory arrest. Despite extensive resuscitation, she was unresponsive and was pronounced dead.

Postmortem examination and autopsy were performed within 24 hours. External examination revealed 10 x 10 cm red fresh bruise on the left side of her upper abdomen, four blue-purple old bruising of 1 to 1.5 cm size on the front of the right thigh, knee, and shin, and left shin. Internal examination revealed multiple ecchymotic lesions of different colors under the scalp, a sutured fronto-temporal wound, and 0.6 cm defect on the underlying bone tissue, due to the operation procedure. Cerebral and cerebellar examination revealed acute edema, subdural hematoma, and enlargement of the third ventricle. Abdominal examination revealed petechial bleeding on the anterior surface of the liver and a hematoma of 5x8 cm on the left side of omentum major. The eyes were not removed for retinal examination. Due to suspect physical abuse, a forensic report was filed with the law enforcement. There was no report filed with Child Protective Services. The mother was tried for negligence after which she was acquitted. No expert witness was called to trial.

**Case 5**

Four year-old male child of a family with three children was brought to the University Medical School Hospital by his father complaining of vomiting after he woke up following a fall six hours prior to coming to the hospital. His mother and father provided a different fall history. His father reported the child fell down while walking but his mother reported he fell from a sofa. The assessment at the emergency room revealed a child in coma with Glascow coma scale of four, irregular breathing, left midriatic pupil (4 mm), left deviation of the eyes, and hemiparesis on the right side. The cranial CT revealed 3.5 cm size left-temporo-parietal epidural hematoma. He was taken to the operating room. Epidural hematoma was drained via left temporal craniectomy. Skeletal survey and retinal examination were not done. Inconsistent history of trauma prompted a forensic report to law enforcement. On discharge to his parents, he had residual right upper extremity paresis and limited medial vision on his left eye.

His father was tried criminally for physically abusing his son. Criminal investigation revealed that he got annoyed with being interrupted by the child playing near him while he was praying. He pushed the child toward the wall. The child lost his consciousness subsequent to impact from the wall. After the father was tried for involuntary child endangerment, he was acquitted. No expert witness was invited to trial. There was no report filed with Child Protective Services, nor was there an abuse assessment of the other children of the family.

**DISCUSSION**

Five cases of physical abuse were reported to the police department in compliance with the code in Turkey when physicians suspected child maltreatment. Two of these cases had a fatal outcome, one had residual neurological handicaps, and two were lost to follow up. Thus, it is appropriate to think that this series consists of most severely and overtly abused cases and represents the tip of the iceberg of physically abused children in the region. The strength of this study is to bring up the weaknesses of the child protection system in the region to the attention of the medical and child protection communities.

Cases display certain characteristics that are typical of societies at the crawling stage of developing a contemporary and humane response to child abuse and neglect (9). All children presented with head trauma that accounts for the high morbidity and mortality in this series (Table I). All but one presented with a past medical history of physical findings indicating recurrent abuse. All but one was an older child, possibly indicating delayed diagnosis of abuse. Two of three surviving children were discharged to the suspected perpetrator. Two of the acquitted perpetrators had inflicted fatal abuse on their children.

Literature on child abuse and neglect from the 1960s indicates that the medical field has led the way to establishing proper child protection in developed countries (9). Suspicion for abuse is heightened most commonly in health care settings when children present with unusual injuries. Because of that, the pioneers of recognition of child abuse and neglect have traditionally been medical professionals including Ambrois Tardieu (1860), S. West (1888), John Cafey (1946), and Henry Kempe (1962) (10-13). In Turkey, the medical field has become involved in the management of child abuse and neglect within the last decade (6,14,15). These efforts led to the establishment of increasing numbers of hospital based multidisciplinary teams in major cities. These teams initiated collaborations with community agencies such as Child Protection Services, prosecutors, law enforcement officers, and school staff attempting to establish regional organization of child protection services (14).

Despite these grass root activities Turkey still lacks a distinct child protection law with clear, culturally competent definitions of various categories of child abuse and neglect and structured social and legal intervention strategies. Due to these factors, the socio-

Table 1. Characteristics of cases

| | Case 1 | Case 2 | Case 3 | Case 4 | Case 5 |
|---|---|---|---|---|---|
| Age | 2.5 years | 6 years | 3 months | 4 years | 4 years |
| Gender | Male | Female | Male | Female | Male |
| Number of siblings | 3 | 3 | NA | NA | 2 |
| Parental marital status | Married | Married | Married | Not married | Married |
| Suspect Perpetrator | Father | Stepmother | Father | Mother | Father |
| Inflicted injuries | 1.visit:Tympanic hematoma, skull fracture. 2.visit:Facial soft tissue injuries, forearm fractures. | Coma, soft tissue injuries, skull fracture, SDH, SAH | Coma, soft tissue injuries, burn lesions, SDH, parenchymal cerebral hematoma, spleen laceration | Coma, soft tissue injuries, SDH, brain edema, intraabdominal hematoma | Coma, EDH |
| Severity | Severe | Severe | Severe | Severe | Severe |
| Indication for recurrent abuse | Recurrent unexplained physical injuries | Lesions with various stages of healing | Recurrent inflicted injuries | Lesions with various stages of healing, subacute SDH | ? |
| Skeletal survey | Not done | Not done | Not done | Not done | Not done |
| Retinal examination | Not done | Not done | Not done | Not done | Not done |
| Discharged TO | Father | NA | Mother | NA | Parents |
| Eye globes removed | NA | Not removed | NA | Not removed | NA |
| Outcome | Lost to follow-up | Fatal | Lost to follow-up | Fatal | Upper extremity paresis, limited medial vision |
| Report to law enforcement | Yes | Yes (autopsy done) | Yes | Yes (autopsy done) | Yes |
| Report to Social Services | No | No | No | No | No |
| Conviction | 1 year 6 months | Acquitted | 2 years 2 months 20 days | Acquitted | Acquitted |

NA: Not Applicable, SDH: Subdural Hematoma, SAH: Subarachnoid Hemorrhage,
EDH: Epidural Hematoma

legal management of child abuse and neglect is vague in Turkish code. Reporting of suspected abuse is still mandated through law enforcement rather than child protective services. Lastly, there is no provision in the code regarding professional mandatory education on response to child abuse and neglect.

Based on these nation-wide problems in the field, Sivas has lacked an awareness of child abuse and neglect as a public health problem. Thus, regional collaboration among agencies to address this issue properly has been non-existent. Even within the university medical school, there has been no curriculum on child abuse and neglect to increase the medical community's awareness of this issue. Thus, the fact that there have been five reports of suspect child abuse within the last six years is an improvement for Sivas region, indicating a positive trend to increased awareness of the at least most severe forms of abuse.

In none of the trials, an expert witness was called for testimony. Only in two of the cases, was there any conviction. Ironically there was no conviction in the two fatal cases. The court system in Turkey is the agency that is least interested in getting involved in multidisciplinary collaborations related to child abuse cases. Because of that, the outcome of the prosecution of these cases is poor even in severe incidents (16).

None of the cases in this series was reported to Child Protective Services. In none of the three children with siblings, were the siblings assessed for possible abuse. This is in clear contrast with the global contemporary and humane approach to child abuse and neglect. Since the target agency for mandatory reporting in Turkey is law enforcement, the prosecutor decides whether to prosecute these cases or not. When the decision is not to prosecute, there is no opportunity for social services for these needy families. When the decision is to prosecute, only occasionally judges will be broad-minded enough to

establish court-ordered social services. Since child abuse and neglect is a social problem, approaching cases from a social services perspective would be much more cost effective and humane.

Suspicion for recurrent abuse was considered at least in all but one of the cases. Professional and public awareness of intra-familial physical abuse is very low in Turkey and Sivas due to lack of structured professional education on and management of child abuse and neglect. These children may have been observed being abused by many lay and professional individuals without any report to any agency before presenting to the University Medical School Hospital. Physical abuse is a spectrum, which many present with various clinical pictures. The lesions range from minimal bruising and abrasions caused by inflicted trauma to lesions, which can cause death such as inflicted head trauma and internal organ injuries (17,18). In every society, as awareness and professional education are heightened, the recognition gradually moves from the most apparent, severe cases to less apparent, mildly injured cases (6,19).

Skeletal survey has proven to be very helpful in establishing diagnosis inflicted trauma especially in subtle cases (20,21). When done properly skeletal survey can improve diagnosis at least in 20% of the cases (22). If not done when the child was alive, forensic pathologist may and should order a post-mortem skeletal survey. However, again due to the lack of professional structured response to child abuse and neglect, skeletal survey was not done in any of these cases.

These cases display a typical distribution of risk factors for child abuse. Single parenthood, low socio-economical status, anger management problem, step parent, parental psychopathology, staircase children, and multiparity were all risk factors observed in this case series. Other risk factors including isolated living conditions, teenage parenthood, low educational status, and parental substance abuse should also be considered in assessing suspect abuse cases (23,24).

Perpetrators of physical abuse are usually the parents or baby-sitters (17). In severe battering involving head trauma, fathers and stepfather figures have been reported 70% of the time (19). In our series, perpetrator in three cases was the father, all of which survived. In the two fatal cases on the other hand, perpetrator was the mother and the stepmother. Especially with the fourth case, there is a possibility that the male involved in the prostituting mother's life may have actually perpetrated and the mother may have taken the responsibility out of fear.

In conclusion; neurological deterioration, fractures, burns, and other soft tissue injuries unexplained by the history of trauma and lesions at various stages of healing without proper explanation must lead to suspicion of child abuse. Detailed history must be taken from the members of the family and relatives to clarify the circumstances surrounding observed injury. When suspicious, full skeletal survey should be ordered. Ophthalmology consultation is of paramount importance in cases presenting with head or facial trauma. Physicians are mandated to file a report with law enforcement when suspicious of abuse. Although not required by law, physicians should also report such cases to Child Protective Services with a recommendation of having other children under the care of caretakers in question, assessed. In fatal cases autopsy and postmortem skeletal survey may provide invaluable information (25-27). Determining whether bruises occurred before death or are due to rigor mortis, palpating especially the ribs, removing all bones that raise suspicion for fracture, removing the eye globes to assess for retinal hemorrhage, removing the cervical spine posteriorly to assess for axonal injuries are some of the key steps of the autopsy when inflicted head trauma is in question (25-28). The next step for each university hospital should be to establish a hospital based multidisciplinary team to develop structured clinical guidelines for institutionalised response to child abuse and neglect. These teams should also lead their communities in developing regional collaborations among the medical facilities, child protective services, prosecutor's office, and law enforcement. Primary prevention efforts by public education are also a very important task.

## SUMMARY

Physically abused children may present with findings ranging from minimal soft tissue lesions to intracranial injury leading to death. Child abuse is an important public health problem most prevalent in children under five years of age. Timely medical diagnosis of child abuse through detailed history and physical examination is of paramount importance to prevent further abuse and establish supportive services to the families.

We present five cases in this paper, two of which had a fatal outcome. We hope the presentation of these cases and apparent previous chronic abuse in their past medical history will help the medical community revisit their responsibility in preventing child abuse. These cases also indicate that there is great need for education to increase public and multidisciplinary professional awareness of child abuse. Interdisciplinary community collaboration is also very important in recognition, proper management, and prevention of child abuse.

**Key words:** Child abuse, physical abuse, neglect

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# The Eyes of The Truth

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Before the war with Iran (1980-1988) Iraq had a series of hospitals and primary health care centre and public health care laboratories in each of its 18 governates. During the 1970s and 1980s many of these were well established and well equipped through partnerships with European and Japanese corporations. However resources dwindled during the Iran-Iraq war and the situation greatly deteriorated after the Kuwait invasion in 1990 and subsequent Gulf war when comprehensive economic sanctions were imposed in August 1990 .This deterioration had a severe impact on Iraqi citizens and health infrastructure .According to UNICEF the number of primary health centre and maternal and child health clinics in laq declined from a pre-Gulf war network of 1800 to 929 in the 1990s.The UN Oil for Food Programme was started in late 1997 and offered some relief but the looting and the destruction of hospitals and laboratories following the war of March 2003 substantially affected the ability of the health care system to diagnose treat and monitor and prevent disease .The post-war damage was clearly extensive. All government public health laboratories were demolished and looters had plundered every thing including floor tiles, window panes, pipes, wires etc. The surviving health care institutions were in urgent need of generators, air conditioner fans, medicines, laboratory reagents and increased capacity to accommodate the increasingly large number of individuals and casualties of violence. There are no disinfectants and all glassware and microscopic slides had to be washed and reused. Underlying this was the collapse in the administrative systems, lack of funds, the inability to import materials, and shortage of basic supplies and medical equipment that was either in a state of disrepair or cannibalised for spare parts due to the sanctions. The situation improved gradually through NGOs and by the donation from the WHO. On August 20 a car bomb exploded in Baghdad and killed 17 UN personnel and injured over 100 people freezing their duties and movements. Later kidnapping of the staff of the NGO and asking for ransoms by some insurgences forced the NGO to withdraw and close their offices. Among the problems in the health sector is the pervasive corruption and the political conflicts in administration slowed down the flow of donations which were promised by the USA and the rest of the world. All these hampered reconstruction and the rehabilitation processes.

There is a remarkable increase in infectious diseases due to poverty and malnutrition and the daily street violence leading to the loss of food earning members in the families and the little decompositions they get. The main reason for the unreliability of infectious disease surveillance is the unavailability of well equipped laboratories, for example, most laboratory results for meningitis are either negative or contaminated, even at the big general hospitals (formerly Saddam's general hospitals) and paediatric hospitals (in each governate capital) adding to that is the increasing number of cases with the limited staff .The uses of biosafety level 2 hoods at these hospitals was prohibited by biological war inspectors who had visited Iraq before the war. Accordingly the use of safe lab practices constituted a major problem. Generally serology for Typhoid fever is conducted by the misleading slide agglutination tests. Tuberculosis is one of the endemic diseases in Iraq; neither T.B culture nor sensitivity tests for multi-drug resistant strain are done at the governate chest hospitals. Because the problems in water treatment, water distribution sewage pumping acute watery diarrhoea is very common and there are great number of hepatitis among poor people. UNICEF had reported that 40% of water samples analyzed in Iraq failed tests due to contamination or insufficient disinfection. Many households do not have individual connection to treated pipe water or 24h access to water, such householders typically store water in the home and this water is vulnerable to contamination (primarily from handling) during transport and storage even if it is clear at source. Damage of the electrical grid lead to the perishing of considerable amounts of vaccines, laboratory reagents, looting of shipments and medicines during transportation exacerbates the problems. Bacterial culture and susceptibility a necessary component for a rational antibacterial prescribing is not uncommon and diagnosis is made largely on the strength of clinical signs and symptoms. Many physicians have been known to use chemotherapy as a diagnostic tool where cure confirm diagnosis .In addition to physicians, nurses and pharmacists others are licensed to supply antimicrobials e.g midwives, community health workers and dispensing assistants. However these drugs can also be obtained for unsanctioned stall keepers itinerant vendors, hawkers and purveyors of other materials who are often the first point of call for patients .To complicate the matter there are drug venders .It is a quiet a widespread habit to ingest antimicrobials and to store others from uncompleted courses even beyond the expiration date and later self administer these drugs for self diagnosed conditions or dispense them to family members and friends this is because poverty and the lack of access to health care for

many reasons such as daily street violence, insecurity ,transportation difficulties because of the high prices of the gasoline but the more precise this persists even among high income and educated patients also. The Iraq health sector is in urgent needs for a shot in the arm and is essentially vital for evolutionism a new statistical campaign with the help of the WHO and to back up this with all the measures.

# Risk Factors for Central and Branch Retinal Vein Occlusion

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ABSTRACT

Objectives: To investigate the relationship between central and branch vein occlusion and certain factors.

Patients and methods: This study was conducted in King Hussein Medical Center in Royal Medical Services during the period between July 2003 and June 2005. A total number of 96 patients with retinal vein occlusion (52 branch, 44 central) were investigated for certain factors. These variables included patient age, body mass index, smoking, presence of hypertension, diabetes, hyperlipidaemia, glaucoma, body mass index, refractive status and thrombophilia profile. The latter included activated protein C resistance (APC-R), factor V Leiden, protein C, protein S, antithrombin III. Results were compared with a control group of 96 patients of the same age distribution.

Results: The mean age for patients with central vein occlusion, branch vein occlusion and for control group was 67.4, 61.4, and 63.2 years respectively. Hypertension and smoking were significantly associated with BRVO while glaucoma, APC-R, factor V mutation, and the methylenetetrahydrofolate reductase mutation (MTHFR) were significantly associated with CRVO. More than one fifth of patients with CRVO expressed reduced APC-R and factor V Leiden mutation.

Conclusions: There are variable risk factors for both central and branch retinal vein occlusion. Also it is important to investigate young patients for coagulation abnormalities.

Keywords: Central retinal vein occlusion, branch retinal vein occlusion, hypertension, glaucoma, and thrombophilia.

## INTRODUCTION

Venous thrombosis affects one in 1000 individuals per year causing significant morbidity and mortality 1. Its has a 'multiple hit' pathogenesis in which several adverse influences affecting the composition of the blood, the structure and function of the vessel wall and blood flow, together result in an acute thrombotic event 2. Retinal venous occlusion is a venous thrombotic disorder which also afflicts older subjects, 51% of cases occurring at more than 65 years of age 3. Undoubted associations exist with other conditions, especially hypertension, diabetes mellitus, sedentary lifestyle, and open angle glaucoma, each of which is also age related 4. The Eye Disease Case Control Study Group identified a number of risk factors for branch, central, and hemiretinal vein occlusions including hypertension, diabetes, a history of cardiovascular disease, an increased body mass index at 20 years of age, and patients with open angle glaucoma 5-7. Other risk factors include hyperviscosity syndromes, malignancy, pregnancy, and oestrogen therapy 8-9.
Inherited defects in the coagulation pathways are also associated with retinal vein occlusion. Hypercoagulability can be the result of deficiencies in particular elements of the coagulation cascade such as protein C, protein S, or antithrombin III. These are rare disorders associated with increased incidence of venous thrombosis particularly in young adults 10.

The aim of this study is to investigate the relationship between central and branch vein occlusion and certain risk factors and whether these factors vary between the two conditions.

## PATIENTS AND METHODS

This study was conducted over a two year period between July 2003 and June 2005 in King Hussein Medical Center in Royal Medical Services. A total number of 96 patients with retinal vein occlusion (52 branch, 44 central) were investigated for certain factors. These variables included patient age, body mass index, smoking, presence of hypertension, diabetes, hyperlipidaemia, glaucoma, body mass index, refractive status and thrombophilia profile. The latter included APC-R, factor V Leiden, protein C, protein S, antithrombin III. Ophthalmologic examination included Snellen's visual acuity, anterior segment examination via slit lamp, Goldmann's applanation tonometry (measured at the same slit lamp by the same physician between 10-11 am), refraction, and posterior segment examination via +78 lens. Diagnosis of retinal vein occlusion was confirmed by fluorescein angiography. Patients with hemicentral venous occlusion were included in CRVO group. Results were compared with a control group of 96 patients of the same age distribution for the same variables. P-value was applied to determine significance of the variable.

## RESULTS

The mean age for patients with central vein occlusion, branch vein occlusion and for control group was 67.4, 61.4, and 63.2 years respectively (Table 1). Table 2 shows the association between risk factors with retinal vein occlusion and Table 3 shows coagulation abnormalities; more than one fifth of patients with CRVO expressed reduced APC-R and factor V Leiden mutation. Hypertension and smoking were significantly associated with BRVO. Glaucoma, APC-R, factor V mutation, and MTHFR mutation were significantly associated with CRVO (Table 4).

Table 1. Age distribution of patients and control groups

| Age group | CRVO group No (%) | BRVO group No (%) | Control group No (%) |
|---|---|---|---|
| < 20 | 0 | 1 (1.9) | 3 (3.1) |
| 20-40 | 5 (11.4) | 4 (7.7) | 6 (6.3) |
| 40-60 | 6 (13.6) | 13 (25) | 27 (28.1) |
| >60 | 33 (75) | 34 (65.4) | 60 (62.5) |
| Total | 44 | 52 | 96 |

Table 2 Risk factors for vein occlusion in the three groups.

| Risk factor | CRVO group No (%) | BRVO group No (%) | Control group No (%) |
|---|---|---|---|
| Hypertension | 18 (40.9) | 28 (53.8) | 28 (29.2) |
| Diabetes | 11 (25) | 10 (19.2) | 13 (13.5) |
| Hypercholesterolaemia (>200 mg/dl) 15 | 15 (34.1) | 23 (44.2) | 30 (31.3) |
| Hypertriglyceridaemia(>200 mg/dl) | 20 (45.5) | 25 (48.1) | 31 (32.3) |
| Glaucoma | 6 (13.6) | 1 (1.9) | 2 (2.1) |
| Smoking * | 20 (45.5) | 30 (57.7) | 31 (32.3) |
| Hypermetropia> 3 Diopters | 1 (2.3) | 4 (7.7) | 2 (2.1) |
| Myopia > 3 Diopters | 2 (4.5) | 3 (5.8) | 6 (6.3) |
| Obesity (BMI>30) | 10 (22.7) | 16 (30.8) | 20 (20.8) |
| Others** | 1 (2.3) | 2 (3.8) | 0 |

* More than 20 cigarettes/day since the last one year.
** include Behçet's disease and non-arteritic anterior ischemic optic neuropathy.

Table 3. Coagulation abnormalities in the three groups.

| Factor | CRVO group No (%) | BRVO group No (%) | Control group No (%) |
|---|---|---|---|
| APC-R (<120 sec) | 10 (22.7) | 7 (13.5) | 5 (5.2) |
| Factor V Leiden mutation | 10 (22.7) | 6 (11.5) | 4 (4.2) |
| Protein C (<60%) | 1 (2.3) | 0 | 0 |
| Protein S (<50%) | 0 | 1 (1.9) | 0 |
| Antithrombin III (<80%) | 0 | 0 | 0 |
| C677T MTHFR mutation | 4 (9.1) | 2 (3.8) | 0 |

Table 4. P-value for both CRVO and BRVO groups in relation to controls.

| Risk factor | P-value (CRVO vs. control) | P-value (BRVO vs. control) |
|---|---|---|
| Hypertension | 0.1<p<0.2 | <0.01 |
| Diabetes | 0.05<p<0.1 | 0.3<p<0.5 |
| Hypercholesterolaemia | >0.5 | 0.1<p<0.2 |
| Hypertriglyceridaemia | 0.1<p<0.2 | 0.05<p<0.1 |
| Glaucoma | <0.01 | >0.5 |
| Smoking | >0.5 | <0.01 |
| Hypermetropia | >0.5 | 0.05<p<0.1 |
| Myopia | >0.5 | >0.5 |
| Obesity | >0.5 | 0.1<p<0.2 |
| APC-R | <0.01 | 0.05<p<0.1 |
| Factor V mutation | <0.01 | 0.05<p<0.1 |
| Protein C | 0.1<p<0.2 | - |
| Protein S | - | 0.1<p<0.2 |
| MTHFR mutation | <0.01 | 0.05<p<0.1 |

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# Low Dose of Droperidol in Vitreoretinal Surgery

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## ABSTRACT

Aim: To investigate the efficacy and safety of low dose of droperidol for the prophylaxis of post-operative nausea and vomiting following vitrectomy in diabetic patients.
Design and Settings: Randomised placebo controlled double blinded study conducted in the Department of Ophthalmology, King Hussein Medical Center in Royal Medical Services.
Methods: Patients with proliferative diabetic retinopathy scheduled for pars plana vitrectomy were randomised either to receive droperidol 10ug/kg 5-10 minutes at the end of surgery or saline (placebo) as a control group. 120 patients were enrolled in the study; 58 males and 62 females aging 40-78 years. Standardised general anaesthesia was performed. Thiopentone 4mg/kg, vecuronium 0.1mg/kg, fentanyl 1ug/kg was given intravenously combined with ventilated sevoflurane 1% through laryngeal mask. Tidal volume was 7ml/kg and respiratory rate was 10/minute. Episodes of vomiting, nausea and retching were recorded for 24 hours and were graded into none, mild, moderate, and severe.
Results: 45 patients (75%) of group receiving droperidol did not experience post operative nausea or vomiting while 41.7% of the control group experienced it. There were no significant extrapyramidal or cardiac side effects in the droperidol group.
Conclusion: Low dose droperidol is considered to be effective and safe in vitreoretinal surgery.
Key words: Anti-emetic, Droperidol, Vitrectomy, nausea and vomiting.

## INTRODUCTION

Post operative nausea and vomiting (PONV) has significant impact on patients and heath care providers 1. Despite impressive advances in the field of anaesthesia 20-30% of patients continue to experience PONV within the first 24 hours 2.

The vomiting reflex may be excited by many stimuli most of which are operative 3. Some of the factors associated with PONV are patient predisposition, surgical site related, opiods administration and anaesthetic drugs used. Ophthalmic surgeries are associated with increased incidence of nausea and vomiting 4. Nausea and vomiting can induce ketosis in diabetic patients undergoing vitrectomy for advanced diabetic retinopathy 5.

Droperidol is frequently used in the United States of America and Europe as a prophylactic drug against PONV 6-7. It is a well-tolerated drug, inexpensive, and has few side effects. The Food and Drug Administration had mandated that the manufacture or the generic formulation of droperidol place a black box warning regarding the risk of serious proarrhythmogenic effects 8.

The aim of this study was to study the safety and efficacy of droperidol in relieving PONV in diabetic patients undergoing pars plana vitrectomy.

## PATIENTS AND METHODS

A prospective randomised double blind study. 120 patients were enrolled in the study. All of them underwent pars plana vitrectomy at King Hussein Medical Center, Ophthalmology Department in the period between May 2004 and October 2005.
All patients had standard three port pars plana vitrectomy due to advanced diabetic retinopathy. Patients were divided into two groups; the first group was given low dose droperidol (10 micrograms/kg diluted in 10 millilitres normal saline 0.9%) ten minutes before the end

of surgery. The control group was given 10 millilitres of normal saline 0.9% as a placebo.

Randomisation was done by sealed envelope technique. Patients receiving antiemetic or patients who were suffering from nausea or vomiting during the last two weeks before surgery were excluded from the study. All patients fasted starting from 10 pm, the night before the surgery.

General anaesthesia was standardised. After insertion of an intravenous line, fentanyl (1-2 microgram/kg) and propofol (2mg/kg) were used for induction. Laryngeal mask was used and vecuronium (0.1mg/kg) was used as muscle relaxant. Neuromuscular monitoring was done. Drugs were repeated as indicated to reduce the need for an antagonising neuromuscular agent (atropine 0.5mg and neostigmine 0.1mg/kg). Anesthesia was maintained using sevoflurane at an end expiratory concentration of 1%. The lungs were ventilated with O2/N2O in a fraction of 0.3: 0.7 using fresh gas flow at 1 litre /minute. Ventilation was adjusted to keep end tidal carbon dioxide within the normal range (36-40mmHg). No local anaesthesia was given by the surgeon.

Vital signs were regularly monitored. Two hours after recovery, patients were transferred to the surgical word. Patients were monitored for the occurrence of nausea and emetic episodes defined as retching or vomiting at 2, 4, 6, 12, 24 hours. Medical records were screened for PONV. Nausea and vomiting was assessed on a rating scale as: 0 - no nausea, no vomiting, 1 - nausea without vomiting (mild), 2 -nausea with vomiting less than three times (moderate), 3 -nausea with vomiting more than three times (severe).

## RESULTS

120 patients were enrolled in the study. The mean age was 66.4 years. Females slightly outnumbered males (62 vs. 58).
Table I shows demographic data and patient characteristics. There is no relevant difference among the groups.

The number of patients suffering from nausea and vomiting was significantly lower in the droperidol group than in the placebo group (25% vs. 38.3%, P value < 0.01).

Table III shows the incidence of side effects. There was no increase in the incidence of arrhythmias or cardiovascular side effects with droperidol. 0.5% of the droperidol group experienced mild restlessness. Headache was more frequent in the placebo group. Intraocular bleeding was diagnosed in three patients in the droperidol group and five patients in the placebo group.

Table 1. Patient characteristics and demographic data

| Characteristic | Droperidol (n=60) | Control (n=60) |
|---|---|---|
| Mean age (years), range | 66.2 (40-78) | 66.6 (42-75 |
| Males | 29 | 29 |
| Females | 31 | 31 |
| Weight (kg) | 75 (65-81) | 73 (69-79) |
| History of motion sickness | 6 patients (10%) | 4 patients (6.7%) |
| Non-Smokers | 45patients (75%) | 48 patients (80%) |

Table 2 Incidence and severity of post operative nausea and vomiting during 24 hours observation period

| Scale of PONV | Droperidol groupNumber and percentage | Control groupNumber and percentage |
|---|---|---|
| 0 No PONV | 45 (75%) | 25 (41.7%) |
| mild PONV | 19 (15%) | 3 (5%) |
| 2 moderate PONV | 5 (8.3%) | 24 (40%) |
| 3 severe PONV | 3 (5%) | 8 (13.3%) |
| Patients without PONV* | 45 (75%) | 25 (41.7%) |
| Patients with PONV* | 15 (25%) | 35 (38.3%) |

* P value < 0.01

Table 3 Incidence of side effects.

| Side effect | Droperidol group | Control group | P- value |
|---|---|---|---|
| Headache:<br>None<br>Mild<br>Moderate<br>Severe | 51 (85)%<br>3 (5%)<br>2 (3.3%)<br>1 (1.7%) | 41 (68.3%)<br>9 (15%)<br>8 (13.3%)<br>1 (1.7%) | 0.05<p<0.02 |
| Extrapyramidal Symptoms | 0 | 0 | - |
| Arrhythmia (Bradycardia requiring atropine) | 1 (1.7%) | 2 (3.4%) | p>0.05 |
| Cardiovascular side effects (hyper or hypotension requiring treatment) | 5 (8.3%) | 8 (13.3%) | 0.3<p<0.5 |
| Intraocular bleeding | 3 (5%) | 5 (8.3%) | 0.3<p<0.5 |
| C677T MTHFR mutation | 4 (9.1) | 2 (3.8) | 0.3<p<0.5 |

## DISCUSSION

Opiods were not used as they may sensitise the vestibular apparatus and affect the incidence of postoperative nausea and vomiting 9.

In this study droperidol has been shown to be effective in reducing PONV in vitreoretinal surgery compared with placebo. This is in accordance with previous studies in ophthalmic surgery 10-11. More patients in the control group experienced PONV; this was statically significant (p value < 0.01). The incidence of severe nausea and vomiting was 5% in the droperidol group and 13.3% in the placebo group. (See Table II for more details).
There were no significant side effects including neurological and extrapyramidal problems.
Restlessness, though, was more prevalent in the droperidol group but it was not statically significant (0.3<p<0.5). Headache was significantly less in the droperidol group (0.05<p<0.02); this was true for mild to moderate headache but not for severe headache. Droperidol seemed to be protective against headache.

As the Food and Drug Administration mandates that manufactures droperidol place black box warning regarding the risk of proarrhythmogenic effects. We observed patients thoroughly for cardiac side effects. There was no significant difference in cardiac status among the two groups. Our results confirmed what was reported in a study done by Henzi and his colleagues 12.

All patients who had postoperative intraocular bleeding had PONV or retching. Patients with intraocular bleeding who didn't receive droperidol slightly outnumbered those who received it but this was not significant (0.3<p<0.5).
In conclusion, droperidol is a cost effective drug compared with other antiemetic therapy 13. It is considered to be an efficacious and safe drug to be used in patients undergoing vitreoretinal surgery.

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# Primary care management of adult lateral neck masses

## CASE SCENARIO

A 49-year-old male presents with a 2-month history of a painless mass in the upper part of the right neck. He is a lifelong smoker and heavy drinker and has recently noticed right-sided earache.

## USEFULL INFORMATION

Lateral neck masses can arise from any of the tissues therein; they may be benign or malignant. In general, lateral neck lumps may be solid or cystic. In adults, the majority are solid.

Enlarged lymph nodes account for the majority of solid lesions. Lymphadenopathy may be benign or malignant. Viral (EBV, CMV, HIV), bacterial (pyogenic, TB or cat scratch) or protozoal (toxoplasmosis) infection may be responsible. Malignant lymphadenopathy may be primary (lymphoma) or secondary (metastatic deposits from a primary head and neck or rarely chest / abdominal neoplasm).

It is vital to recognise abnormal lymph nodes. Hospital series have shown that 6% of all head and neck neoplasms presented with isolated lateral neck masses. Of this subset, metastases from squamous cell primaries (40%) and lymphoma (39.5%) accounted for the majority1. Both require specialist referral. Early recognition of specific warning symptoms and signs facilitate accurate diagnosis and speedy referral to an appropriate specialist. This avoids diagnostic delay, thereby reducing morbidity and mortality.

Subcutaneous cystic lesions are uncommon. A branchial cyst typically presents in the 2nd or 3rd decades but may occasionally present late. Usually painless, this swelling projects from the anterior border of the sternocleidomastoid at the junction of its middle and upper thirds. A branchial cyst in a patient over 40 years of age warrants urgent referral to exclude cystic metastasis.

## Issues you should cover & what you should do (see diagnostic flow diagram)

In our scenario the patient has an enlarging solid lesion consistent with a malignant cervical node. On examination, the anatomical location and associated features will indicate a lymph node.

Commonly the patient with a metastatic node is asymptomatic, only complaining of a steadily enlarging painless neck lump. Symptoms may arise from the primary tumour. In our scenario otalgia is a key feature. Such symptoms should be sought, together with risk factors for head and neck cancer and associated generalised features of malignancy. Malignant nodes may have specific physical characteristics. If found, one must proceed to examine for a possible primary in the head and neck, not forgetting the small possibility of a chest or abdominal primary, in particular associated with supraclavicular lymphadenopathy.

Lymphoma is commoner in young adults and the elderly, most of whom are asymptomatic. Constitutional upset (fever, night sweats) and weight loss, aching bones and pruritis are a feature in 25%. Palpable lymph node(s) may have a rubbery consistency. Nodes typically remain separate and distinct. Other nodal groups, the liver and the spleen should all be examined for enlargement. Here referral to a haematologist is warranted.

A likely malignant node, with or without symptoms and signs of a primary malignancy, demands urgent referral to a specialist. Reactive lymphadenopathy is common and resolves spontaneously; persistence after a short trial of antibiotics at a 2-week review, warrants referral. In the absence of infection, a lateral neck mass is metastatic squamous cell carcinoma, or lymphoma, until proven otherwise and should be promptly referred2.

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# Report on the First International Primary Health Care Conference, Abu Dhabi, UAE

The First International Primary Health Care Conference "Challenges in Primary Health Care' was held in the Emirate of Abu Dhabi, January 21-23, 2006. Speakers represented 24 countries as well as the United Arab Emirates. Chairman of the Scientific Committee was our esteemed Chief Editor, Dr Abdulrazak Abyad, who was ably assisted by the Advisory Committee, including Dr Tawfik Khoja, Director General Executive Board, Council of Health Ministers Cooperation for GCC States, Emeritus Professor John Beasley, University of Wisconsin, Dr Fawzi Amin, Assistant Undersecretary for Planning & Training, Ministry of Health, Kingdom of Bahrain and Dr Ahmed Abdellatif, WHO Regional Office for the Eastern Mediterranean.

A three day program, included 75 invited speakers. Topics included - Models of Primary Care, around the world; school health; women's health; medical education, quality in primary health care, research in primary care; elderly care, home care, mental health and the future of family medicine.

Posters featured type 2 diabetes in pregnant women, nutrition in the elderly, teenage smoking, streptococcal infection among children, vitamin B12 deficiency, outpatient quality of care and more.

It was deemed an excellent conference by all who attended and we congratulate the organizers and H.E. Hamad Mohamed Al Hurr Al Suwaidi, Chairman of the Board of Directors of the General Authority for Health Services for the Emirate of Abu Dhabi.

Lesley Pocock
Invited Speaker