In conclusion, fulminant hepatic damage induced by PTU is rare during childhood. Close clinical and biochemical follow-up is necessary to early predict this complication.

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Rimonabant as potential treatment for the neglected epidemic of diabetes in the Middle East and Arabian Peninsula. *Implication for prevention*

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The clustering of insulin resistance, dysglycemia, dyslipidemia, hypertension and central obesity represent the major features of metabolic syndrome. These clusters of factors may share common etiology and each of which is a risk factor for cardiovascular disease. The metabolic syndrome appears to affect between 10 and 25% of adult populations worldwide. Several studies have described the association between metabolic syndrome, diabetes and cardiovascular disease. The prevalence of diabetes for all age groups worldwide was estimated to be 2.8% in 2000 and 4.4% in 2030. The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030.[1] The number of people with diabetes is increasing in the Middle East and Arabian Peninsula due to population growth, aging, urbanization, and increasing prevalence of obesity and physical inactivity. Quantifying the prevalence of diabetes and the number of people affected by diabetes, now and in the future, is important to allow rational planning and allocation of resources. In the Arab world, which comprises 22 countries and has a total population of almost more than 300 million, high prevalence of diabetes has been reported from many countries.

The estimated prevalence of diabetes has increased in the Arab countries from 2-3% in 1980 to a current prevalence of approximately 20%.[2] In Saudi subjects, the age group of 30-70 years followed for 5 years period between 1995 and 2000. A total of 17,232 Saudi subjects were selected in the study and 16,917 participated (98.2% response rate). Four thousand and four subjects out of 16,917 were diagnosed to have diabetes. This study concluded that the overall prevalence of diabetes in the Kingdom of Saudi Arabia is 23.7%. The prevalence in males was 26.2% while 21.5% in females. Diabetes was more prevalent among Saudis living in urban areas (25.5%) compared to rural Saudis (19.5%). The important conclusion from this study is that 27.9% were unaware of having diabetes.[2] In the light of the observed increase in prevalence of obesity in many countries of the Arab world and Middle East, the number of cases of diabetes currently or in following decades may be considerably higher than expected. Therefore, management of obesity is crucial in order to reduce the epidemic of diabetes. Orlistat, anti-obesity medication was shown to reduce diabetes by 37%.[3] Recent exciting new data suggests that inhibition of endocannabinoid system might be beneficial in the treatment of the metabolic syndrome. The discovery of endocannabinoid system dates back almost 4000 years, when the therapeutic and psychotropic actions of the plant Cannabis sativa were first documented. The endocannabinoid system contributes to the physiological regulation of energy balance, food intake, lipid and glucose metabolism through both central and peripheral effects. Many different regulatory actions

have been attributed to endocannabinoids, and their involvement in several pathophysiological conditions is under intense scrutiny. Cannabinoid receptors, named cannabinoid-1 receptor (CB1) and cannabinoid-2 receptor (CB2), participate in the physiological modulation of many central and peripheral functions. The CB2 receptor is mainly expressed in immune cells, whereas CB1 receptor is the most abundant G protein-coupled receptor expressed in the brain. The CB1 receptor is expressed in the hypothalamus and the pituitary gland, and its activation is known to modulate all the endocrine hypothalamic-peripheral endocrine axes. An increasing amount of data highlights the role of the system in the stress response by influencing the hypothalamic-pituitary-adrenal axis and in the control of reproduction by modifying gonadotropin release, fertility, and sexual behavior. The ability of the endocannabinoid system is to control appetite, food intake, and energy balance by modulating rewarding properties of food by acting at specific mesolimbic areas in the brain. In animal models, CB1 blockade by rimonabant produces a lean phenotype, with resistance to diet-induced obesity and associated dyslipidemia. In the hypothalamus, CB1 receptor and endocannabinoids are integrated components of the networks controlling appetite and food intake. The endocannabinoid system was recently shown to control metabolic functions by acting on peripheral tissues, such as adipocytes, hepatocytes, the gastrointestinal tract, and, possibly, skeletal muscle.[4,5] The Rimonabant in obesity (RIO)-Europe study[4] recruited patients with body mass index (BMI) of 30 kg/m^2 or greater, or BMI greater than 27 kg/m^2 with treated or untreated dyslipidemia, hypertension, or both, were randomized to receive double-blind treatment with placebo, 5 mg or 20 mg rimonabant (currently licensed in Europe), once daily in addition to a mild hypocaloric diet (600 kcal/day deficit). The primary efficacy endpoint was weight and changed from baseline after 1 year of treatment in the intention-to-treat population. Weight loss at 1 year was significantly greater in patients treated with rimonabant 5 mg (mean -3.4 kg [SD 5.7]; p=0.002 versus placebo) and 20 mg (-6.6 kg [7.2]; p<0.001 versus placebo) compared with placebo (-1.8 kg [6.4]). Significantly, more patients treated with rimonabant 20 mg than placebo achieved weight loss of 5% or greater (p<0.001) and 10% or greater (p<0.001). Rimonabant 20 mg produced significantly greater improvements than placebo in waist circumference, high density lipoprotein (HDL)-cholesterol, triglycerides, and insulin resistance, and prevalence of the metabolic syndrome. The effects of rimonabant 5 mg were of less clinical significance. Rimonabant was generally well tolerated with mild and transient side effects.[4]

The RIO-lipids study [5] randomly assigned 1036 overweight or obese patients (BMI was between 27-40) with untreated dyslipidemia (triglyceride levels >1.69 - 7.90 mmol per liter, or a ratio of cholesterol to HDL-cholesterol of >4.5 among women and >5 among men) to double-blinded therapy with either placebo or rimonabant at a dose of 5 mg or 20 mg daily for 12 months in addition to a hypocaloric diet. Their result showed, as compared with placebo, rimonabant at a dose of 20 mg was associated with a significant (p<0.001) mean weight loss (repeated-measures method, –6.7±0.5 kg, and last-observation-carried-forward analyses, –5.4±0.4 kg), reduction in waist circumference (repeated-measures method, –5.8±0.5 cm, and last-observation-carried-forward analyses, –4.7±0.5 cm), increase in HDL cholesterol (repeated-measures method, +10.0±1.6 %, and last-observation-carried-forward analyses, +8.1±1.5 %), and reduction in triglycerides (repeated-measures method, –13.0±3.5 %, and last-observation-carried-forward analyses, –12.4±3.2 %). Rimonabant at a dose of 20 mg also resulted in an increase in plasma adiponectin levels (repeated-measures method, 57.7%, and last-observation-carried-forward analyses, 46.2%; p<0.001), for a change that was partly independent of weight loss alone.[5] The most frequent and important adverse events resulting in discontinuation of the drug were depression, anxiety, and nausea. These side effects may be important as obesity per se is often associated with depression and low self-esteem. Another important issue is that caution is needed with administration of this medication in patients with moderate liver failure. As fatty liver now appeared as common liver abnormality with obesity, further studies are needed to address the safety of administration of rimonabant in such individuals. In addition, rimonabant reduced metabolic syndrome and half of the effect on HDL and triglyceride was independent of weight loss. This was attributed to an associated increase in adiponectin. It will be of interest to determine whether long term administration of rimonabant will be associated with a reduction in the prevalence of diabetes and cardiovascular disease, especially in the Middle East and Arabian Peninsula. Research testing of this hypothesis may have an important impact in treating metabolic syndrome and associated risk of development of diabetes. This may provide potential for developing part of health strategies towards the prevention of the epidemic of diabetes.

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Five-year surveillance of chickenpox in Qassim, Central Saudi Arabia

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Chickenpox or Varicella results from primary infection with varicella zoster virus. The resulting illness is usually mild, but serious complications and deaths can occur. Amongst children, generally it is a mild illness but rare complications such as pneumonia, encephalitis and acute cerebellar ataxia may occur. Chickenpox is an important public health problem because it is very common, highly contagious and carries a high secondary attack rate. It leads to untoward health and economic consequences. A live-attenuated varicella vaccine is available, has proven to be safe and effective, and introduced in some countries around the world. In the Kingdom of Saudi Arabia, chickenpox is a notifiable disease. According to the Ministry of Health Communicable Diseases Report 2003, the reported cases demonstrate a rise during the years 2000 to 2003.[1] In Saudi Arabia, the vaccine for varicella is not included in the routine childhood immunization program. At this point in time, when there is a debate regarding introduction of universal varicella vaccination in Saudi Arabia,[2] insight into the epidemiology of chickenpox is essential to assess the need of introduction of universal varicella vaccination. Subsequently, the knowledge of chickenpox epidemiology will also be helpful to formulate an appropriate strategy for implementation and evaluation of the vaccination program. This study describes the magnitude of the problem as well as epidemiological factors of chickenpox in Qassim region for 5 years period; from 1999 to 2003.

It is a descriptive analysis of surveillance data of chickenpox, collected by the Preventive Medicine Department, Primary Health Care Administration, Qassim region. Qassim, located in the northern part of the center of Kingdom of Saudi Arabia, covers an area of 78,500 Km^2. According to the Third National Census of Population and Housing, its population was 1.016 million during the year 2004.[3] Non-Saudis comprised 19.6% of the population, majority of them, being adults constituting the expatriate work force. The list of Notifiable Diseases in Qassim region follows the list of Ministry of Health and includes chickenpox as a notifiable condition. The surveillance data for notifiable diseases has been computerized in Qassim since January 1999. Reporting of notifiable diseases to the Preventive Medicine Department is "passive", that is the department relies on health care providers in health care facilities to report disease occurrence. All health care facilities; primary, secondary and tertiary, whether public or private, are obliged to submit weekly report of notifiable disease cases to the primary health care administration. The data included age, gender and nationality of the cases. Other variables were reporting week, name of reporting health care facility and district. Analyses were conducted using the Statistical Package for Social Sciences version 10. The distribution of cases was examined by age, gender and nationality. Between 1999 and 2003, 20,788 cases of chickenpox were reported and provided the basis for the analysis. Overall, the incidence rates increased from 207 per 100,000 population in 1999 to 759 per 100,000 during

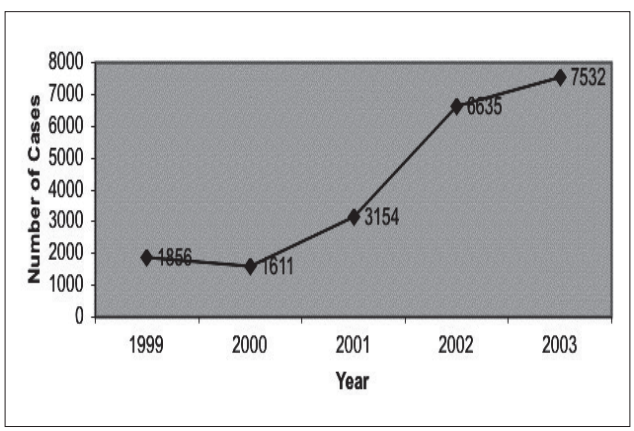

Figure 1 - Reported cases of chickenpox in Qassim, Kingdom of Saudi Arabia (1999-2003).