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In this issue we commence our Focus on Quality Care (FOQC) initiative. There are two papers, one from Australia on Family Practice - a global perspective, and a second paper from Iraq on establishing a Centre of Disease Control in the Middle East.

The first paper in our Focus on Quality Care initiative provides an overview of the challenges global family doctors now face and those they will begin to face as our world becomes even more challenging on every front. This paper and indeed the initiative itself, sets out to highlight some of these challenges, but also to provide where possible, some insights and solutions. It also recognizes the vital role of the primary care physician who is at the forefront of these many challenges, be they environmental, epidemiological, social, psychological or medical.

The author stressed that this century provides a new set of problems, and problems of a more residual nature. Social unrest, climate change, less availability of clean water, polluted air in the main population centres, and increased levels of stress and depression are becoming mainstream health issues even in high income nations. Perhaps if we can look at these issues as challenges, itemise and quantify the problems and set up programs to overcome them, then the problems are already half solved. Another important challenge I feel will have a great effect on the health care systems in the developing world is poverty which is hindering the progress of health especially in African countries where people are surviving on less than a dollar a day and where AIDS is predominant and war and famine have contributed to the systemic destruction of whatever health care systems existed.

The second paper on FOQC discusses The status of health and medicine in the Middle East - disease control. The author conveys a pessimistic view about the Middle East where he propounds that it is the most neglected health arena in the world today. Although to a certain extent this is true in some of the countries in the Middle East, other countries have an excellent health care system compared to the less privileged and poor countries of the World. In the Middle East there is good infrastructure and large number of physicians, which does not exist in Africa for example. Even the health care sector in Iraq, although it has suffered tremendously through the war, is still functioning and still have excellent health professionals. The author stresses that the media ignores that much of the credit for early medical discoveries is owed to physicians from the Middle East in the first millennium. The author calls for the establishment of a Center of Disease Control in the Middle East. The center should handle diseases grouped into the following three categories: diseases which cause high levels of mortality; diseases which place on populations heavy burdens of disability; and diseases which owing to the rapid and unexpected nature of their spread can have serious global repercussions. Among the tasks envisioned for the center are harmonisation of surveillance methodologies across the middle east, providing scientific opinions and technical assistance.

Dr. Al Mustafa BA discussed the Development of Encounter Forms for Cardiovascular Disease Risk Management. He stressed that during the last decade many guidelines have been published for detection, evaluation and treatment of different cardiovascular disease (CVD) risk factors (RF).

Nevertheless, guidelines were not sufficient to change either the outcome or the behavior of the caregiver. The author describes 4 pages of evidence-based encounter forms (EF) that have been developed by the author, to facilitate office assessment, follow-up and audit of services delivered to patients with chronic CVD risk factors.

A study from Iran investigated medical staff awareness of patients' rights in Fasa Hospitals and Medical Centers. The authors stressed that Medical staff should gain, learn and use the medical principle of morality along with experimental, applied and theoretical sciences. In the second paper the authors looked at the effective factors on patients' satisfaction, who are referred to medical centers in regard to family planning services in Fasa in 2005.

A study from Department of Microbiology, University of Nigeria, Nsukka, Nigeria, reports on In Vitro Susceptibility Testing of 71 species of Dermatophytes isolated from pediatric cases in Nigeria against five anti fungal agents. This appears to be the first documented data on the susceptibility of isolates of dermatophytes, from Nigeria.

A paper from Dubai reports on the use of special software for Safer Drug Therapy in the Middle East. The authors stress that medical errors rank as the eighth leading cause of death, killing more Americans than motor vehicle accidents, breast cancer, or AIDS. A large percentage of Medical Errors are related to the mistakes made by a doctor during the Drug Therapy. The authors stressed that the product will help doctors to reduce medication errors.

A study from Egypt looked at the relationship between

severity of inflammatory reaction in gastritis and intensity of Helicobacter pylori in the antrum. This study revealed that many factors play a role in the relationship between severity of inflammatory reaction and intensity of helicobacter in antral chronic gastritis, and these factors include host immunity, virulence of the microorganism, genetic factors, and diet rich in antioxidants that neutralize the mediators.

A retrospective survey from the Royal Medical Services and the Ministry of Health in Jordan reports on the effect of Clomiphene citrate on the incidence of Hypospadias. In their study period between 1999 and 2003 they found a total of 104 cases of hypospdias in all hospitals. There was no association between clomiphene citrate and external genital malformation, specifically Hypospadias.

A cross sectional hospital based study from Basrah/Iraq studied patients with sickling disorder who presented for screening. The total number of patients was 647. In most of the patients (69.3%), the HbS range is 31-40 %. Only 5.7% of patients had HbS >40%. This study represents the first reported level of HbS among both sexes in Basrah.
A paper from Pakistan discusses the epidemiological survey of maternal mortality rate . Two hundred houses were included in the study. From those houses 400 women in their reproductive ages were selected. The authors concluded that socioeconomic, marital and obstetric factors are still major causes of maternal deaths. Another study from Iran studied the Parent-Adolescent Relationships in the City of Amol. The aim of this research is to identify the value order in two generations (fathers and their children), and to specify the value gap and the reasons related to it.

Finally I would like to thank all the contributors, reviewers, the editorial board and the production team headed by Lesley Pocock for their GREAT effort in reaching higher standards this year. We are looking forward to increasing the frequency of the journal next year and I wish all an early happy new year as this is the last issue for 2006.

Family Practice - a global perspective

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ABSTRACT

This first paper in our Focus on Quality Care initiative provides an overview of the challenges global family doctors now face and those they will begin to face as our world becomes even more challenging on every front. This paper and indeed the initiative itself, sets out to highlight some of these challenges, but also to provide where possible, some insights and solutions. It also recognizes the vital role of the primary care physician who is at the forefront of these many challenges, be they environmental, epidemiological, social, psychological or medical.

Key words: challenges, life-learning environment, business environment, patient care environment, the heart of general practice

While the health of communities worldwide will always require a substantial injection of government or public money it is imperative that primary care seeks to be self sustainable in the interests of viable national healthcare systems.

Keeping healthcare at a healthy 70-30 mix of primary care and specialist care is the first step to a sustainable national approach. Patients in the United States for example, where health care costs are greatly increased per head of population, are twice as likely as patients in Britain to see a specialist during any 12 months. This large difference is partly because patients refer themselves more often in the United States, even when they must pay for the full costs of care. In the United Kingdom, access to specialists has generally not been possible without a general practitioner's authorisation. [1]

It would seem to the writer that a free market system, where the family doctor practice is run as a small business would be the optimum way to go - given that the 'average family doctor' is usually in an isolated practice in a community setting and reasonably independent. This way the patient becomes the 'customer' and the more practiced, highly skilled and knowledgeable the doctor is, the better the patient care given and the more patients will return and recommend the services of the practice to others.

This also gives the family doctor both the incentive and the requirement to keep his/her skills and knowledge up to date and it is thus a self perpetuating system and one that at least goes a good way toward sustainability. The system should be outcome based for maximum benefit. That is, where required, practice should change where continuing education, or policy indicates.

Regionally, nationally and locally, costs will still be incurred outside of this system, (study, research, technology, therapeutics, development) but again great savings would be made if these costs were shared around the world and the knowledge shared in return.

In the case of developing nations sometimes the very basics need to be shared. We have been involved in several recent initiatives to do just this. A project with the International Atomic Energy Agency of the United Nations, designed to overcome a world shortage of oncologists and involving years of research into both technical and content issues, has recently been validated as global curriculum and will be used to train 900 oncologists every five years - with an emphasis on upskilling doctors in developing nations.

Our own World CME project has been extended free of charge to World Bank designated low income nations and is being used as a national accreditation and QA&CPD program where none previously existed While a small degree of customization has been required the online self administering system 'bridges the gap' as far as access to high quality resources is concerned.

The life-learning environment therefore requires access to formal targeted, and self-elected education and those programs that contribute to outcome-based learning are optimum. Education at decision-making time has been argued as the best method, but these programs leave little room for error, whereas considered 'behaviour change' as a 'reflection activity ' after an educational program is of a permanent nature. 'Referral to information' to make a diagnosis has to be a lesser approach than 'learning the requirements' and making 'positive changes' The former does not imply new knowledge - it implies 'lack of knowledge'.

CME-CPD should also increasingly be international medical education with increased tourism, migration and transitory workforces, medical education should no longer stop at national borders.

The business environment for the family doctor in his/her own practice requires basic administration, financial management and people handling skills, though in an optimum environment additional health professionals or support staff can be brought into the business to share the burden of care, and into specialised and appropriate positions. This should also increase the financial return of the practice.

The patient care environment is the most challenging and the most important. These days the family doctor is responsible for the patient's health, within the context of the family and the community. Preventive medicine, counseling and breaking bad news, public health, and public information are increasingly the domain of the family physician.

The family doctor best way to provide the breadth of universal care and family doctors often give their services free to support the poorer members of their communities or arrange community support services for them.

Family doctors usually have their own families and familial and societal obligations and it is always a struggle to balance the needs of all, with the primary care doctor often the one who is overstretched in trying to meet all obligations.

Governments and public bodies should support these valuable community resource people in terms of financial and respite support, public recognition, and legislation to lessen the burden where possible.

What is best practice on a regional and global basis? Best practice encompasses more than optimum patient care - it needs to be defined within many contexts. Contexts include content issues - level of language (ESL) ethnic or geographical contexts, availability of services (customization and localization) and respect for all cultures, religions and sexes. It also extends to delivery methods of care.

Best practices is an interesting area. While we address the situation of the rural and remote practitioner in our own programs, by spelling out best practice for those with access to high end facilities but providing where possible, alternatives for the rural and remote practitioner. This may often entail going back to the original 'arts of general practice' - physical examination and careful history taking.

Best practice on an international level however takes on a very different dimension. Factors such as extreme poverty and deprivation, poor geographical access, lack of public health and sanitation services, war, pestilence, drought, natural disasters and hazards of occupations, all contribute to complex 'cause and effect' scenarios so that the economic status of a country has a direct relationship on the health of its people via negative factors relating to lack of public health services.

While we can attempt to meet these challenges and provide pragmatic local alternatives, the dream of being able to provide universal internationalised medical education and information will require a more peaceful, equitable and compassionate world society to overcome the grosser inequities.

We all have a vested interest in the health of all people even at the most selfish level. Polluted air, the greenhouse effect, drought, lack of water, and disease outbreaks, be they human or domestic animal, affect us all, as SARS and Avian flu outbreaks have shown us.

This century provides a new set of problems, and problems of a more residual nature. Social unrest, climate change, less availability of clean water, polluted air in the main population centres, and increased levels of stress and depression are becoming mainstream health issues even in high income nations. Perhaps if we can look at them as challenges, and itemise and quantify the problems and set up programs to overcome them, then the problems are already half solved.

Positive advancement of societies can be assisted through asking our family doctors , to take a leading role in the health and welfare and living conditions of the society they live and practice in, and through this practice, teach tolerance and respect of all people. Nearly every community has a family doctor, albeit one who is often under educated and under resourced.

General practice is therefore a very big picture profession, as it deals with humanity everyday. A family doctor in

Ottawa probably has more in common with a family doctor in Lagos than members of his/her own community as both deal with the vagaries of humanity every day.

Family doctors may feel they are isolated and ineffective, but they deal with the big pictures in the global health arena every day - be they observation, immunisation, care of the psychological and health of the community or the practical aspects of health, such as the call for access to clean water and air.

General practice/primary care/family medicine is probably the most demanding of all medical professions due to breadth of knowledge required, through being the first contact point with patients and their ailments, through breaking bad news to the terminally ill and the chronically ill, and have to feel helpless when patients cannot afford remedies; and when they see the depressed, the downtrodden and the abused to whom no practical help can be given. Family doctors must be mentors, teachers, friends, and confidantes.

But also what an opportunity they have to heal, to advise, to achieve, to befriend, to build up lasting relationships with generations of people, to deliver babies and watch them grow into fine citizens, and what an opportunity to make a meaningful difference at the grass roots level of society.

Therefore urge our governments and NGOs and those to support these gems within our midst and encourage them to continue to shoulder the burden of care.

The 'heart of general practice' is therefore equally if not more vital to the ongoing health of our communities and we need to give these gems within our midst, as much support as possible, on all levels.

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The status of health and medicine in the Middle East - disease control

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The Middle East is the most neglected health arena in the world today. This is no surprise given it's constant media portrayal as a center of violence and terror. I am sure you agree with me that we need to forge a partnership without looking through a prism of violence. We also need to invite all those working in the privileged world of western medicine to admit the origins of the profession.

Much of the credit for early medical discoveries is owed to physicians from the Middle East in the first millennium. It is a predicament of extraordinary proportions. Doctors must say that loudly and repeatedly. Presently we are largely silent. Unfortunately, the status of health and medicine in the region today is often compromised by political unrest and compounded by public-health, infection control and educational challenges. This complex situation was analysed by the UN in a trio of Arab Human Development Reports that focused on the three deficits of the Arab world: knowledge, women's empowerment, and freedom.

I think another problem that we always turn blind eyes to is the gap in the gross national product per capita for each country. So the challenge is clear. Strong governmental leadership is essential to drive the necessary challenges forward and successful collaborations must be undertaken between the oil rich countries and their less wealthy neighbours. I have a dream I do hope one day to become a reality; it is an embryonic health initiative serving as a catalyst for a true and lasting benefit for all people in region and beyond - The appeal for a Center of Disease Control in the Middle East. I am pleased to present to you the broad outlines of this center.

The center should handle diseases grouped into the following three categories: diseases which cause high levels of mortality; diseases which place on populations heavy burdens of disability; and diseases which owing to the rapid and unexpected nature of their spread can have serious global repercussions.

Among the tasks envisioned for the center are harmonisation of surveillance methodologies across the middle east, providing scientific opinions and technical assistance (WHO's Eastern Mediterranean Regional Office, in the early 2000s, found that disease-surveillance systems were mostly inadequate, with insufficient commitment to the system, lack of practical guidelines, overwhelming reporting requirements, weak involvement of the private sector, lack of transparency, shortage of human resources, poor analysis of data, and lack of qualified doctors. Iraq has 6.2 doctors per 10000 people, compared with 216.6 per 10000 in the UK); supporting preparedness planning for health emergencies and providing a rapid response to health threats.

Let us consider the first group of diseases with high mortality. There are six diseases currently causing 90% of mortality within the region. These are acute respiratory infections, which may lead to pneumonia, HIV/AIDS, diahorreal diseases, tuberculosis, malaria and measles. For only one of these, measles, is there a vaccine that can prevent infection. Drugs exists however to control the remaining five, either to cure the infections and prevent death, or in the case of HIV to prevent infection in children and prolong lives.

Whereas we have at our disposal vaccines and technologies to deal with the vaccine-preventable diseases, and continue to make good use of them, we have not yet done so well in making drugs and products e.g. bed nets and diagnostic tests, available to the poorest of the poor, who are most affected by diseases against which there is no vaccine. If we want to empower these populations to pull themselves out of poverty, we must broaden our thinking to include ensuring access to the drugs and products that will prevent the mortality caused by these diseases. The tools are available, and we must use them today while the windows of opportunity remain open, and before drug resistance closes them. But the all encompassing need, is the need for raising awareness in the population in which practices such as selling their medicines to vendors of over the counter drugs, and the mafia' to get the basic and urgent needs of their families. What a travesty.

Infectious diseases with severe and long term disability impose on societies a double burden: not only is economic productivity jeopardised, but the costs of care weigh down the health system which is already fragile most of the time. So the Center of Disease Control approach will be alleviating these burdens through a partnership of work both locally and globally. The third group of diseases - usually described as emerging or re-emerging disease, have economic repercussions well beyond their immediate health costs. They may impede trade and travel, or cause disproportionate alarm, especially if rumours of intentional use become widespread.

The center can answer the international threat from these diseases through well-coordinated global surveillance and response.

Finally the center will have the following priorities:
- To reduce the impact of communicable diseases through intensified and routine prevention and control.
- To continue to strengthen surveillance and monitoring of communicable disease problems of international importance and effective response to these problems.
- To generate new knowledge, tools, intervention methods, implementation strategies and research capabilities for use in developing endemic countries.

Histopathological relationship between severity of inflammatory reaction in gastritis and intensity of Helicobacter pylori in the antrum

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ABSTRACT

Objectives of this study was to investigate the relationship between severity of inflammatory reaction in gastritis and intensity of Helicobacter pylori in the antrum.

Methods: Antrum biopsies from 45 H. pylori-positive patients were selected from the pathology archive at King Khalid University Hospital, Riyadh, Kingdom of Saudi Arabia in three consecutive months.

Results: Sometimes the correlation between the severity of the inflammatory reaction and the intensity of helicobacter pylori was not in a direct relationship. Shown in Group 1, is a mild reaction associated with a large amount of helicobacter; Group 2 cases show a correlation between the amount of helicobacter bacilli and the degree of inflammatory reaction, and Group 3 cases show a severe type of inflammatory reaction and activity but the amount of helicobacter ranges from minimal in number of bacilli and number of foveolar involvement, to very rarely and difficult to find bacilli, but it is present.

Conclusion: Many factors play a role in the relationship between severity of inflammatory reaction and the intensity of helicobacter in antral chronic gastritis. These factors could be host immunity and response, and virulence of the microorganism; There could be genetic factors; or they could be from a diet rich in antioxidants that neutralizes the mediators.

INTRODUCTION

Helicobacter pylori (H. pylori) was cultured for the first time by Warren and Marshall in 1983(1). Since that time, it has been recognized as one of the most common infections in the world and it is accepted as a cause of type B gastritis and duodenal and gastric ulcer as well as a risk factor for gastric cancer[2]. The route of H. pylori transmission, its natural history after initial infection, and factors defining disease severity are currently being investigated. A wide geographical variety of H. pylori prevalence has been reported, with high levels in developing countries and lower rates in developed countries[3], in particular between different ethnic groups[4]. Reasons for the ethnic predilection are not entirely clear. Genetic factors may account for these differences[5]. Ethnic differences may also be a surrogate marker for different environmental exposures within the community. Low socioeconomic status and crowded living conditions commonly associated with poor hygienic conditions have been suggested as major risk factors facilitating H. pylori infection in less developed countries. However, the high variations within and between these countries implies that certain socio-cultural practices influence infection to some extent.

MATERIALS AND METHODS

Antrum biopsies from 45 H. pylori-positive patients were selected from the pathology archive at King Khalid University Hospital, Riyadh, Kingdom of Saudi Arabia in three consecutive months. The hematoxylin eosin stain preparations of each patient were reviewed and the values obtained by selection of the cases that have severe helicobacter intensity and less intense inflammatory reaction (group 1), the cases that have a direct relationship between the intensity of helicobacter and intensity of inflammatory reaction, (group 2), and cases that show intense inflammatory reaction and less helicobacter intensity (group 3). Every slide is examined at scan power view 4X, 10X, and at high power view 20X, 40X.

Aim of the work. The aim of this study was to investigate the relationship between severity of inflammatory reaction in gastritis and intensity of Helicobacter pylori in the antrum by studying the cases of antral gastritis positive for helicobacter bacilli sent to the pathology laboratory in King Khalid University Hospital within 3 consecutive months. The number of cases positive for Helicobacter were 45 cases. 18 of these were female and 27 of were male. In this study it was noticed that the severity of the bacterial infection detected by the number of foveolar involvement and number of bacilli present within the foveola and mucosal surface is not always correlated with inflammatory reaction presented by the amount of inflammatory cells

lymphocytes and plasma cells in the lamin propria and the signs of reactivity in the form of infiltration of the glands and lamina propria by polymorphonuclear leukocytes.

RESULTS

The results were as follows:

Group 1: 15 cases show a mild reaction in the form of few lymphocytes and plasma cells with rare neutrophilic infiltration of the glands associated with a large amount of helicobacter in the form of increased number of bacilli and the number of foveolae involved. *(Fig. 1,2,3 and 4)*

Group 2: 10 cases show a correlation between the amount of helicobacter bacilli (number of the bacillus and number of foveolae involved. Most of the these cases are of moderate degree of inflammatory reaction and moderate amount of helicobacter bacilli. *(Fig. 5, 6 and 7)*

Group 3: 20 cases show a severe type of inflammatory reaction and activity with lymphoid follicle formation in some of them and polymorph within lamina propria and infiltrating glands, but the amount of helicobacter range from minimal in number of bacilli and number of foveolar involvement to very rarely and difficult to find bacilli but it is present. *(Fig. 8, 9 and 10)*

DISCUSSION

Throughout the world, the rate of Helicobacter pylori infection increases with age[6]. In the stomach, it induces significant cellular and humoral immune responses via the antigenic stimulus of mucosal monocytes and T-lymphocytes. Various cytokines, proteases, prostaglandins, and reactive O2 metabolites released from these inflammatory cells increase the endothelial adhesion of neutrophilic leukocytes. Local humoral mediators such as mucosal IgA lead to leukocyte accumulation, and the degranulation of eosinophilic leukocytes brings about the secretion of various cytokines, contributing to the progress of tissue damage[6].

While it is known that humans serve as the natural host of H. pylori, the exact mechanism of transmission is still unclear. Most researchers believe that infection occurs via oral-oral (kissing) or fecal-oral (food or water contamination) transmission.[7] In the United States only 20 percent of the population under 40 years of age is infected. But since infection continues to spread with time, the rate grows with each passing year until 50 percent of all US citizens over the age of 60 are infected. The infection problem is even greater outside of the US, with infection beginning early in childhood, leading to adult rates of infection approaching 90 percent in some parts of Asia and Africa.[8]

In this study group 2 represented by the 10 patients, the amount of bacilli correlate with the severity of inflammatory reaction determined that the severity of infection is important enough to manifest the gastritis, as presented by the severity of inflammatory reaction. The other two groups go against this theory as regards the 20 cases (in group 3) in which the inflammatory reaction is too much to be explained by the low amount and number of helicobacter pylori found within the tissue and glands. In the other 15 cases (group 1) the opposite is shown - in which the number and amount of helicobacter presented and number of foveola involved, are not explained by the amount of inflammatory reaction noticed in these cases. Additionly the activity of the inflammatory reaction presented as neutrophilic infiltrate within lamina propria and glands, were noticed in most or all of the cases ranging from mild to moderate and rarely severe. The presence of eosinophils were noticed in most of the cases. This means that there were probably different responses which depend on interactions between the bacteria and host factors[9]. Other factors may play a role in the host tissue response against the Helicobacter pylori infection. These factors may be the virulence of the organism and its strain and, mast cells [10]. There are many studies investigating the relationship between H. pylori infection in childhood and symptoms of abdominal pain in selected and unselected populations [11-13]. These studies showed that H. pylori infection in childhood was mostly asymptomatic and not associated with specific gastrointestinal symptoms [11-12]. In our study group 1the amount of the bacilli were intense and not correlated with the tissue reaction and may lead to the possibility of a carrier status of the host whocarries the bacilli in large amounts but show no symptoms on clinical presentation and this could be a source of infection, There are some studies investigating the possible protective role of breastfeeding against H. pylori infection [14-16]. Anti-H. pylori IgA in human breast milk has been shown to protect against early acquisition of H. pylori infection in developing countries [15]. Malaty et al. [16] found that breastfeeding had a significant protective effect against acquiring the infection in children. On the other hand, McCallion et al [14] were not able to show the protective role of breastfeeding against H. pylori infection, but they concluded that breastfeeding might reduce the risk of infection. In our study this different tissue reaction could be explained by a difference in the immune response of the host. Alsogenetic factors and family predisposition could play a role in the tissue response to helicobacter pylori as shown by Drumm et al [17] in which family members of 34 children who were diagnosed to have H. pylori gastritis by upper gastrointestinal were investigated by endoscopy. They found that the sero-prevalence of H. pylori was 73.5% in family members of the study group. This study showed that intra-familial clustering of H. pylori infection might be an important risk factor for the spread of infection to the children.

There have been several studies done in Turkish children whose families migrated to Germany before or after their birth, investigating the prevalence and associated risk factors for H. pylori infection [18,19]. The prevalence of H. pylori infection is very high among adults in Turkey. There are data on the prevalence of H. pylori infection in children of Turkish immigrants living in different parts of Europe, however, there is limited knowledge on the prevalence, determinants and associations of H. pylori infection among healthy Turkish children living in their native country [18,20,21].

Also H. pylori defends itself from another immune threat - the human immune system. The immune inflammatory response involves the production of vast numbers of neutrophils that are mobilized to destroy invading pathogens. Safely ensconced behind its mucus and antacid barriers, H. pylori is protected from attack by the immune system which cannot penetrate the mucus lining. Additionally, H. pylori produces another enzyme called catalase that further protects the bacteria from neutrophils. The result is that instead of repelling H. pylori, the immune inflammatory response causes severe damage to the stomach lining, thus contributing to gastritis and ulcer formation. [22] These can explain the variability of inflammatory reaction as a response to helicobacter, and may be caused by familial issues such as diet, that may be rich in antioxidants in some of these patient and this antioxidants can neutralize the free radicals produced by the inflammatory cells. So we can conclude that the inflammation that occurs in gastritis is not related to the amount of the microorganisms by a direct relationship, but may be related to the quantity of the mediators that are produced by the inflammatory cells that can produce chemotactic effects to the lymphocytes and plasma cells.

SUMMARY

The aim of this study was to investigate the relationship between, Helicobacter pylori intensity and histopathological severity of gastritis in the antrum mucosa.

Methods: The study included 45 Helicobacter pylori-positive patients. All cases underwent histopathological examination. All cases were evaluated. The comparision between Helicobacter pylori intensity and histopathological severity of gastritis in the antrum mucosa was instituted.

Results: in the antrum the intensity of helicobacter pylori and the intensity of inflammatory reaction in some cases are correlated, but in most of the cases there was a variability in the degree of intensity of helicobacter and that of inflammatory reaction

Conclusions: In the light of the results of our study, it is suggested that there are other factors that play a role in the development of Helicobacter pylori gastritis. These factors may be the mediators that are produced by the inflammatory cells, which can be neutralized by a diet rich in antioxidants.

Table 1. Table showing the relationship between the severity of inflammatory reaction and intensity of helicobacter infection

	Severity of inflammatory reaction	Intensity of Helicobacter pylori	Reactivity and neutrophils	Eosinophils
Group 1	+	++ - +++	+ - ++	+
Group 2	+ - ++	+ - ++	++	+ - ++
Group 3	+++	Rare to +	+	+-++

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Hypospadias: does the usage of Clomiphene citrate influence the incidence?

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ABSTRACT

Objectives: To evaluate the link between ovulation induction drug (clomiphene citrate) in pregnancy and the prevalence of hypospadias.

Materials and Methods: A retrospective survey of all cases of hypospadias in the period between the 1st of January 1999 until 31 of December 2003. These cases were collected from the Obstetric-Gynecological Department and the Neonatal Care Unit in the Royal Medical Services Hospitals in the south of Jordan. Odds ratios were calculated for the probability of a genital anomaly (hypospadias) after exposure to clomiphene citrate using conditional logistic regression analysis (95% confidence intervals).

Results: We found a total of 104 cases of hypospdias in all hospitals, 19 (0.37%) of them were those who conceived after ovulation induction by clomiphene citrate, while the remaining 85 (0.38%) were the result of spontaneous ovulation. Cases (19/5119) and controls (85/22210) were matched, and odds ratios adjusted for maternal age and birth order were calculated and it was 0.0 for hypospadias associated with clomiphene citrate.

Conclusion: There was no association between clomiphene citrate and external genital malformation specifically Hypospadias. Thus, women exposed to clomiphene citrate after conception, may be assured there is no increased risk of urogenital anomalies (Hypospadias).

Key words: clomiphene citrate, Hypospadias, ovulation induction.

INTRODUCTION

In this year (2006), nearly 45 years will have passed after the first description of a 'chemically' induced ovulation with clomiphene citrate[1]. Over this period it has maintained a solid footing in reproductive medicine .Worldwide, clomiphene citrate is used for inducing ovulation [2], as it is the first-line therapy for physicians practicing general gynecology when initiating treatment of infertility due to ovulatory dysfunction [3,4].

Clomiphene Citrate is a synthetic, non-steroidal estrogen receptor agonist/antagonist. This anti-estrogenic activity is the mechanism of its action in inducing ovulation. Structurally clomiphene citrate is related to diethylstilbestrol. It has a racemic mixture of two 'isomers', zuclomiphene and enclomiphene. The active isomer is enclomiphene, (trans-isomer with only anti-oestrogenic activity), and has a short half life. On the opposite side, the relatively inactive one (zuclomiphene), has a very long half life. As a result, the half life of clomiphene citrate is about 5-7 days, but its metabolites have been found in blood samples on day 22 of the menstrual cycle, and in the faeces up to 6 weeks after administration [5]. In addition, clomiphene citrate displays a tendency for prolonged nuclear receptor occupancy [6] upon repetitive administration ,and this has given rise to speculations about its toxicity and possible teratogenic effects [7].

The extensive experience, gained over a long period of prescribing clomiphene citrate, makes it safe to use

,however , this conclusion is empirical rather than a result of properly designed studies [8], especially in view of the teratogenic and toxic effects that have been described in animals. The aim of our study was to assess the risk of hypospadias among males conceived following the use of clomiphene citrate as an ovulation induction drug.

MATERIALS AND METHODS

A retrospective survey of all cases of hypospadias in the period between the 1st of January 1999 until 31 of December 2003. These cases were collected from the Obstetric-Gynecological Department and the Neonatal Care Unit in the Royal Medical Services Hospitals in south of Jordan. All data was collected from three sources:

Birth registry in each hospital which contains information on the mother, date and time of delivery, assurance number, the mode of delivery, delivery outcome (male, female and any congenital abnormalities), midwife name and any comments.

Neonatal care unit registry also contains information about the newborn taken by the pediatrician and staff nurse.
Pharmacy registries in selected hospitals which contain data on all prescriptions for clomiphene citrate (Clomid). All mothers with epilepsy, diabetes and those diagnosed with pre-eclampsia were excluded from this study, as it has been associated with increased risk for hypospadias. Also mothers other than Jordanians (immigrant) were excluded from this study as some countries of origin (e.g. Turkish) have an increased risk for hypospadias.

In this population based case-control study, odds ratios were calculated for the probability of a genital anomaly (hypospadias) after exposure to clomiphene citrate using conditional logistic regression analysis adjusted for maternal age and birth order (95% confidence intervals).

RESULTS

Of the 27,329 male newborns that were enrolled in this population based case - control study, we found a total of 104 cases of hypospdias in all hospitals. Cases were distributed into two groups; those who conceived after ovulation induction by clomiphene citrate 0.37% (19/5119), and those, control groups, who conceived spontaneously 0.38% (85/22210).

Odds ratios were calculated for the probability of a genital anomaly (hypospadias) after exposure to clomiphene citrate using conditional logistic regression analysis adjusted for maternal age and birth order, and it was 0.0 for hypospadias associated with clomiphene citrate. *(see Table 1)*.

The analysis of these results revealed that, there was no significant differences between the two groups in the incidence of hypospadias (0.37%) compared with (0.38%) in the control one.

Thus fear of hypospadias in women conceived after clomiphene citrate, or who used it incidentally during early pregnancy can be reduced towards the null, as seen in figure 1.

DISCUSSION

Embryologic formation of the penile urethra takes place between 9 and 12 weeks after ovulation and depends on the secretion of testosterone by the fetal testes [9], and by 12-14 weeks gestation, differentiation of internal genital ducts and external genitalia along either male or female is complete [10], therefore, we considered exposure during the 1st trimester to be most important.

Hypospadias is a developmental anomaly considered one of the most prevalent urogenital malformations, the etiology of which, is still not clearly understood [11], and affects 1 in 250 male newborns [12].

In 2002, an increased risk of hypospadias was reported for sons of women exposed to diethyl-stilbestrol (DES) in utero, which is a non-steroidal estrogen, and nowadays it is no longer used in obstetric patients of childbearing age. Because of the fact that clomiphene citrate and DES are related structurally, the latter was reported to be responsible for the appearance of clear cell adenocarcinoma of the vagina of female offsprings [13], and the development of benign epididymal cysts in DES-exposed men [14-19], fear about clomiphene citrate teratogenicity and concern has been raised over a possible increase in disorders of the male reproductive tract, specifically hypospadias.

Fortunately, clomiphene citrate is a well tolerated drug (in 1997 only one of 113 patients dropped out because of drug side-effects in a study by Kousta et al [20]). According to our knowledge of current literature, the potential effects of clomiphene on the fetus have been investigated in animal studies, while others (human studies) investigate the effect of sex hormones exposure to the urogenital system as shown in Table 2.

The overall clinical experience up till now indicates that the use of clomiphene citrate is associated with an incidence of birth defects similar to that observed in the general population [20,21]. Similar observation was reported in our study in which there was no significant differences between the two groups in the incidence of hypospadias (0.37%) compared with (0.38%) in the control one.

At the present time, despite the fact that all collected data was based on routine daily records, and while the comparison must be interpreted cautiously in light of possible selection bias, it may be concluded that clomiphene citrate is not associated with any increased risk of hypospadias.

CONCLUSION

In this study, we found that, there was no association between clomiphene citrate and external genital malformation specifically Hypospadias. Thus, women exposed to clomiphene citrate after conception, may be assured there is no increased risk of urogenital anomalies (Hypospadias).

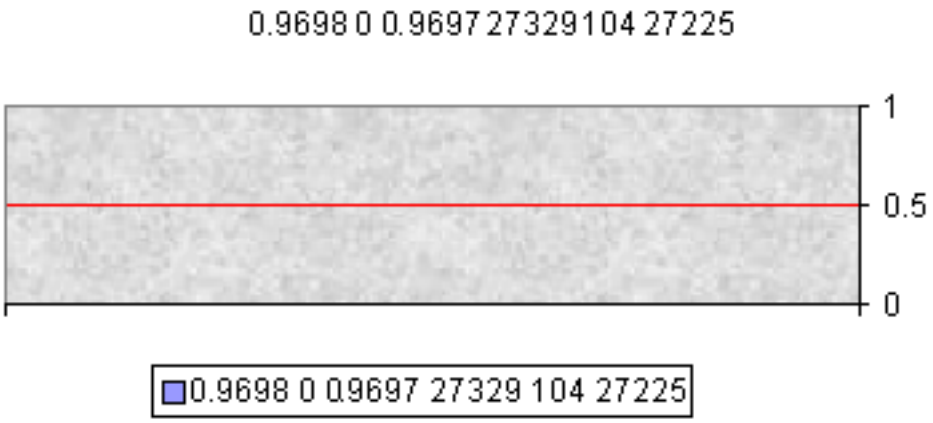
Table 1. Characteristics of 104 boys with hypospadias and 22210 control population

	Without Hypospadias	With Hypospadias	Total	Crude Odds Ratio	Adjusted Odds Ratio	Risk Ratio
With Clomiphene	5100	19	5119	0.9697	-	0.9698
Without Clomiphene	22125	85	22210			
Total	27225	104	27329	0.9697	0	0.9698

Table 2. Effects of sex hormones on genitalia, case-control and cohort studies

Reference No.	Authors	Genital changes investigated	Sex hormones exposure
22	Sweet et al, 1974	Hypospadias	Estrogen, hydroxyprogesteronec-aproate
23	Harlap et al, 1975	Hypospadias, Hydrocele cryptorchidism	Estrogen, progesterone, abortifients
24	Mau, 1981	Hypospadias	Progestin / (pregnancy test)
25	Monteleone et al , 1981	Hypospadias	Sex hormones (not specified)
26	Polednak and Janerich, 1983	Hypospadias	Hormonal pregnancy tests, supportive hormones, oral contraceptive pills
27	Kallen, 1988	Hypospadias	Oral contraceptive pills

Figure 1. Effects of sex hormones on genitalia, case-control and cohort studies.



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Level of Hemoglobin in Sickle Cell Trait in Basrah Using HPLC

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ABSTRACT

Background: Sickle-cell trait (SCT) is the heterozygous state of the sickle cell gene. The aim of this study is to give hemoglobin S(HbS) level in SCT in Basrah (Southern Iraq), which is the discriminating test for diagnosis.

Methods: This was a cross sectional hospital based study for patients with sickling disorder who attended the hematology center for screening. The total number of patients was 647, of them 248 were males and 363 were females.

Results: Mean ±SD of HbS for males was 33.5±5.5% versus 33.4±6.2 % for females, and for both sexes 33.4±5.9%. In most of the patients (69.3%), the HbS range was 31-40 %. Only 5.7% of patients had HbS >40%.

Conclusion: We, for the first time, reported the level of HbS among both sexes with SCT in Basrah.

Key words: sickle, trait, hemoglobin S.

INTRODUCTION

Sickle-cell trait (SCT) is the heterozygous state of the sickle cell gene.[1] The prevalence of sickle cell disease reaches up to 16% of the population in the South of Iraq.[2] Reported incidence of SCT in Bahrain is about 11%,[3] and among Omani women is 9.1%.[4]

SCT contrary to common beliefs is not always a benign condition.[4] It has been associated with increased mortality during physical exertion in athletes and non-athletes, reduced exercise tolerance during long-distance running, increased coronary risk and coronary bypass graft surgery, heightened risk of renal carcinoma, thrombo-embolism and death during prolonged air flight, and a 10-fold increase in the risk of hemorrhagic stroke.[5] Differentiating this condition from other sickle syndromes is mandatory to take certain precautions during surgical procedures and other stressful situations, to detect rare but important complications.

The use of high-performance liquid chromatography (HPLC), which facilitates quantification of the various haemoglobin types, may help in subclassification of the sickle syndrome and make diagnosis of SCT easier.[6] The aim of this study is to give hemoglobin S (HbS) levels in SCT in Basrah (Southern Iraq), which is the discriminating test for diagnosis.

METHODS

This was a cross sectional hospital based study for patients with sickling disorder who attended the hematology center for screening. From each patient 5 ml of blood was taken in an EDTA tube and the test performed within 3-4 days, in the teaching hospital in Basrah. Patient samples were studied by HPLC on a Bio-Rad Variant [2] instrument (Bio-Rad Laboratories, Hemel Hempstead, Hertfordshire) to do quantitative assessment of haemoglobins F, A, A2, and S. The study was done in the years 2000-2005.

A diagnosis of SCT was made if patients had both haemoglobin A and HbS, with the proportion of haemoglobin A being greater than that of HbS.[7,8] The total number of patients was 647, of them 248 were males and 363 were females.

RESULTS

Mean ±SD of HbS for males was 33.5±5.5% versus 33.4±6.2 % for females, and for both sexes 33.4±5.9% *(Table 1)*. While for hemoglobin F for males was 1.5±1.5% versus 1.4±2.8% for females, and for both sexes 1.5±2.3%. In most of patients (69.3%), the HbS range 31-40 % *(Table 2)*. Only 5.7% of patients were having HbS >40%.

DISCUSSION

Mean level of HbS in our study for both sexes was 33.4±5.9 % among SCT. In Iraqi,Al-Shawi TS, found mean ±SD of HbS to be 34±6.[2] in males with SCT in a study of army recruits.[9] Previous study from Basrah concentrated on a trimodal distribution of the amounts of HbS, but no exact range value was given.[10] In general the level of HbS in SCT ranges from 20-50%[11] with a mean value of 38±5%.[12,13] In Jordan, the HbS level among SCT was 39.8± 3.8%.[14] In conclusion: we for the first time reported the level of HbS among both sexes with SCT in Basrah.

Table 1. Levels of hemoglobin S and F among 647 patients.

	Males (248)	Females (363)	Total (647)
Hemoglobin S mean ±SD	33.5±5.5	33.4±6.2	33.4±5.9
Hemoglobin Fmean ±SD	1.5±1.5	1.4±2.8	1.5±2.3

Table 2. Different levels of hemoglobin S.

Hemoglobin S (%)	Males n (%)	Females n (%)	Total n (%)
<20%	3 (1.0)	8 (2.2)	11 (1.7)
20-30	62 (21.8)	88 (24.2)	150 (23.1)
31-40	205 (72.1)	244 (67.2)	449 (69.3)
>40	14 (4.9)	23 (6.3)	37 (5.7)
Total n (%)	284 (100)	363 (100)	647 (100)
N denotes number.			

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Assure Safer Drug Therapy in the Middle East

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Seven years ago, in 1999, the Institute of Medicine in the United States published its report" To Err Is Human: Building a Safer Health System". The report claims that medical errors[1] cause between 44,000 and 98,000 deaths in the USA every year. Using the more conservative figure, medical errors rank as the eighth leading cause of death, killing more Americans than motor vehicle accidents, breast cancer, or AIDS. In addition to this extraordinary human toll, medical errors result in annual direct costs of $17 to $29 billion in the United States. Finally, fear of becoming a victim of medical errors, may lead patients to delay obtaining potentially beneficial medical care, which may allow their illnesses to worsen[2].

A big part of Medical Errors are related to the mistakes made by a doctor during the Drug Therapy. Doctor might miss particular contra-indicated drugs while making prescription for the patient, make mistakes because of sound-alike or look-alike medications, or prescribe the wrong dose for a child or even misinterpret the Lab Result because of drug therapy.

As it is the job of healthcare professionals to provide healthcare services to people, they should work in an adequately equipped medical environment, that provide them with information about patient's current therapy and disease state as well as drug information software to provide alerts and precautions to reduce medication errors.

Currently, healthcare professionals use very different sources of drug information to learn about medications and their interactions. Some hospitals use Micromedex or First DataBank, the international drug databases that contain a huge number of drugs available worldwide. But because of the price, these products are not available for small clinics and private doctors. Some doctors download free drug database for US or UK markets on their PDAs from the web. Certain part of healthcare professionals uses drug catalogs published by HCP Healthcare Publications or similar companies. Of course, the Internet is also a source of drug information for doctors. It's also possible to download a list of drugs registered in the country from the Ministry of Health web site, but it's a simple plain list with product's brand name and price information.

In spite of the fact that there is a certain number of sources that might help healthcare professionals to get information about the drugs, there is no product exists on the market that would contain full details about the medications that are presented in UAE or the entire Middle East. And even more, only small number of currently available sources of drug information can be integrated into the existing hospital's Electronic Patient Record.

In the late 2005, software company Business Information System started the project to create the expert system that would contain drug database as well as logic to check drug-drug interactions, dose check, sound-alike or look-alike drugs and many other things. The system got code name DRUGS and was intended to be used as a part of hospital's Electronic Patient Record.

In the beginning of year 2006 another software development company based in UAE, Aroma Software, started the similar project to create Drug Database that would contain all drugs available in the United Arab Emirates. The information about each drug would contain the details like Generic Name, prescription recommendations, precautions, contra-indicated drugs and diseases and so on. The product would also contain the logic to check drug-drug interactions, dose check and precautions. The project got a code name Snowhorse. It was intended to be used first as stand-alone application and then as a component that might be integrated into hospital's Electronic Patient Record.

In early July 2006 both companies had made a decision to merge their efforts and create common program that would implement the ideas of both companies in helping healthcare professionals to deliver safer drug therapy to their patients. The new joint project got a name Greenrain. As a first step, the product will be marketed in United Arab Emirates, then in GCC countries and finally in other countries in the Middle East.

First of all, the product will help doctors to reduced medication errors. At the time doctor make a prescription, the program performs the following checks:

1. Drugs currently used have the same Generic Name as currently prescribed drugs - this check will prevent any duplication in therapy and avoid Adverse Drug Events.
2. Contra-indicated drugs with currently used to find drugs in the prescription that conflict with currently used drugs.
3. Contra-indicated diseases of the patient to find drugs in the prescription that conflict with the diagnosed diseases.

4. Drugs with the same therapeutic use - this will help doctors to avoid duplication in therapy. If currently prescribed drug is in the same therapeutic use as currently used drug, then Greenrain makes a check for sound-alike and look-alike drugs.
5. All the checks above are made against the other drugs in the same prescription.
6. Dose check to find the situations when currently prescribed drug has wrong dosage taking in consideration Renal and Hepatic Impairment possibility.
7. Finally, the program provides doctors with drug information to make it easy for them to learn the details about particular drugs, its indications, contraindications, precautions etc.

The second, Greenrain helps doctors to avoid misinterpretation of Lab Results due to Drug Therapy. At the time when new Lab Results are saved in hospital system, they are checked against currently used drugs and currently prescribed drugs to see if there are any drugs currently taken by the patient that might affect the Lab Results.

The third, the program checks precautions of each currently prescribed drug regarding the Pregnancy, Habit, Influence of food or drinks, Drug Availability, Discontinuation, Prolonged use, Start and stop conditions and so on.

The fourth, Greenrain support drug substation by checking if currently prescribed drug can be replaced by another drug based on Generic Name. Any particular drug might be replaced by another one with the same efficacy by with less side effects, or to insure that patient gets cheaper drug with the same efficacy to promote patient compliance.

All the checks mentioned above are possible because of the drug database that is included into the program. The drug database contains information about all drugs approved and licensed by Ministry of Health of United Arab Emirates and it will be regularly updated as new information is available.

The program will be released in two major versions. Doctor version that contains full drug search facility and basic functionality for creating prescriptions and managing patient details, and Hospital version that might be smoothly integrated into hospital's Electronic Patient Record.

The Greenrain will significantly help to improve the quality of Healthcare Services in the region. The benefits the program brings might be considered from two different perspectives.

From the medical point of view, the safety of the patient will be increases because of the fact that number of Medication Errors will be reduced through the checks explained above. The program provides doctors with information and alerts to warn about possible issues with the particular drug or Lab Results. By providing the mechanism to warn doctor about possible problems, the mortality and morbidity of the population due to Adverse Drug Events will be decreased.

From financial perspective, the number of patient visits will be reduced, as well as patient's stay in the hospital will become shorter. This will allow hospitals to save additional budget that is currently spent on the treatment of Medication Errors consequences.

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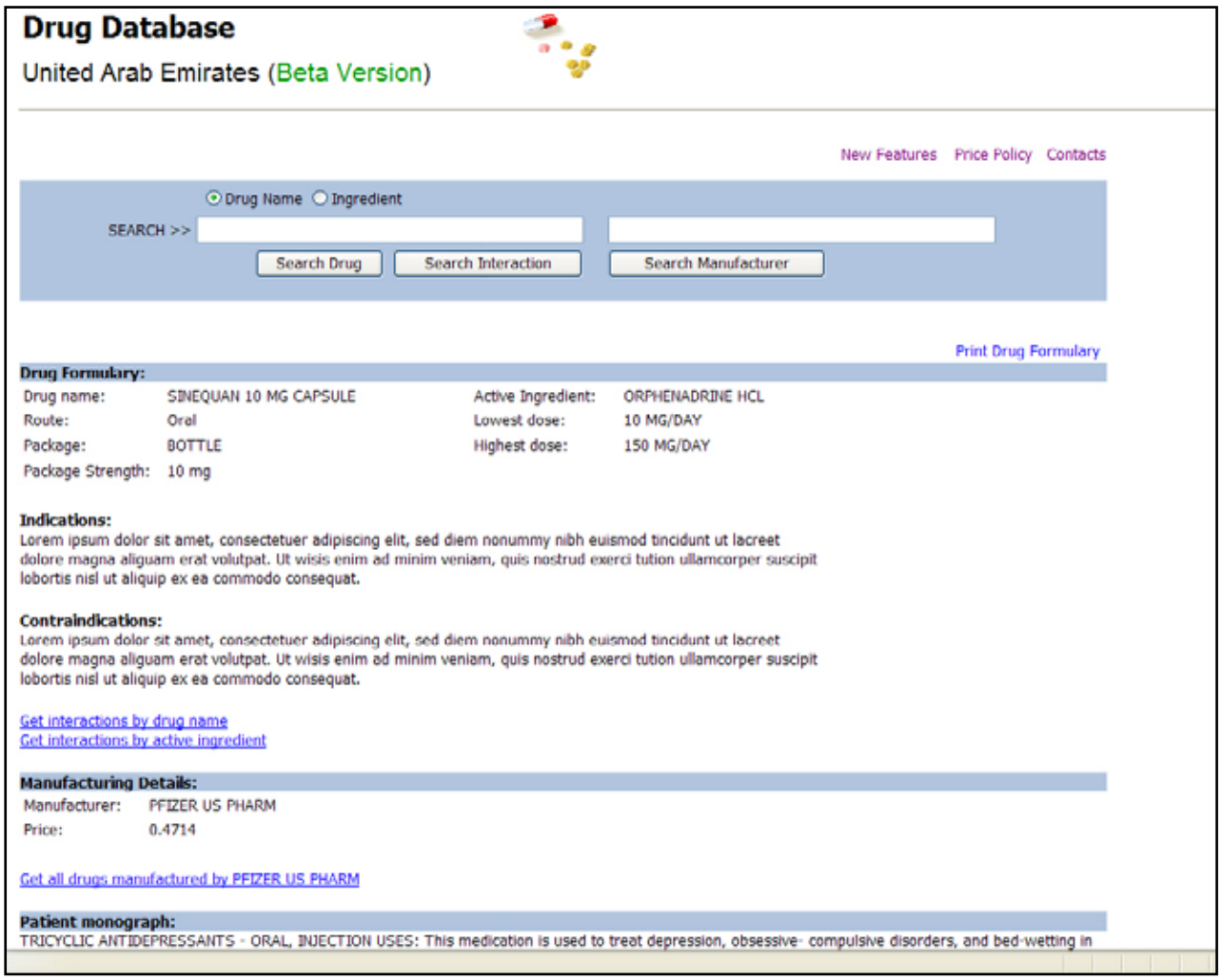
Drug Database
United Arab Emirates (Beta Version)
New Features Price Policy Contacts
Drug Name Ingredient
SEARCH >>
Search Drug
Search Interaction
Search Manufacturer
Print Drug Formulary
Drug Formulary:
Drug name: SINEQUAN 10 MG CAPSULE
Active Ingredient: ORPHENADRINE HCL
Route: Oral
Lowest dose: 10 MG/DAY
Package: BOTTLE
Highest dose: 150 MG/DAY
Package Strength: 10 mg
Indications:
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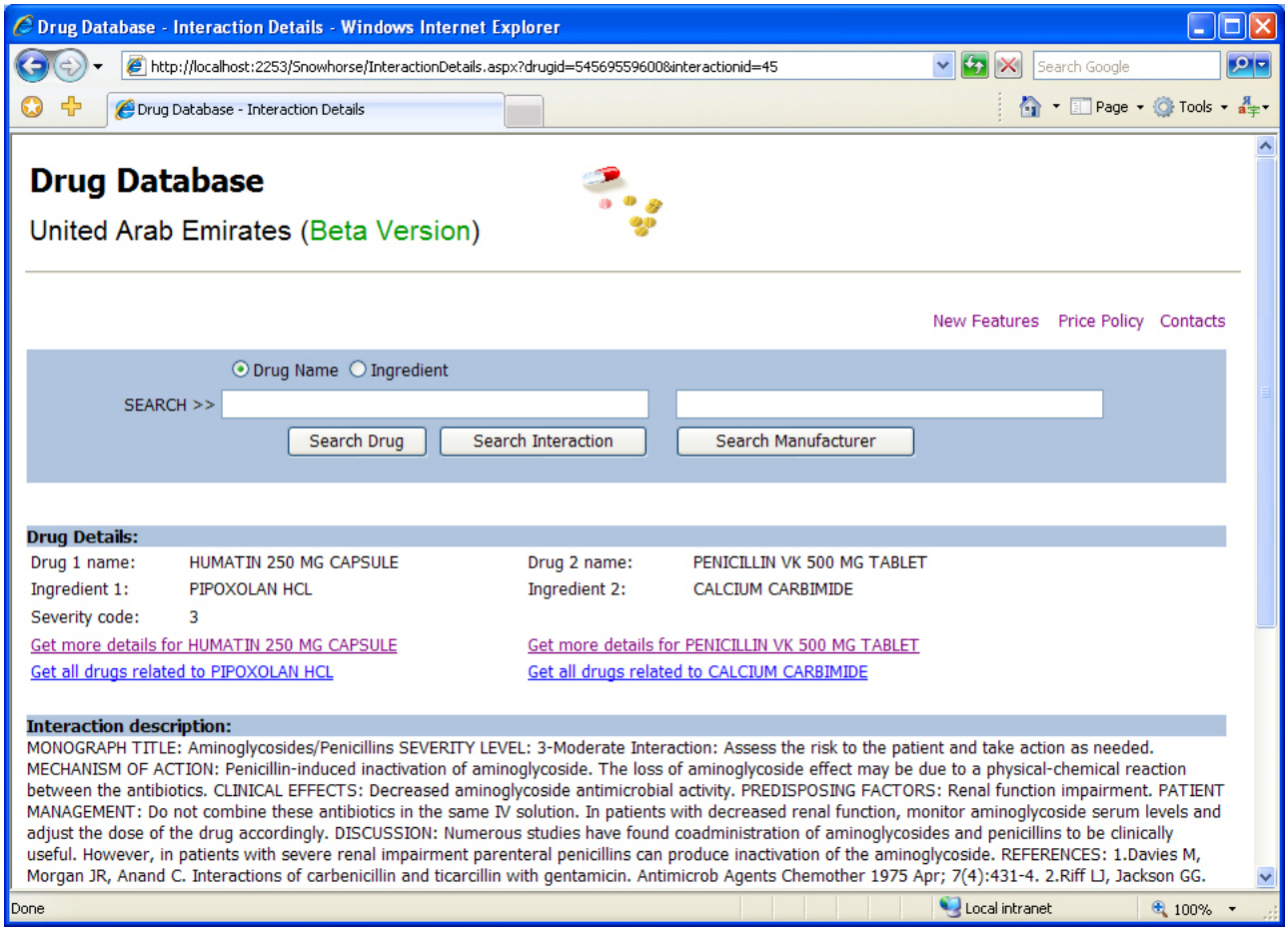
Get interactions by drug name
Get interactions by active ingredient
Manufacturing Details:
Manufacturer: PFIZER US PHARM
Price: 0.4714
Get all drugs manufactured by PFIZER US PHARM
Patient monograph:
TRICYCLIC ANTIDEPRESSANTS - ORAL, INJECTION USES: This medication is used to treat depression, obsessive- compulsive disorders, and bed-wetting in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Drug Details:
Drug 1 name: HUMATIN 250 MG CAPSULE
Drug 2 name: PENICILLIN VK 500 MG TABLET
Ingredient 1: PIPOXOLAN HCL
Ingredient 2: CALCIUM CARBIMIDE
Severity code: 3
Get more details for HUMATIN 250 MG CAPSULE
Get more details for PENICILLIN VK 500 MG TABLET
Get all drugs related to PIPOXOLAN HCL
Get all drugs related to CALCIUM CARBIMIDE
Interaction description:
MONOGRAPH TITLE: Aminoglycosides/Penicillins SEVERITY LEVEL: 3-Moderate Interaction: Assess the risk to the patient and take action as needed. MECHANISM OF ACTION: Penicillin-induced inactivation of aminoglycoside. The loss of aminoglycoside effect may be due to a physical-chemical reaction between the antibiotics. CLINICAL EFFECTS: Decreased aminoglycoside antimicrobial activity. PREDISPOSING FACTORS: Renal function impairment. PATIENT MANAGEMENT: Do not combine these antibiotics in the same IV solution. In patients with decreased renal function, monitor aminoglycoside serum levels and adjust the dose of the drug accordingly. DISCUSSION: Numerous studies have found coadministration of aminoglycosides and penicillins to be clinically useful. However, in patients with severe renal impairment parenteral penicillins can produce inactivation of the aminoglycoside. REFERENCES: 1.Davies M, Morgan JR, Anand C. Interactions of carbenicillin and ticarcillin with gentamicin. Antimicrob Agents Chemother 1975 Apr; 7(4):431-4. 2.Riff LJ, Jackson GG.
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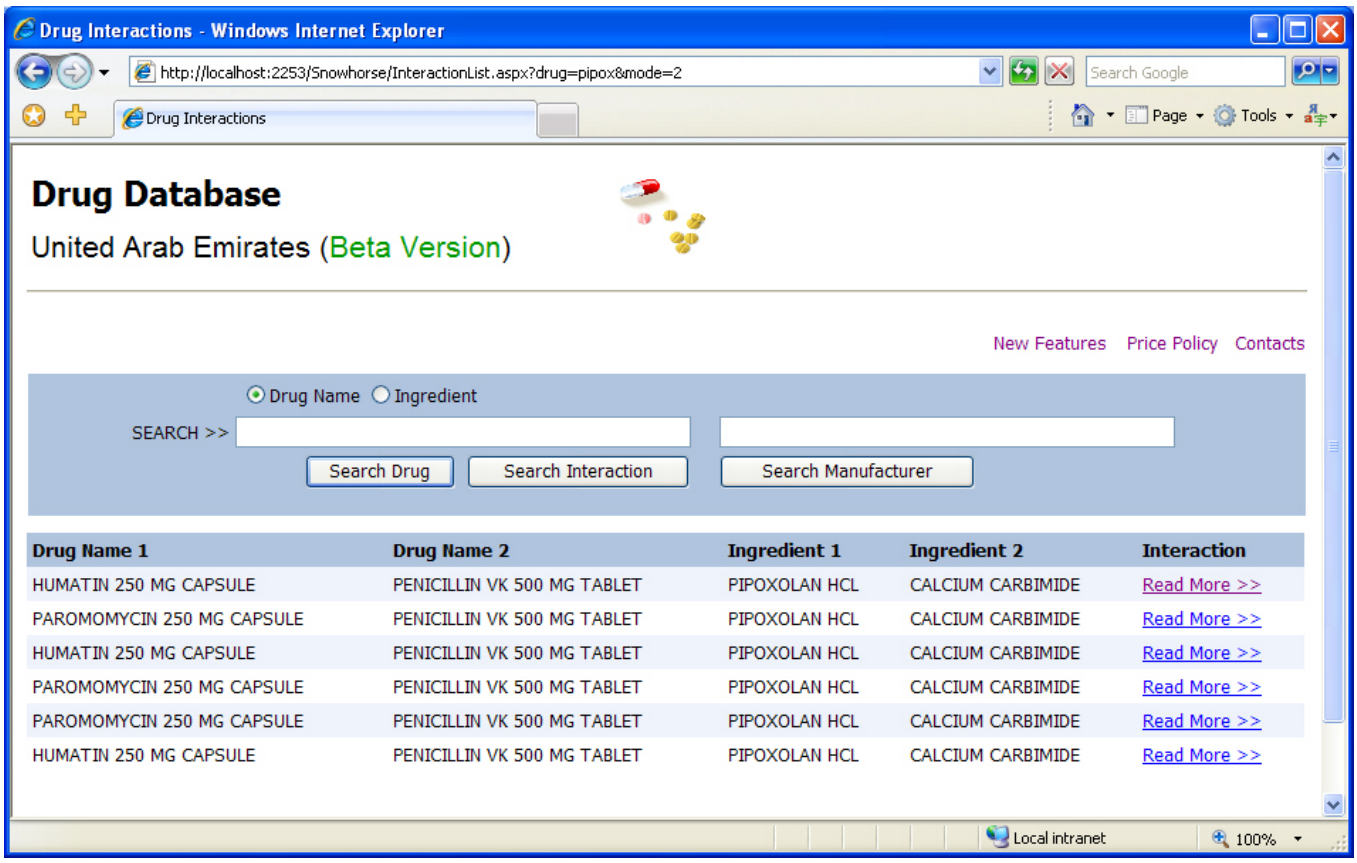
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HUMATIN 250 MG CAPSULE | PENICILLIN VK 500 MG TABLET | PIPOXOLAN HCL | CALCIUM CARBIMIDE | Read More >>
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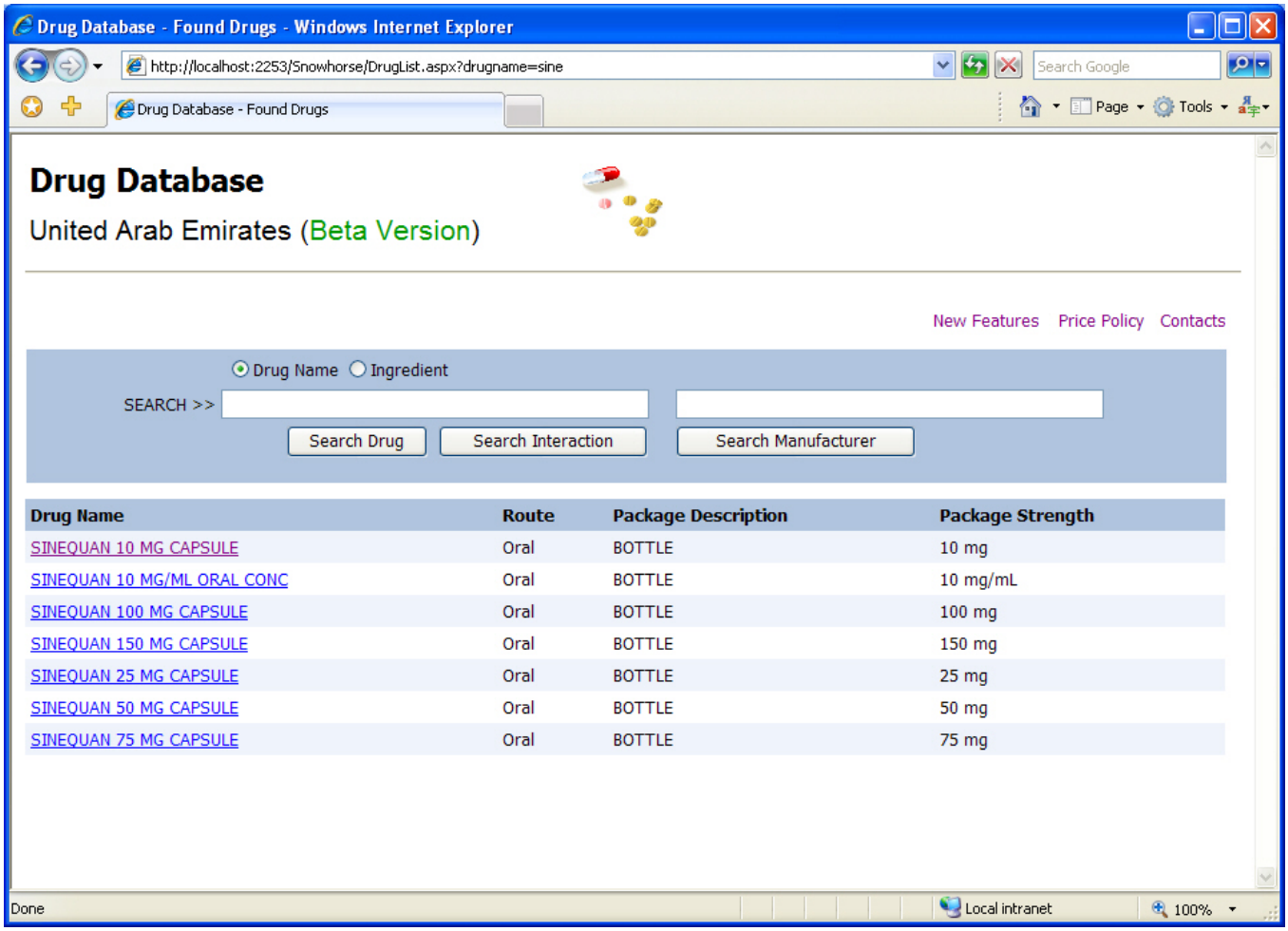
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Drug Name Ingredient
SEARCH >>
Search Drug
Search Interaction
Search Manufacturer
Drug Name | Route | Package Description | Package Strength
SINEQUAN 10 MG CAPSULE | Oral | BOTTLE | 10 mg
SINEQUAN 10 MG/ML ORAL CONC | Oral | BOTTLE | 10 mg/mL
SINEQUAN 100 MG CAPSULE | Oral | BOTTLE | 100 mg
SINEQUAN 150 MG CAPSULE | Oral | BOTTLE | 150 mg
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An investigation of medical staff awareness of patients' rights in Fasa hospitals and medical centers

S. Habibolah Kavari

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ABSTRACT

Introduction: The patient's rights refer to all points and abilities or certain certificates that law has given to patient. Perhaps the most important challenge that happens between patients and related staff is due to lack of staff knowledge concerning patient's rights. The object of this study is to determine the degree of awareness of those who are in charge of taking care of patients on patient's rights in Fasa hospitals and medical centers. Instrument and

Procedures: In this project the instrument for data collection is a questionnaire consists of two parts according to the patients' rights charter. The participants in this study were including %3/2 physician, %47/6 nurse, %3/2 radiology staff and %25/4 auxiliary nurse, %9/5 personnel, %11/1 nursing student.

Findings: The findings show that the most degree of awareness related to patients' rights that is equal to %91, was about being aware of the treatment method. All the staffs were totally aware of the subject. The least degree of awareness that is equal to %53 was related to patient's rights in regard to the awareness of their date of discharge.

Conclusion: Making the hospital staffs and hospital managers familiar with patients' rights and having organization foe supervision on the quality of paying attention to patient's rights in different hospitals can be the best suggestion.

INTRODUCTION

This study has been done to investigate the degree of medical staff's awareness of patients' rights. Patients' rights refer to all points and abilities or certain certificates that law has given to patients.

Medical staff should gain, learn and use the medical principle of morality along with experimental, applied and theoretical sciences and this is the medical university's responsibilities to incorporate it in their plans in such a way that the university students learn them.[1]

Although it takes a long time to understand that patients have rights in their remedy and care needs, remedy and treatment service systems in advanced countries, take the lead in assigning the patients' rights.[4]

Nowadays, it is necessary, not only to pay more attention to patients' rights but also to reinvestigate the social aspect of patients rights that include the preparation of necessary information and the forming of suitable laws in the field of making remedial services better and exploiting the latest progress in remedial services.

With the passing of time patients are starting to have more participation in making medical decisions in regard to their own problems.

The thing that needs to be changed, here in Iran, is the resistance of some doctors against the changes. Doctors should make themselves ready to accept the patients' opinions about their own problems. Although it was a presumption in the past that patients should not know more about their own problems, we should try to put it aside and change our mind.[5]

To some extent, we can say that the most problematic matters that happened between patients and medical staff is lack of knowledge of medical staff about patients' rights and also lack of knowledge of patients about their own rights.

In this study we try to examine the level of Fasa medical staff's awareness of this matter and we will examine the level of awareness of these staff who work in Fasa training hospitals.

PATIENTS' RIGHTS AND LAWS

These days the emphasis on patients' rights in remedial health services systems in most countries, brings about change.

This matter has influenced the collective laws of advanced societies even in 20th century. [2]

In most countries the civil courts play an important role in regard to violation of patients' rights. Such courts inspect the patients' complaints even when there is no clear law in regard to support of the patients' rights. Propounding patients' rights in the legal system of countries is an unavoidable matter.

1) Make the patients' rights lawful:
Choosing a suitable solution for making the patients' rights lawful need some conditions such as political and social conditions, legal regulation and methods of lawmaking in countries. Introducing patients' rights directly into country's laws, has two benefits:

1. Patients' advantage
2. Supporting the relationship between patient and personnel who work in health care service systems.

2) Penal law and patients' rights:
Discussions about care and personal rights is a nonessential matter unless the basic structure of justice and fairness I in place.

Lack and shortage of care may cause some such crimes and most of the time it is due to neglect and carelessness in patient matters. "Crime" in health care is defined as swerving from those standard directions that cause civil, penal and criminal violations.

3) Civil law and patients' rights:
In Iran according to article 5 of civil law, if a disability or deficiency happens to a person's health because of a phenomenon or event and this matter causes the patient some problems, the person who causes this problem and this event is responsible for compensation for the losses, injuries and damages.

Article 4 of disciplinary direction in regard to investigation of professional and union violation in the medical profession says that: those who work in medical professions have a responsibility to keep patients' confidentiality unless in situations and matters that the law does not protect such.

INSTRUMENTS AND PROCEDURES

The main object of this research is the assignation of effective factors that have influence on the degree of awareness of medical staff who work in Fasa medical courts regarding patients' rights. Doctors (3.2%) nurses (47.6%) auxiliary nurses (25.4%) personnel (9.5%) radiology personnel (3.2%) and nursery students (11.1%) are those who play a role in this research.

INSTRUMENT FOR GATHERING INFORMATION

The instrument that is used in this research is a two part questionnaire that is prepared based on the charter of patients' rights. These two parts are as follow: Part A: Demographic features Part B: 20 questions that examine the effective factors that have influence on the degree of staffs' awareness. The credibility of the questionnaire is guaranteed, and it is analyzed by SPSS and Excel programs after they have been gathered.

RESEARCH FINDINGS

The following results have been gained from this research:

1. The degree of awareness from the most to the least is as follows: women personnel 74.6%, married personnel 52.6%, educated personnel 53.2%, nurses and midwifes 24.6% and official personnel 30.2% in health care staffs' opinion, 81% of patients have the right not to accept their doctor's method of treatment.

- 91% of personnel believe that the doctor must explain the method of treatment of the patient.
- research shows that 70% of society believes that the patient has the right to know about their own rights when they enter a medical center.
- 53% of research society believes that the patient should know about the date and time of their discharge.
- 86% of researchers believe that patients should be satisfied with health and remedy services
- 78% of staff believe that patients have the right to know about the hospital laws and regulations.
- Most awareness of patients' rights is among women personnel with the average of 47.6%

DISCUSSION AND CONCLUSION

Hospitals and related organizations exist because of human beings and their health.

Human sources are the most important source of funds in most management books and we see that there is no improvement in an organization unless physical resources accompany financial resources.

The more staff's awareness of patients' rights, the more patients are satisfied and this leads to better and faster health care services to patients. Through recognition of the factors that influence staffs' unawareness of patients' rights and patient rights charters and the omitting of them, the better the health care services in our hospitals.

According to Mr. Nematollahi's study entitled "comparing

the law of patients' rights in Iran with the charter of patients' rights "and Shiraz medical university doctors' poll, 67 General physicians and experts completed the questionnaire and 64.2% of doctors believe that patients can not choose the method of treatment for themselves and 80% of them believe that patients have the right to know that the hospital that they enter is a training hospital.

The degree of understudy staffs' awareness of patients' rights in regard to knowing about the doctor's expertise is 98.9%, knowing about the doctor's name is 97.9%, knowing the name of care personnel is 69.6% and knowing about their expertise is 72%.

Comparing this research shows that the degree of awareness in this field has been increased. The following suggestion is given by the researcher:

1. Make the care personnel more familiar with the articles in the patients' rights charter.
2. Make managers more aware about patients' rights in order to control the hospital personnel's' work.
3. Make the patient and their family more familiar with patients' rights in order to have them request these rights from the hospital care personnel.
4. Establish an institute or an organization in order to control the hospital's work.

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The investigation of effective factors on patients' satisfaction Parent-Adolescent Relationships in the City of Amol

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M. Jamshidi

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ABSTRACT

Introduction: Study on the subject of value conflict between parents and children and the identification of the causes. Objectives: This research was conducted to investigate factors related to value conflict between parents and children. The aim of this research is to identify the value order in two generations (fathers and their children) and to specify the value gap and the reasons related to it.

Method: The method is survey based research. The basic variables of this research were contradiction of norms, individualism, family contradiction within the reference group, value diversity and identity crisis, as independent variables, and value conflict as dependent variables. For collecting data, a questionnaire was used as the instrument. 240 students were chosen by simple random sampling. Furthermore, to analyze the data, descriptive and inferential statistics (Pearson correlation) were used.

Findings: It was found that there are significant relationships between variables such as contradiction of norms, fathers as the reference group, family conflicts, individualism, educational styles, identity crisis, and value conflict.

Conclusion: This research has shown that from the viewpoint of the students, regardingthe value diversity between the two generations, the amount of individuality of the children, the parenting styles (authoritarian, authoritative, permissive) the identity crisis of the children, the freshness of value messages from the side of the fathers, the plainness in the values of the fathers, with the value conflict between fathers and children, has a meaningful relationship.

Key words: Parent; Adolescent; Relationship; Value Conflict; Family

INTRODUCTION

Relationship is a process through which the "messages", regardless of their nature and the instruments that are used, are being transferred from one person to the other. Therefore, the mutual action becomes possible (Mohseni, 2000:19). Values are the important qualifications of societies.

Values in different dimensions have great influences on actions and these can be observed. Most actions of the individuals result from innatevalues of the societies during the growth period of the individuals, and innate values in each generation have a relationship with the existence of a "valued generation" of that society (Yousefi,2004:27).

The most widely used typology of parenting behavior has been developed by Baumrind (1991). She identified three parenting styles: authoritarian, authoritative, permissive. Parents who practice the authoritarian style focus on their control of the child, and his/her obedience. A variety of problems were identified among the children of authoritarian parents. These children tend to be uncooperative and to suffer from low self-esteem, low initiative, and difficulties in making decisions in adulthood. Parents who adopt an authoritative style tend to have good nurturing skills and exercise moderate parental control to allow the child to become progressively more autonomous. Children raised according to this style are not completely restricted but are rather allowed a reasonable degree of latitude in their behavior. Parents who adopt the permissive style encourage their children's autonomy and enable them to make their own decisions and regulate their own activities. They avoid confrontation and tend to be warm and supportive people (Maccoby and Martin, 1983; Steinberg et al., 1994; Stewart and Bond, 2002).

In a recent study, Phinney and her colleagues (Phinney et al., in press) suggest that the developmental changes observed in adolescence are universally toward effecting a compromise or balance between self and other concerns.

Many researchers in different fields such as philosophy,

education, economy, sociology, and psychology have paid attention to the concept of value (Khalifeh, 1999:15). It is natural that each generation is anxious about its outcome and has expectations of the next generation. He/she pays attention to this outcome and accepts the values and the customs and delivers them to the next generation. But the new generation is always unaware about the values and the importance of the outcomes. Because they have not understood what great capital has been spent for them and therefore, they do not pay attention to itand due to being young, follow the new patterns and values (Alikhani, 2003:29).

Values are separated ideals, while customs show the specified principles and rules that people are expected to observe. Customs show the obligations and not the social life (Aerabi, 1994:65). According to the views of Bals, the observers of public culture and historians believe that about every 10 years a new shape of generation mentality exists. (Bals, 2001:6).

Making no distinction between the different meanings of the generations, has provided the background for the combination of meanings from the generation (Azad Armaki, Ghafari, 2004: 27). For reviewing the generation gap between children and parents, some studies have been undertaken(Gilack, 1994, Zain Abadi, 1998, Teymouri, 1999). In most of this research, the religious, economic, social and political values between the two generations have been reviewed. These studies show that the gap between the generations is a common phenomenon and by considering the different conditions of the society, acceptance of the parents and the children in the society is generalized for study. Also other studies support the probability of contrast between the parents and the children on the negative social behavior on the part of the children. (Shek, 2001, Stephenson et al, 1998, Todd, 1972, Rajput, 1999).

Identity means establishing balance between yourself and others. In some cultures, identity is equivalent to the personality and the originality. In case a teenager does not become successful in shaping his/her individual identity, and in spite of the fact that it is from his/her unfavorable conditions of childhood or present unfavorable conditions, a crisis is created that is called the crisis of identity or becoming 'lost' (Sharafi, 2001:18). This is a window that one can look through to the matter of gap between the generations and the crisis of values in periods of life. The aim of this research is the identification of different values of two generations (fathers and children) and measuring the conflict of values between the two generations. Also this aim includes identifying the elements that resulted in the existence of a conflict of values between parents and their young children. The existence of a conflict of values causes friction and segregation and scratches the relationships of the generation. The non-existence of this conflict will result in the establishment of social order.

THEORETICAL PERSPECTIVE

One of the important matters in the generation gap is the insufficiency in the process of transfer of values and customs to the new generation. According to Parsons, there is a matter in society named the transfer of essential values to the individuals in the society and these values specify the quality of the actions of individuals and they play an important role in the continuation of social order. On the one hand, the gap of generation is influenced by the social values, social supervision, individuality and training methods, and on the other hand, it is inspired from the cultural values such as diversity of values and identity crisis.

Value gap between the generations is causing a distinction between the values of two generations in such a way that the values of these two generations will not conform to each other.

Using special methods of training by parents such as reasoning against the powerful actions, has different influences on innating the values and ideas of parents by children.

According to Zimmel, the process of social acceptance, reaction paradigm against the conditional paradigm, considers parents as the special elements for the nourishing of childhood and teenager periods of children. The families put into practice the process of social acceptance through the education of customs and transfer of values and social order.

Innating the values is the inclination of the children in following the positive specialties of parents. Therefore, parents who put emphasis on affectionate methods such as reaction by the children and their acceptance, and also submitting their proper experiments for better understanding of social values by children, prevent the existence of a value reaction between themselves and their children.

METHOD

In this research, the population consisted of 957 college level students of girls and boys of Amol city, in the academic year 2004-2005. As there are 4 college level centers in this city (two centers for girls and two centers for boys), at first, two centers were chosen according to the gender. Using simple random sampling, the sample consisted of 240 persons. The variables in this research in the framework of questions of the specifications of the children (6 questions), fathers (9 questions) and 88 items

related to the measurement of value conflicts between parents and children included the value gap between the generations, value supervision (ordering to do and ordering not to do by the parents to the children), contradiction of customs (imitation in wearing clothes), family contradiction (quarreling at home), individuality, value diversity (companionship with friends), value plainness, redundancy of messages (surplus, old and repeated), newness of messages, parenting styles (authoritarian, authoritative, permissive), reference group, identity crisis and value hypocrisy according to the five point scale of Lickert and specifying the amount of approval or disapproval with each items which have been recognized. Also the measuring instrument (a questionnaire) with the calculation of Cronbach's alpha coefficient (0.86), indicates a high credibility of the research instrument.

RESULTS

In the following table the existence of the relationship between the value diversity asked ofthe two generations, the reference group of fathers, family contradiction, individuality of the children, identity crisis of the children, newness of values by the fathers, plainness in the values of the fathers with the value contradiction of two generations, are shown in Table 1.

According to Table 1, the amount of correlation between the value contradiction and value conflict between the fathers and the children, indicates the meaningful relation between the two variables (sig=0.03). It also shows the amount of correlation between pattern accepting from the fathers, family contradiction, individuality of the children, identity crisis of the children, newness of values by the fathers, transparency in the values of fathers and value conflict between fathers and children, which is significant at the level of 0.02, 0.04, 0.04, 0.01, 0.04, and 0.05.

Also Table 2 shows no relationhip between the custom contradiction, supervision of fathers, hypocrisy of fathers and value redundant with value conflict between the two generations.

As Table 3 shows, there is no meaningful level between the authoritarian and authoritative parenting styles. But the amount of correlation of parenting style of permissive parents with value conflict of the two generations shows a meaningful level (sig = 0.05), which is the meaningfulness between the two variables.

Table 4 compares the Mean of value conflict according to gender. Table 4 shows the comparison of value conflict averages of the children (girls and boys) in respect to the fathers. By considering the results of the Levin test that shows the equality of variance in two societies, we come to the conclusion that the resultant average from the two groups, has no meaningful difference with each other (by considering the meaningful level of 0.12).

DISCUSSION

As mentioned before, between the custom contradiction and value conflict of two generations there is no meaningful relationship. However, there is a meaningful relationship between the value diversity and value conflict of the two generations and the resulted correlation between the two variables is in the reverse direction and 99 percent confidence is meaningful.

According to the opinions on value diversity, as the human being in society confronts different groups in which special values govern and the generation of the children in such a situation confront different values and sometimes contradicted values, this matter can result in value diversity of two generations. In its turn it can result in value conflict of the two generations and as the calculated average of these two variables are very close to each other, it can be said that they influence each other. But as the correlation shown is reversed, it is possible to conclude that the students from whom the questions have been asked, have referred to the values of their parents at the time of diversity.

Also it is observed that between the numbers of the reference group of the fathers with the amount of value conflict of the two generations, there is a meaningful relationship and the correlation direction between the two variables is reversed. It means that as little as the fathers are in reference group of the children, there is more value conflict between them and this relationship is confirmed by 99 percent confidence. This research shows that between the supervision of the fathers with value conflict, there is no meaningful relation and the resulted correlation between two variables is not meaningful. As much as the contradiction of families is increased, the amount of value conflict is increased too and the related hypothesis is confirmed with 99 percent confidence. According to the theories it is observed that the contradiction of fathers-children and the social behavior of the teenagers have influence on each other and these two have correlation. As much as the individuality of the children's generation is increased the amount of value conflict is increased too and vice versa. Therefore, there is a meaningful relationship between the two variables. According to the theories of individuality it is observed that by the increase of individuality in children generation, their binding to the values of the previous generation becomes less.

The analysis of the data shows that there is no meaningful relationship between the two methods of training (authoritarian, authoritative) with value conflict variable. But there is a meaningful relationship in permissive styles

with the variable of value conflict.

According to the theories of identity crisis as cultural identity of the children faces crisis, they become less able to understand the values of the previous generations. Therefore, there is a meaningful relationship between these two variables and the direction of the correlation is positive. It means that this relationship is confirmed with 99 percent confidence. Also as much as the identity crisis of the children increases, the value conflict of the two generations is increased too and vice versa.

On the other hand, there is a meaningful relationship between the newness of values of the fathers with the value conflict. It means that as little as the newness of values of the fathers is, the value conflict is more, and this hypothesis is confirmed with 99 percent confidence.

The less the plainness of the values of the fathers for the children is, the value conflict is more and vice versa. This hypothesis has meaning with 99 percent confidence and the hypothesis under test is confirmed.

The averages of value conflict according to gender shows that between the value conflict and gender (girls and boys) there is no meaningful relationship. Of course this hypothesis has been confirmed in some researche and in other research has not been confirmed.

According to Inglehart (1989: 115), the resultant changes in society are based on economic and social transformation. Therefore, the cultural changes result in the differences between the generations. Also findings of this research in the case of existence of value conflict between the generations, confirms the results of the previous research (Teymouri,1999; Zein Abadi, 1998; Shek, 2001).

According to this principle, study on the conflict between parents and children for identifying the elements related to it, has special importance. The value conflict between parents and children in Iranian society in the recent two decades has confronted with more questions (Yousefi, 2004). According to the results of this research it seems that the reaction paradigm of George Zimmel can be a proper model for decreasing the value conflict between the generations.

CONCLUSION

As being the reference group, family contradiction, training methods, newness of value messages from the side of fathers, plainness of values from the side of fathers are identified as the influencing variables in value conflict and are mostly related to the parents, and by considering the passing situation of the society, and the challenges of the tradition; the parents understand this matter, through proper training especially through gatherings and meetings of the parents and the tutors, the society has changed and the situation of new thought, sense, and behavior style, needs change. Therefore, they should give this right to their children and do not consider them the enemy of their situation.

As individuality, the identity crisis and value diversity are influencing variables on the value conflict and are mostly related to the children, through proper education, it is proposed to the children not to rehjecte verything, and not to forget that it is not possible to discard all the previous cultural heritages, and to combine awareness with belief and faith.

Some research shows (Yousefi, 2004) that loyalty in behavior and speech are elements of social acceptance. Parents and children in this approach of training are influenced by awareness and faith, and both learn to accept the differences of each other and by putting themselves in the other onesposition, help each other to remove the value conflict by reaction. The authorities of cultural and educational institutions and the families by cooperation, by stressing the active participation in the field of the health of the society, will be able to strengthen the cultural identity of the children.

Although, the technique of self-report, on which this study relies, has been used in many studies of value conflict, it has important limitations. In this study, the results reflect how the children perceive their parents' parenting styles, and therefore the deductions that can be drawn from the results are open to question. Furthermore, more research is needed in a number of other cities to validate the present results.

Table 1. Correlation between the value diversity, pattern accepting from the fathers and value contradiction of two generations

Variable	Correlation	P-Value
Value diversity	-0.24	0.03
Pattern accepting from the fathers	0.36	0.02
Family contradiction	0.23	0.04
Individuality of the children	0.04	0.04
Identity crisis of the children	0.39	0.01
Newness of values by the fathers	-0.33	0.04
Transparency in the values of fathers	0.33	0.05

Table 2. Correlation between the custom contradiction, supervision of fathers, hypocrisy of fathers and value redundant and value conflict between the two generations

Variable	Correlation	P-Value
Custom contradiction	0.061	0.61
Supervision of fathers	0.08	0.46
Hypocrisy of fathers	0.16	0.18
Value redundant	0.04	0.70

Table 3. Correlation between the Parenting Styles (Authoritarian, Authoritative, Permissive)

Authoritarian	0.17	0.13
Authoritative	0.06	0.60
Permissive	-0.20	0.05

Table 4. Correlation between the custom contradiction, supervision of fathers, hypocrisy of fathers and value redundant and value conflict between the two generations

Gender	F	Mean	SD	T	P-Value
Male	38	42.26	12.07	1.54	0.12
Female	35	38.14	10.58		

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An Epidemological Survey on Maternal Mortality Rate and Factors Contributing to Maternal Mortality in Rural Area of Peshwar

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ABSTRACT

Objectives: To determine the maternal mortality rate in the rural areas of Peshawar. To appreciate the factors contributing to maternal mortality.

Design: a descriptive observational survey

Setting: Palusai village near Peshawar University, Peshawar.

Duration: from December 2004 to December 2005.

Methods: Two hundreds houses were included in the study. Of those houses 400 women in their reproductive ages were selected. Five maternal deaths were recorded as a whole. Maternal mortality ratio was 4.73/1000 live births (5/1056), and percentage mortality was 1.25%. In Factors related to maternal mortality, 43% of the women living in kaccha (mud made) houses. Sixty one percent had drinking water supply from tube wells. Most of the women (49%)were living in houses with monthly income less than 5000/month. Sixty percent of the deliveries took place at home. Of total 57.5% women had no education. The age at marriage was between 16-20 years in 64% of the clients. Sixty two percent of the ladies missed to visit signally to antenatal care center in gestational period. The interval between two childbirths was less than two years for 59% cases. Thirty percent were vaccinated for TT only and 16% for both tetanus toxoid (TT) and measles, mump and rubella (MMR) during pregnancy. 72% had not utilized any iron supplements during pregnancy.

Conclusion: Socioeconomic, marital and obstetric factors are still major causes of maternal deaths.

Key words: MMR, Risk factors of MMR, Rural area, Peshawar, Pakistan.

INTRODUCTION

Globally, progress in improving the survival and well being of mothers has been slow, and this holds true for the Eastern Mediterranean Region. Thus at the current pace, it is unlikely that the Millennium Development Goal related improving maternal health will be achieved in the Region by the year 2015.[1] An estimated 400,000 infant and 16,500 maternal deaths occur annually in Pakistan. These translate into an infant mortality rate and maternal mortality ratio that should be unacceptable to any state. Disease states including communicable diseases and reproductive health (RH) problems, which are largely preventable account for over 50% of the disease burden.[2] In a hospital based study in ayub teaching hospital, abbotabad, six maternal deaths were recorded during study period. The major causative factors were hemorrhage, eclampsia, sepsis, anesthetic complications and hepatic encephalopathy. Maternal mortality ratio was 12.7/1000 live births (26/2040). The age range was between 18-42 years. Most of them (69%) were grand multiparas (Parity >5). Education, antenatal booking and socio-economic status were poor.[3] The MMRs reported from hospitals

vary between 17 in a private tertiary hospital to 2,736 in a government tertiary hospital. In the community the range is from 160 in Sindh to 673 in Khuzdar.

Data for different periods of time from three tertiary public hospitals, two in the south and one in the north of Pakistan, show no decrease in MMRs[4]. In a study from Aga Khan University, Karachi, The female mortality rate was 151 per 100,000 women aged 10-49 years and the maternal mortality ratio was 281 per 100,000 livebirths. The leading causes of deaths among women were complications of pregnancy (28%), infectious diseases (25%), cardiovascular diseases (21%), neoplasia (11%) and trauma (11%).[5]

Present epidemiological survey was therefore conducted in rural areas of Peshawar to determine the maternal mortality rate (MMR) and to appreciate the factors contributing to maternal mortality.

PATIENTS AND METHODS

A descriptive observational survey was conducted in Palusai village near Peshawar University, Peshawar, from December 2004 to December 2005.

Two hundreds houses were included in the study. Of those houses 400 women in their reproductive ages were selected.

Inclusion criteria were all married women in their reproductive ages. Relatives were interview in case of those ladies who had died during pregnancy or cause related to pregnancy. Unmarried women in their reproductive ages were excluded.

A detailed history of the respondents was taken with the help of a pre-designed questionnaire, prepared in accordance with the objectives of this study.

Questionnaire contained preliminary information regarding age, address and education of the respondents. It also contained information's about the risk factors that can lead to maternal death including socioeconomic factors, marital factors and obstetric factors.

Finally statistical analysis of the data was performed and association of risk factors with maternal mortality was studied.

RESULTS

This epidemiological; survey cover a total of 200 houses and 400 women in their reproductive ages. The average number of married women per house was two. A total of five maternal deaths were recorded during the survey, from December 2004 to November 2005. The total births according to the local BHU in the same period were 1056.Maternal mortality rate is the number of maternal deaths related to childbearing divided by the number of live births (or by the number of live births + fetal deaths) in that year. And is expressed as mother dying per 1000 live births. In our study the MMR will be,

MMR: 5(1000) /1056= 4.73/1000

Percentage Mortality: 5(100)/400 =1.25%

Socioeconomic factors: In Socioeconomic factors related to maternal mortality, 43% of the women living in kaccha (mud made) houses. Sixty one percent had drinking water supply from tube wells. Most of the women (49%)were living in houses with monthly income less than 5000/ month. *(Table 1)*

Marital factors: Sixty percent of the deliveries took place at home. Of total 57.5% women had no education. The age at marriage was less than 15 years for 17.25% of women and between 16-20 years in 47% of the clients. Thirty percent were vaccinated for TT only and 16% for both TT and MMR during pregnancy. 72% had not utilized any iron supplements during pregnancy.*(Table 2)*

Obstetric factors: The interval between two childbirths was less than two years for 59% cases. Sixty two percent of the ladies missed to visit signally even to antenatal care center through out their pregnancy. In 60% of women the deliveries recorded in home environment. *(Table 3)*

DISCUSSION

In order to achieve the millennium development goals (MDGs), Pakistan would require a fundamental shift in its policy and strategic directions. Along with allocation of significant additional resources for health, it needs to review and reprioritize the use of existing resources, focusing more on primary health care. Pakistan must also adopt a holistic integrated approach that views health, education, and other social sector development as intrinsically interrelated and interwoven[6]. In present study five maternal deaths were recorded as a whole. Maternal mortality ratio was 4.73/1000 live births (5/1056), and percentage mortality was 1.25%. Our finding correlates with the findings of Begum S et al[3].

In Socioeconomic factors related to maternal mortality, 43% of the women living in kaccha (mud made) houses. Sixty one percent had drinking water supply from tube wells. Most of the women (49%)were living in houses with monthly income less than 5000/month. In another

study by Kazmi S,[7] from Karachi the participants were largely poor, illiterate, and of reproductive age. In the rural context of only minimal access to quality institutional care services, most rural women delivered at home with the aid of traditional birth attendants (TBA). The decision to deliver at home was reached by a combination of women's high degree of trust in the services of TBAs and their concern about costs and convenience.

The age at marriage was less than 15 years for 17.25% of women and between 16-20 years in 47% of the clients. In Germany there is a rapid decrease in infant and maternal mortality. Since the 80s of the twentieth century the average age at marriage of until then unmarried persons as well as the number of single mothers show a permanent increase. Generally, the average age of mothers increased (for live and legitimate births)[8]. Thirty percent were vaccinated for TT only and 16% for both tetanus toxoid (TT) and measles, mump and rubella (MMR) during pregnancy. 72% had not utilized any iron supplements during pregnancy. MMR is inversely related to contraceptive prevalence rates, presence of trained attendants during delivery, and adult female literacy rates.

Ninety percent of the South Asian region had coverage with BCG immunization, followed by DPT, OPV, and measles immunization. Maternal tetanus toxoid was 69%.[9] In our study sixty two percent of the ladies missed to visit signally even to antenatal care center through out their pregnancy. In a UN study from Punjab and north west frontier provinces of Pakistan, out of 170 facilities only 22 were providing basic and 37 comprehensive emergency obstetric care (EmOC) services in the areas studied. Only 5.7% of births occurred in EmOC health facilities. Met need was 9% and 0.5% of women gave birth by cesarean section. The case fatality rate was a low 0.7%, probably due to poor record keeping. Access and several indicators were better in NWFP than in Punjab.[10]

In our findings the interval between two childbirths was less than two years for 59% cases. The odds of dying in the neonatal and post-neonatal period is 2.27 and 2.12 times higher respectively for children born after preceding birth intervals of one year or less compared to children born after longer intervals. Children born within two years of a subsequent birth are at 4.09 times higher risk of dying in the second year of life than children whose mother gave birth more than 2 years after the index birth.[11]

CONCLUSION

Socioeconomic factors mainly contributing top maternal mortality in the area followed by marital and obstetric factors. There is need for more actions to decrease maternal morality by increasing awareness, improving life style of the women, and providing better health facilities at doorstep. Most maternal deaths are preventable. The provision of skilled care and timely management of complications can lower maternal mortality in our setup.

Table 1. Socioeconomic variables of women. Total number of women=400

Socioeconomic variables of women	Number of women	Percentage of total (%)
1. Housing condition		
Kaccha (mud made) house	172	43%
Pakka bricks made) house	92	23%
Mixed house	136	34%
2. Source of drinking water		
Tube wells	246	61.5%
Hand pumps	92	23%
Miscellaneous sources	62	15.5%
3. Monthly income in home		
Less than 5000/month	195	48.75%
5000-20,000/month	146	36.5%
More than 20,000/month	59	14.75%

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Table 2. Marital factors that can lead to maternal mortality. Total number of women=400

Variables Recorded	Number of women	Percentage of total (%)
1. Education level of women		
Illiterate	*230*	*57.5%*
Primary education	85	47%
Matriculate	63	28.5%
Secondary education	22	7.25%
2. Age of marriage		
Less than 15 years	69	17.25%
15 to 20 years	188	47%
21-25 years	114	28.5%
More than 25 years	29	7.25%
3. Nutrition supplements during pregnancy		
Yes	291	72.75%
No	109	27.25%
4. Vaccination during pregnancy		
Not at all	216	54%
TT done only	120	30%
TT plus MMR done	64	16%

Table 3. Obstetrics factors that can lead to maternal mortality. Total number of the respondents: 400

Variables Recorded	Number of women	Percentage of total (%)
1. Antenatal visits		
No visit to antenatal clinic	248	62%
One or more visits	152	38%
2. Interval between child births		
One years	57	19.25%
1- 2 years	180	45%
3 years	136	34%
> Three years	27	6.75%
3. Number of children born to deceased (total number= 5)		
1-3 children	1	20%
4-6 children	3	60%
> 6 children	1	20%
4. Place of delivery		
Home	240	60%
Government Hospital	118	29.5%
Private clinics	42	10.5%

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Microdilution In Vitro Susceptibility Testing of 71 species of Dermatophytes isolated from pediatric cases in Nigeria against five antifungal agents

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ABSTRACT

The antifungal activities of Itraconazole, Ketoconazole, fluconazole, terbinafine and griseofulvin against 71 isolates of dermatophytes belonging to three different species viz: Trichophyton(67), Microsporium(2) and E.Flocossum(2) isolated from children were tested by broth microdilution methods. Most drugs were very active against all the dermatophytes, MIC 90 ranging between 0.03 to 8.0. Thus far, no resistance was recorded, especially among the isolates. This appears to be the first documented data on the susceptibility of isolates of dermatophytes from Nigeria.

Key words: Antifungal, Microdilution, dermatophytes, Children.

INTRODUCTION

Dermatophytes are communicable fungal disease caused by three genera of fungi namely, Trichophyton, Microsporum and Epidermophyton. Several varieties of tropical and systematic preparation are reported to have reasonable activity in these diseases and are being used in treating these superficial mycotic infections[1,2]. Although in the last few years, there has been a steady introduction of new drugs by either modification of pre-existing or entirely new chemical classes of antimycotics, there has also been an increased interest in clinically relevant susceptibility testing[3]. This has become necessary due to a considerable increase in the incidence of dermotophytoses all over the world especially in underdeveloped countries such as Nigeria[4-7] among the elderly and in immunocompromised patients[8]. In developed countries of Europe and America and fast developing countries of Asia, data on the antifungal susceptibility of dermatophytes could not be said to be entirely scanty, the case appears different in African countries, such as Nigeria, where unfortunately, the occurrence of dermatophytosis is endemic. Expansion of information on invitro susceptibility testing of dermatophytes will provide data that will help in developing or selecting drug regimen[9]. In addition, the various cases of imported dermatophyte infection across different countries and the variability in the antimycotic properties of similar strains obtained across different geographical locations of the world make exchange of information on susceptibility data across different countries necessary. We carried out susceptibility studies on clinical isolates obtained in children previously. We believe that our data will also help clinicians to choose appropriate antifungal agents for a successful treatment outcome in their patients especially in countries like ours where immediate laboratory diagnosis for this infections are not readily performed before treatments are administered.

MATERIALS AND METHODS

Test isolates

Seventy-one isolates of dermatophytes were evaluated. Out of this 27 were Trichophyton tonsurans, 15 were Trichophyton soudanense, 7 were Trichophyton violaceum, 5 were Trichophyton rubrum, 4 were Trichophyton verrucosum, 9 were Trichophyton mentagrophytes, 3 were Trichophyton schoenlenii and 2 each of Epidermophyton flocossum and Microsporum audounii. Three American typed culture collections (ATCC) quality control organisms were used: Candida parasilopsis ATCC22019, Trichophyton mentagrophytes (ATCC 40004) and Candida krusei ATCC 6258. These dermatophytes were mainly isolates from different body sites collected from children during previous investigational study. (4,5). The cultures were maintained on Saboraud dextrose agar slants supplemented with cycloheximide, chloramphenicol and genticin (SAB-CCG). Freshly growing cultures on SAB-CCG slants were transferred to oatmeal agar slants two weeks prior to the study to enhance conidial production as proposed previously[10].

Antifungal agents

Five antifungal agents were used, itraconazole (ITR) and ketoconazole (KET) (Jansen), fluconazole (FLU)

(Pfizer), terbinafine (TER), (Novartis) and griseofulvin (GRI) (Schering plough). Fluconzole and ketoconazole were dissolved in sterile distilled water while the rest were dissolved in 100% dimethylsulphuroxide (Sigma-Aldrich). They are subsequently prepared as stock solutions and stored at appropriate temperature.

Invitro tests for susceptibility

Drug dilutions/medium: RPMI 1640 (Sigma- Aldrich) with L- glutamine but without sodium bicarbonate and buffered at PH 7 with MOPS was used for susceptibility testing.

Preparation of Inoculums

The method previously described by Norris et al[11] was used. Briefly; conidial suspensions of dermatophytes prepared from seven to fourteen day old culture grown on oatmeal cereal agar slants were made. Cultures producing between fifty and hundred conidia per field of view, for at least five different fields of view, were selected for testing. The selected slants were flooded with 0.85% sterile saline and swabbed with a cotton wool tip applicator. The resulting mixture of conidia and hyphal particles were subsequently transferred to a sterile tube. After settling for about 15-20 minutes, the upper layer (about 2ml) of the suspension was removed and adjusted for 80-85% transmission using a colorimeter. This corresponds to an inoculum of 1-5 x 106 CFU/ml. The inoculum was adjusted to 5ml with saline (0.85%) and diluted further in RPML 1640 to achieve a final concentration of 2-5 x 103 CFU/ml.

Testing procedure

Following CLSI guidelines M 27-P [12], Micro dilution plates were set up. Each test plate had two drug free growth controls, one with the media alone (growth control) and the other with media containing an equivalent amount of solvent used to dissolve the antifungal drug (solvent control). The plates (two for each) were incubated at 300c and 350c respectively and read visually after 4 and 5 days of incubation. Growth was normally checked after 48hrs post inoculation. Endpoint determinations were made by visually comparing the growth in the wells containing the drug with the growth in the solvent control well. MIC ranges were obtained for each species-drugs combination tested. To facilitate comparisons of the activities of the drugs, the MIC were reported as the concentration at which 50% (MIC50) and 90% (MIC90) of the isolates were inhibited.

RESULTS

The in vitro susceptibilities of 71 isolates of dermatophytes to terbinafine, itraconazole, ketoconazole, fluconazole and griseofulvin are summarized in Table 1. The data are presented as MIC ranges and, where appropriate, as the drug concentrations required to inhibit 50 and 90% of the isolates of each species (MIC90 and MIC50 respectively). The readings were obtained after 7 days of incubation. All the 71 isolates of dermatophytes tested were susceptible to the five antifungal drugs used in the study. The MIC of all the quality control strains used were within established ranges (data not shown) [13].

Although detectable growths were noticed after four days of incubation in some cases, majority of the isolates had pronounced growth after 5 days. We observed no major differences in incubating at 30 or 350C,but our results reflect readings recorded at 350C. However, no resistance was recorded among all the isolates. The isolates were less susceptible for griseofilvin and fluconazole with MICs ranging from 0.125 - 16.0 and 0.25- 64ug/ml. The MIC90 range for them respectively is between 2.0-8.0 ug/ml for griseofulvin and 4.0-16.0ug/ml for fluconazole. Terbinafine was the most effective drug against all isolates of dermatophytes since the MIC90 range was between 0.01-0.07mg/ml. The order of in vitro activity is therefore terbinafine > itraconazole > ketoconazole > griseofulvin > fluconazole

DISCUSSION

This is the first large -scale in vitro susceptibility testing of dermatophytes obtained from Nigeria against a wide range of commonly used antifungals in our country. Monitoring antimicrobial resistance is useful because apart from tracking and detection of resistance trends by microorganisms, it is also gives clues to emerging threats of new resistance. This serves among other things, in assessing interventional efforts and empirical treatments recommendations [14]. In the past, several authors have performed in vitro susceptibility tests on various strains of dermatophytes [8,10,11]. However, there appears to be a lack of data on susceptibility studies of isolates from the West African sub region like Nigeria where this infection is endemic[4,5]. We observed no major differences in the MIC endpoints by incubating at 300c or 350c. Information available in the literature from other authors[10,15,16] indicated that 4 days of incubation was sufficient to observe noticeable growth in the control wells. Our findings are also in agreement. We therefore recorded our MIC values after 4 days of incubation. However, studies from Santos and Hamden [17] and fromBelkys. Fernandez-Torres et al [18] are not in similar agreement. In another study by Fernadez-Torres and co-workers [19], 508 strains belonging to 24 species of dermatophytes were tested against conventional (itraconazole and fluconazole) and some newer antifungal agents like voriconazole and UR-9825. Our results on itraconazole and fluconazole are similar to those in their study. This tends to support

the fact that incubating after 4 or 7 days does not have a significant impact on the MIC readings. Nevertheless, our result on terbinafine as the most active agent for example, agrees with the observation from previous authors in other continents and region [17,18]. This antimycotic showed an excellent in vitro potency and broad-spectrum activity against all the tested species. This suggests that terbinafine can be used to treat a majority of dermatophytic infections especially those showing high MIC values on the azoles, such as fluconazole. Although we did not include the newer antifungals such as posaconzole, voriconazole etc in our study, we noticed in literature, their promising antifungal activities. In Nigeria, these antifungal are relatively new and not readily available, affordable and widely used as the ones we have tested. This buttresses our initial observation that most patients with dermatophytoses resort to use of some medicinal plants as a preferred treatment choice apparently due to inability to afford the orthodox drugs [4]. It will be of interest to state that all isolates used in our study were obtained from patients not previously on any antifungal treatment. Interestingly; there was no record of resistance in our study even though some agents recorded high MIC values than others. From our data, ketoconazole appears to be next choice in terms of in vitro activity after terbinafine and itraconazole. This information among other things will assist clinicians to monitor trend and be able to choose effective medications for treating patients with dermatophytoses, especially in countries like Nigeria where dermatophytoses have become a public health problem and have remained endemic [5].

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Table 1. MICs of the five drugs against seventy-one clinical isolates of dermotophytes. MIC (ug/mL)

Species (nA)	Antifungal Drug	Range	MIC50B	MIC90
T. tonsurans(25)	TER	0.007-0.125	0.07	0.125
	ITR	0.06-0.5000	0.01	0.03
	KET	0.125-1.00	0.125	0.25
	FLU	0.25-16.00	1.00	4.00
	GRI	0.50-16.00	2.00	8.00
T. soundanense	TER	0.01-0.25	0.01	0.06
	ITR	0.03-0.125	0.03	0.125
	KET	1.00-16.00	1.00	2.00
	FLU	8.00-32.00	8.00	16.00
	GRI	2.00-16.00	2.00	8.00
T.mentagrophytes (9)	TER	0.007-0.500	0.07	0.07
	ITR	0.01-4.00	0.01	0.50
	KET	0.06-4.00	0.05	1.00
	FLU	0.06-64.00	2.00	4.00
	GRI	0.125-4.00	0.50	2.00
T.violaceum (7)	TER	0.007-0.125	0.01	0.0125
	ITR	0.01-1.00	0.01	1.00
	KET	0.03-0.25	0.25	8.00
	FLU	1.00-8.00	1.00	8.00
	GRI	0.25-8.00	0.50	4.00
T.verrucosum(4)	TER	0.007-0.125	0.007	0.0125
	ITR	0.125-1.00	0.125	1.00
	KET	1.00-16.00	2.00	8.00
	FLU	4.00-16.00	4.00	8.00
	GRI	0.50-4.00	4.00	4.00
T.rubrum(5)	TER	0.03-0.25	0.007	0.01
	ITR	0.03-1.00	0.03	0.25
	KET	0.125-4.00	0.125	0.50
	FLU	1.00-8.00	2.00	4.00
T.schoeinlenii(3)	TER	0.007	-	-
	ITR	0.01-0.50	-	-
	KET	0.06-0.125	-	-
	FLU	>16	-	-
	GRI	4.00-16.00	-	-
M.audouinii(2)	TER	0.01	-	-
	ITR	0.01-0.125	-	-
	KET	0.01-0.50	-	-
	FLU	0.50-2.00	-	-
	GRI	0.25-1.00	-	-
E.flocossum	TER	0.01-0.125	-	-
	ITR	0.01-0.50	-	-
	KET	0.01-1.00	-	-
	FLU	0.50-2.00	-	-
	GRI	1.00-2.00	-	-

nA, number of isolates tested.
B, MIC for 50% of the isolates tested.
-, MIC 50 and 90 were not determined because of thr small sample number.

Development of Encounter Forms for Cardiovascular Disease Risk Management

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During the last decade many guidelines have been published for detection, evaluation and treatment of different cardiovascular disease (CVD) risk factors (RF) including hypertension (HTN), diabetes mellitus (DM), dyslipidemia, and obesity. Many of these were evidence-based, vigorously reviewed and regularly updated.

Nevertheless, guidelines were not sufficient to change neither the outcome nor the behavior of caregivers. Several studies have shown that clinicians often fail to collect, routinely, even basic information such as plasma lipids, blood pressure (BP) and cigarette smoking status during the course of medical care.[17,18]

This failure has been explained by many barriers, identified earlier. Among these are the lack of knowledge and poor communication skills of the practicing physicians, lack of self efficacy, oversight, discontinuity of care, lack of communication between providers caring for the same patient, lack of external barriers, lack of auditing, pressure of work, co-morbid illness, along with the diverse and complex work-up needed for chronic problems at different stages of their progress.[17,18,20,22] Practicing physicians may find this work-up time-consuming,[23] as most of the consultation time is spent in looking-up different pages in the medical chart, which might belong to previous visits in the last few months or even years, in order to find, compare and interpret laboratory results and blood pressure readings.

Another difficulty that may add to the burden is the need to reduce the risk for CVD which includes the recall of all necessary details needed for: [23]

1. the identification and measurement of RF and collection of clinical data relevant for assessing these factors;
2. the interpretation of risk-related data with estimation of total CVD risk, which is highly missed;
3. and the use of therapeutic intervention to minimize CVD risk or to prevent the development of additional RF.

The principle of assessing total risk associated with multiple CVD risk factors has been well stated since its first introduction in New Zealand in 1993, and followed thereafter, by many guidelines, worldwide. It provides more logical approach to patient management, as it approaches the whole patient and every aspect of his risk to develop CVD. It predicts short-term benefits and provides accurate data to substantiate a physician's clinical judgment. This is particularly true by identifying those individuals who, while asymptomatic, will potentially benefit from risk-reducing interventions.[26]

OBJECTIVES

This article describes 4 pages of evidence-based encounter forms (EF) that have been developed by the author to facilitate office assessment, follow-up and audit of services delivered to patients with chronic CVD risk factors. They are used in the initial clinical assessment of patients presenting with high readings of BP, fasting blood sugar (FBS), total cholesterol or body mass index (BMI). In addition, they provide a tool for stratification of CVD risk, regular follow up and annual assessment.

DEVELOPMENT

The development of these forms started in the late 1990's. At that time, many constraints were noticed by the author regardingthe use of the locally available forms assigned, at that time, for the follow up of either hypertension or diabetes. Although, they had a significant advantage in auditing the work, they lacked convenience in office use. Their application involves extra work and time. Physicians need to go through many papers and forms to browse and fill. On the other hand, they do not offer any guide for initial assessment and do not consider all risk factors in one view.

On this background, the author started to look for the practice of other institutions, during his visits to different regions and countries, in addition to browsing for the internationally published ones. Unfortunately, none of these have been considered for use in neither initial CVD risk assessment nor the estimation of this risk. They were, merely, used in the follow up of either hypertensive or diabetic patients, which included ,their best, blood pressure readings, blood sugar, urine dipstick results, and/or medications.

The presently described EF have considered, in their

design, the constraints and needs presented above, to be evidence-based and the need to have a total CVD risk assessment approach.

For these reasons, current local and international guidelines that consider detection, evaluation or management of CVD risk factors were reviewed and their recommendations were put in view.

EF, then, were put in practice and were periodically reviewed to meet up-to-date recommendations and goals of their development. The latest version was reviewed upon current guidelines, protocols, and references shown below, in addition to comments collected from practicing physicians and nurses.[1-11,29,33,39,41,43,44,45]

ENCOUNTER FORMS

Figure 1 shows the temporal use of the described EF. The initial assessment visit needs the use of all four forms, while the regular follow-up visit necessitates the use of one form only. However, the annual assessment requires three of them to be used.

EF-1 *(Figure 2)* is the initial-visit assessment form. It is intended for use in the initial assessment of newly attending patients with CVD risk factors, mentioned above. It contains eight sections for demographic data, history taking, physical examination and investigations. It assists in identifying confounding RF, target organ damages (TOD), associated clinical conditions (ACC) and secondary causes such as renal, vascular and endocrine diseases. In addition, a table has been included to help in staging the BP level.

EF-2 *(Figure 3)* is the CVD risk stratification form. It is tailored to supplement both EF-1 and EF-4. It helps summarize and stratify CVD risk. The risk assessment tool, presented in the European guidelines for management of hypertension, was used for this purpose.3 Two tables are provided in this EF; the first table provides a check list of RF, TOD and ACC collected, earlier, using EF-2 or EF-4. This list makes stratification of total CVD risk easier, using the second table. EF-2 might be filled in by the physician or the attending nurse.

On the other hand, EF-2 provides a chance to compare the progress in total CVD risk among the years of follow-up.

EF-3 *(Figure 4)* is the regular follow-up flow chart. It is used in each visit the patient pays to the clinic. It contains four sections and 14 columns. Each column is intended for use in one visit. One section has reserved spaced for more frequently monitored parameters, i.e. vital signs, urinary dipstick and blood chemistry. These help in monitoring the control and early detection of hemodynamic - and biochemical drug adverse effects. The uppermost section is allocated for plotting blood pressure readings. It allows for quick evaluation of control of BP over the last few visits. Documentation of medication refills and changes in dose requirement are possible for six medications, each in one line.

Patient's compliance is readily reviewed and documented using a mnemonics (DEMO) created for this purpose, where D, E, M and O stand for diet, exercise, medication and others (such as smoking, hygiene and foot care), respectively. In the same pattern health education is reviewed and documented. DEMO functions as a reminder for the physician to inquire about patient's compliance and to provide appropriate education.

Advantages of the use of CVR Encounter Forms:

1. Facilitate and empower initial assessment and follow-up of different CVD risk factors in one common form.
2. Simplify stratification of CVD risk, and thus approaching patients more appropriately.
3. Minimize the time needed in assessment and follow-up.
4. Enable physicians to compare the status of current visit with previous visits and identify defect in service and control, easily. The comparison can be used as reflection that can be shown to patients to help them improving their compliance.
5. Function as a reminder for care. They prompt care giver to address this issue during every visit, even if the patient is presenting for unrelated complaint, such as cut wounds.
6. Improve quality of service, documentation and ensure uniform data entry.
7. Facilitate communication between providers caring for the same patient.
8. Facilitate the audit work in readily structured process.

Decision of referral to other services such as nephrology, dietary, ophthalmology, or echocardiography can be documented in an exclusive field in the lower part of the form. At the bottom, two fields were allocated for extra notes, such as reason to change regimen, and expected next visit.

The last form EF-4 *(Figure 5)* is the annual assessment chart. It acts as a reminder for the annual work-up needed for CVD risk patients and provides, in addition, a tool to compare progress in control of risk, development of TOD and complications, as well as hemodynamic and biochemical changes secondary to medications used.

Parameters needed for estimation of CVD risk are labeled by a super text. Additionally this form is used, by the auditors to evaluate process and outcome achieved.

Many advantages have been noticed by the author from the use of EF-1 through to EF-4 *(box 1)*. However, the extra use of such forms necessitated regular update and regular orientation for newly employed staff, which were, thankfully, encouraging for the development of the forms.

CONCLUSION

In conclusion, caring for patients with multiple CVD risks is a demanding task that physicians usually fail to fulfill, as per guidelines. This article describes the development of evidence-based encounter forms that help physicians and nurses to put guidelines into practice. Validation of these forms on a wider scale is needed to show their significance.

Figure 1

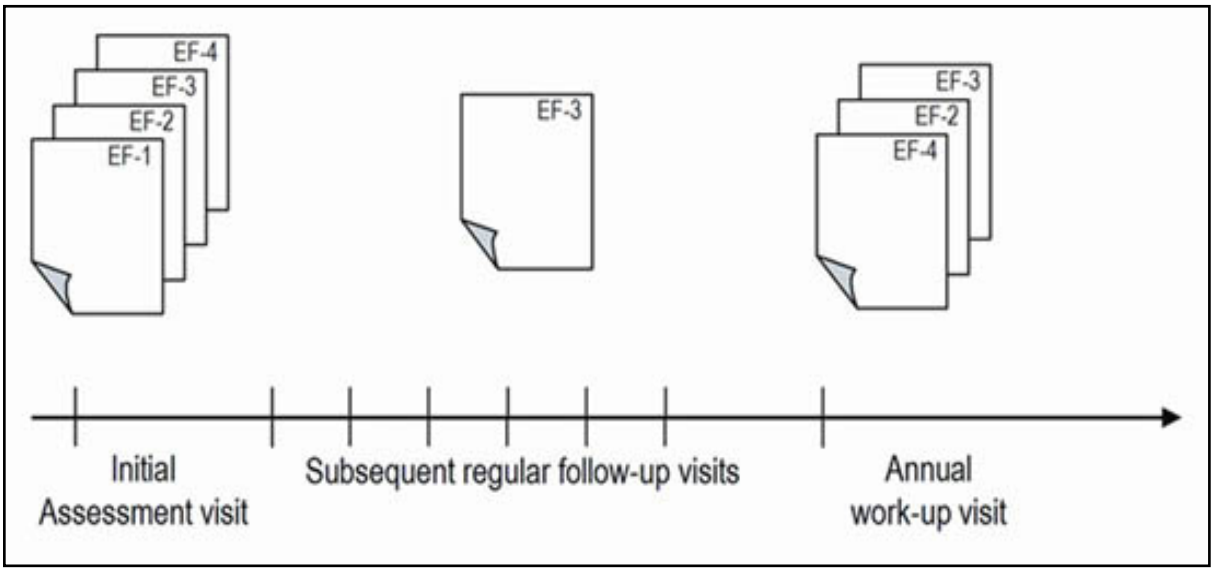
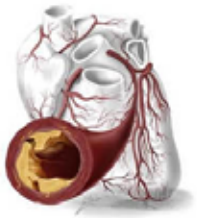


Figure 2

EF 1

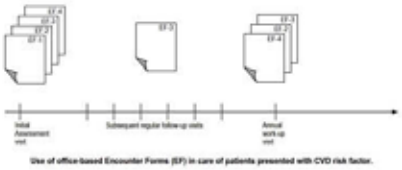
CVD Risk Initial-visit Assessment

Next Appt. ...../...../20.....
For .....



Indication for use of this chart (mark):
☐ BMI ≥ 30 ☐ T. Chole ≥ 240
☐ FBS ≥ 100 ☐ BP ≥ 140/90

File no. ..... Sex: ☐ M ☐ F
Name: .....
Tel: .....
DOB / Age ...../.....
Job: .....



Use of office-based Encounter Forms (EF) in care of patients presented with CVD risk factor.

For newly discovered High BP

Date	BP_1	BP_2	Average
1st ...../...../.....			
≥ 2 wks ...../...../.....			
≥ 2 wks ...../...../.....			

At rest, no smoking or coffee in last 30 min. 1-3 min apart

☐ **Current Symptoms:**

O *Hirsutism*	O *Palpitation + Sweating*	O Easy bruising	O Sleep apnea	O Headache	O Muscle cramps
O Fatigability	O Claudication	O Polyuria	O Polydepsia	O Polyphagia	O Blurred vision
O Dizziness	O Numbness	O Recurrent infections (UTI, Thrush, Tenia, ...)		O Others:	

☐ **PMH:** (When?)

O Pre-eclampsia	O Gest. DM	O DM	O Dyslipidaemia	O Angina	O Dyspnea
O Syncope	O Stroke	O TIA	O Br.Asthma	O COPD	O HTN
O CCU admission	O Coronary catherterization	O Gout	O Impotence		

☐ **Family Hx:** (Who / at what age?)

O HTN	O *Renal Disease*	O IHD	O Premature CV Death
O DM	O Dyslipidaemia	O Stroke	

☐ **Drug Hx:**

O Anti HTN	O *OCP*	O NSAID	O Corticosteroids	O Decongestants
O *Amphetamine (Jab)*	O *Thyroid replacement*	O *Antidepressants*	O *Antipsychotics*	

☐ **Social Hx:**

O Dietary Habits (Salt – Fat)	O Tobacco	O Alcohol	O Recent wt. gain
O Physical inactivity	O Stress		

☐ **Physical Exam:**

BP	Lt. arm =	Rt. arm =	Standing (Elderly/DM) =		Pulse =		
General	Wt. =	Ht. =	BMI =		Waist =		
	O Xanthelasmata	O *Hirsutism*	O Neurofibromatosis	O *Cushinoid*	O *Acromegaly*	O *Thyroid*	O *Striae*
CVS	O Precordium	O Heart Sounds	O Carotid Bruit	O *Radio–femoral Pulses*			
Chest	O Bronchospasm	O HF					
Abd	O Bruit	O Masses					
LL	O Edema	O Pulses	O Vibration	O Pin Prick			
CNS	O Focal Neurologic deficit						
Eye	O V. acuity	O Fundi					

☐ **Investigations:**

☐ CBC ☐ FBS ☐ Chol ☐ LDL ☐ HDL ☐ Tg ☐ *U+E* ☐ Cr ☐ Uric Acid ☐ Ca ☐ Urinalysis ☐ ECG ☐ ?TFT ☐ CRP

Mark ☐ with √ if done or requested. Mark O with √ if positive. Elaborate marked in space provided. Fill results in annual chart EF4 and flow chart EF3 where appropriate.
Use EF2 for stratification of CVD risk. ***Italics indicates possible secondary cause.***

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Done by ..... on ...../...../.....

CVD Risk Initial-visit Assessment Chart (CVD EF-1)

Figure 3

EF 2

CVD Risk Stratification

Mark applicable RF, TOD and ACC for your patient in table 1. Then, use table 2 to estimate risk for developing major CVD (Stroke and MI) in 10 years.

Table1: Assess RF, TOD and ACC

	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year
Risk Factors for CVD												
• Grade of Blood Pressure (table 2 below)												
• Men > 55 years	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Women > 65 years	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Smoking	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Total cholesterol > 240 mg/dl or LDL > 160	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• HDL M < 40; F < 48	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Obesity (BMI > 30)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Diabetes or GDM	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• CRP > 1mg/dl	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Family history of premature cardiovascular disease (M<55; F<65)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Target Organ Damage (TOD)												
• Left ventricular hypertrophy (electrocardiogram, echocardiogram)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Proteinuria and/or slight elevation of S. creatinine (1.2-1.5 mg/dl)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Microalbuminuria (30-300 mg/24 h; Alb:Cr ratio M=22,F=31)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Ultrasound or radiological evidence of atherosclerotic plaque (carotid, iliac and femoral arteries, aorta)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Generalised or focal narrowing of the retinal arteries	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Associated Clinical Conditions (ACC)												
Cerbrovascular disease	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Ischaemic stroke	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Cerebral haemorrhage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Transient ischaemic attack												
Heart disease	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Myocardial infarction	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Angina pectoris	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Coronary revascularisation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Congestive heart failure	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Renal disease	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Diabetic nephropathy	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Renal impairment (S. Cr > 1.5 mg/dl; proteinuria > 300 mg/ 24 h)												
Vascular disease	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Dissection aneurysm	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Symptomatic peripheral arterial disease												
Advanced hypertensive retinopathy	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Haemorrhages or exudates	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
• Papilloedema												
Total CVD Risk[2]												

Table2: Stratify CVD Risk[3]

	Blood Pressure (mm Hg)				
	Normal SBP 120-129 or DBP 80-84	**High Normal** SBP 130-139 or DBP 85-89	**Grade 1** SBP 140-159 or DBP 90-99	**Grade 2** SBP 160-179 or DBP 100-109	**Grade 3** SBP ≥ 180 or DBP ≥ 100
No other Risk Factors[1]	Average Risk	Average Risk	Low Risk	Moderate Risk	High Risk
1-2 other Risk Factors[1]	Low Risk	Low Risk	Moderate Risk	Moderate Risk	V. High Risk
≥ 3 Risk Factors[1] or TOD[1] or DM	Moderate Risk	High Risk	High Risk	High Risk	V. High Risk
ACC[1]	High Risk	V. High Risk	V. High Risk	V. High Risk	V. High Risk

[1] Use table 1 to identify risk factors, TOD and ACC used in stratifying risk. [2] Use table 2 to estimate CVD risk.
[3] Chance to develop major CV event in 10 years is low (< 15%), medium (15-20%), high (20-30%) or very high (>30%).

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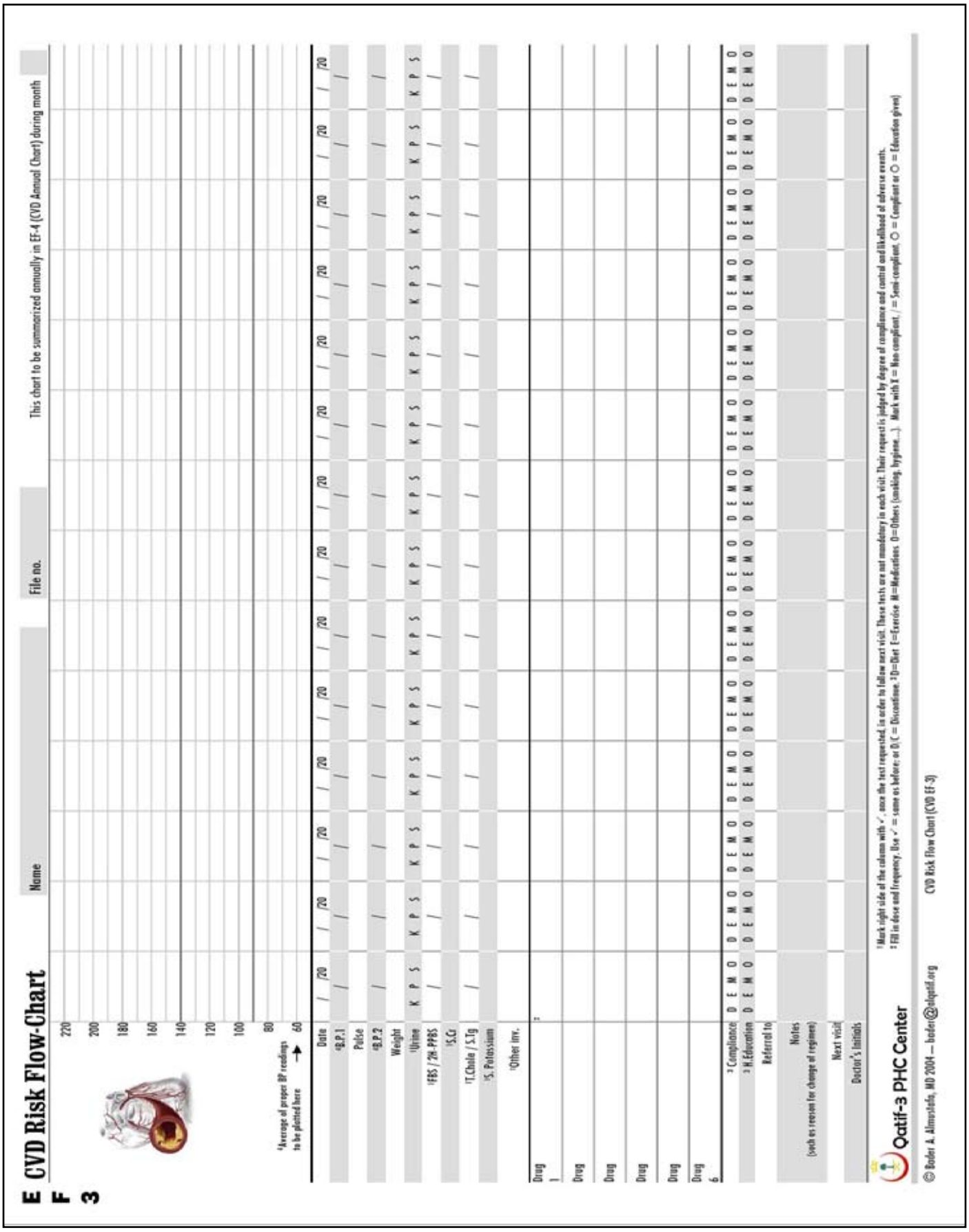
CVD Risk Stratification Chart (CVD EF-2)

Figure 4


E CVD Risk Flow-Chart
F 3
Name
File no.
This chart to be summarized annually in EF-4 (CVD Annual Chart) during month
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CVD Risk Flow Chart (CVD EF-3)

Figure 5

EF 4

CVD Risk Annual Work-up

File no. ..... Sex: ☐ M ☐ F

Name: .....

Tel: .....

*DOB / Age ...../.....

Job: .....

Diagnosis 1* ____ on __/__/20__ at ____

Diagnosis 2* ____ on __/__/20__ at ____

Diagnosis 3* ____ on __/__/20__ at ____

Diagnosis 4* ____ on __/__/20__ at ____

☐ Color Code

☐ Problem List

Family Hx:

☐ DM ☐ F

☐ HTN ☐ M

☐ *Prem. CVD (S. Death, Stroke, MI, PAD,) ☐ B ☐ S ☐ O

Date (month / year)	Year	Year	Year	Year	Year	Year
*Smoking since ..... cig./day						
[3]Symptoms (complications and side effects); Family Hx.						
*Weight / BMI (Ht² =)						
*Average BP (Last 3 Mon)						
[3]P.E. General						
*Peripheral pulses (radial, carotid, femoral, dorsalis pedis, posterior tibial)						
*Foot (Inspect; Cap. Fill, SW Filament, T. Fork)						
*Fundoscopy / Eye / V. Acuity						
*ECG						
*FBS / PPBS	/	/	/	/	/	/
HbA_1C						
*Cholesterol / LDL / HDL	/ /	/ /	/ /	/ /	/ /	/ /
Triglycerides						
ALT / AST	/	/	/	/	/	/
K^+ / Na^+	/	/	/	/	/	/
*Creatinine / BUN	/	/	/	/	/	/
Uric Acid / Ca^{+2}	/	/	/	/	/	/
*Urine dipstick	K P S	K P S	K P S	K P S	K P S	K P S
*24h–Urine (Cr. Cl. / MAU)	/	/	/	/	/	/
*CRP						
Others (if indicated)						
Compliance[2]	D *E M O	D *E M O	D *E M O	D *E M O	D *E M O	D *E M O
CVD Risk[1]						
Doctor's Initials						

CXR / IVP (...../...../20.....) | USS (...../...../20.....) | Ex.ECG / Echo (...../...../20.....)

[1] Use CVD Risk Assessment Chart EF2 to estimate CVD Risk. *Needed for estimation of CVD risk. [3] Refer to EF-1 to help you exploring Hx and PE.

[2] D=Diet; E=Exercise; M=Medications; O=Others (Smoking/Hygiene/...). Mark with X = Non-compliant; / = Semi-compliant; O = Compliant.

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 CVD Risk Annual Work-up Chart (CVD EF-4)

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