was admitted to the hospital where she received polyvalent antivenom serum by intravenous infusion and whole blood clotting time (5 minutes and 20 seconds) was carried out initially and repeated daily until she was discharged form the hospital. Sixteen hours later, she developed severe abdominal pain and profuse vaginal bleeding and her cervix was found opened 4 cm and the membranes were bulging. The diagnosis of abruptio placentae was suspected and confirmed by ultrasound and the cessation of fetal heart pulsation was confirmed. The patient was managed accordingly (morphine, fresh blood, artificial rupture of the membranes and oxytocin infusion). Six hours later she delivered vaginally, there was no postpartum bleeding and her clotting time was 5 minutes and 35 seconds and renal functions tests were within normal values. The patient was kept in the hospital for 5 days and discharged on folic acid tablets, 0.5 mg daily for 6 months.

Abruptio placentae with an evidence of fibrin deposition and microthrombus formation in the spongy layer which lead to placental cleavage and separation following snake bite was reported before.[3] The venom of the snake contains a procoagulant that defibrinates the blood and leads to bleeding throughout the body and this might cause the placental separation.[1,3] There are several mechanisms, which lead to fetal wastage following snake bite during pregnancy; they include direct effect of the venom on the fetus, fetal hypoxia due to maternal hypotension, venom induced uterine contraction, pyrexia and cytokine released following tissue damage.[1]

The patient received polyvalent antivenom serum by intravenous infusion, which is the mainstay of treatment for poisonous bites to neutralize the effects of the venom. Techniques such as the use of tourniquets, incision and suction should no longer be practiced.[4] The use of antivenom serum during pregnancy should balance its risk benefit and it may be life saving. However, anaphylaxis that may follow its administration as well as its treatment with adrenaline may jeopardize the placental circulation.[1,5]

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References

1. Dunnihoo DR, Rush BM, Wise RB, Brooks GG, Otterson WN. Snake bite poisoning in pregnancy. A review of the literature. ***J Reprod Med*** 1992; 37: 653-658.
2. Seneviratne SL, de Silva CE, Fonseka MM, Pathmeswaran A, Gunatilake SB, de Silva HJ. Envenoming due to snake bite during pregnancy. ***Trans R Soc Trop Med Hyg*** 2002; 96: 272-274.
3. Zugaib M, de Barros AC, Bittar RE, Burdmann EA, Neme B. Abruptio placentae following snake bite. ***Am J Obstet Gynecol*** 1985; 15: 754-755.
4. Gold BS, Barish RA. Venomous snake bites. Current concepts in diagnosis, treatment, and management. ***Emerg Med Clin North Am***1992; 10: 249-267.
5. Entman SS, Moise JJ. Anaphylaxis in pregnancy. ***South Med J*** 1984; 77: 402.

Prevalence of smoking and frequency of visits to primary health care clinics

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The prevalence of cigarette smoking is declining in some of the western countries. In the United States, it decreased from 42.4% in 1965 to 25% in 1993 and 23.3% in year 2000[1] due to awareness of the harm caused by cigarette smoking. In Saudi Arabia, different studies have shown a prevalence varying between 20-47%. Smoking has become a major health problem in Saudi Arabia,[2-6] contributing to national morbidity and mortality. In contrast to the situation in the western countries, the trend is towards an increase in prevalence of this habit over the past decade. The aim of the present study is to assess the prevalence of smoking among the adult male soldiers residing in King Khalid Military City (KKMC) situated near Hafr Al-Batin, Saudi Arabia.

Nine primary care clinics are attached to the Northern Area Armed Forces Hospital at KKMC. The present study included subjects from 4 of these clinics catering to the military personnel. A total of 25,000 soldiers who have their medical files in these clinics constituted our target population. Even if the patient is seen in other clinics or at the emergency room, the follow-up sheet is transferred to his permanent file at his clinic. Hence, the file of each subject reflects the total number of visits paid by him to the primary care clinics. A random sample of 1411 was drawn using computerized randomization. The number of cases chosen was according to the statistical table for sampling numbers with 5% level of significance. Medical record (MR) numbers were obtained for all the subjects included in the sample. Telephone numbers of these subjects were retrieved from the medical records. Subsequently, the subjects were contacted over the phone and their answers were filled into a pre-structured

questionnaire. The questionnaire consisted of 8 simple questions including age, smoking status, number of cigarettes smoked per day, duration of smoking, and so forth. The questionnaire was answered by a total of 1208 subjects with a response rate of 85.6%. Subsequently, we scanned the files of the subjects to estimate the number of visits paid by them to the primary care clinics during the period from 1st January 2001 to 31st December 2002. The frequency of visits per person per year was obtained from these figures. The number of current smokers was found to be 368 out of a total of 1208 respondents with a prevalence of 30.5% (**Table 1**). Approximately half the smokers (46.7%) smoke between 10-20 cigarettes/day. Of the remaining, 18.5% smoke more than 20 cigarettes per day, and 34.8% smoke less than 10 cigarettes per day. The number of visits paid to primary care clinics by non-smokers was found to be 1640 visits for 2001, and 1978 visits during 2002 with a total of 3618 visits for 2 years and a mean of 2.15 visits per person per year. For smokers, the number of visits was found to be 780 and 704 for 2001 and 2002, with a total of 1484 for the 2 years and a mean of 2.02 visits per person per year. The difference between the visits paid by the smokers and non-smokers to their clinics is statistically not significant at 95% confidence interval (4.08, 3.868) with a *p* value of 0.953. The mean age for smokers was found to be 35 years and for non-smokers 36 years. The difference is not statistically significant (*p* value 0.308). The number of smokers who have smoked for less than 10 years was 122 (33.15%). The number who smoke between 10-20 cigarettes per day was 194 (52.7%) whereas 52 smokers were found to smoke more than 20 cigarettes per day.

This is the first study of its type performed at KKMC for estimation of the prevalence of smoking in the male population, and its correlation with general morbidity using the frequency of visits to primary care clinics as an index of morbidity. The prevalence of smoking among Saudi male soldiers has been estimated by this study to be 30.5%. This exceeds the prevalence of smoking in some developed countries such as the USA where the prevalence was estimated at 23.3% in 2000.[1] The prevalence estimated in this study correlates well with some other studies performed elsewhere in the Kingdom. Siddiqui et al[2] performed a similar study among males aged over 12 years attending a primary care clinic using a pre-structured questionnaire. They found a prevalence of 34.4% for current smokers. Al-Damegh et al[3] found a prevalence of smoking of 29.8% among male secondary school students in Al-Qassim. Hasim[4] found a prevalence of 29% current smokers among the students of College of Applied Medical Sciences in Riyadh. However, Jarallah et al,[5] who studied the prevalence of cigarette smoking among Saudi nationals in 3 regions of Saudi Arabia using a pre-designed questionnaire and interviews by primary care physicians, found a prevalence of 21.1% current smokers among males. They found that the rate for certain groups, including army officers, was significantly higher. Similarly, Al-Shahri et al[6] found a prevalence of 17% among the primary care physicians in Riyadh. However, this rate cannot be applied to the general population in this country since the subjects of this study were highly educated and Saudis constituted <5% of the participants.

No significant difference was found between the number of visits made by smokers and non-smokers to their primary care clinics. Non-smokers may be more conscious of health issues and may pay more frequent visits to the primary care clinics for minor complaints.

Ex-smokers were not included in the study as it was thought that this would inflate the prevalence rate. While counting the number of visits made by the subjects to their primary care clinics, the diagnosis and the "reason for encounter" or "problem" were not considered. The visits paid by the subjects to the hospital specialty clinics were not included in the study. Subjects with chronic conditions such as hypertension and diabetes mellitus are likely to have regular follow-up visits at the Consultant clinics. These visits were ignored.

In conclusion, cigarette smoking is an important public health problem in Saudi Arabia. Estimates of prevalence of smoking show that one in every 3 adult male Saudi is addicted to tobacco. This is likely to lead to a heavy burden on the healthcare resources of this country in the future. Efforts must be made to avoid this calamity by means of a multidisciplinary approach that should include public education campaigns, publicity through the

Table 1 - Prevalence of smoking and frequency of visits to the primary care clinics.

Subjects	Respondents n (%)	N of visits to primary care clinics			N of clinic visits annually per person
		2001	2002	Total visits	
Smokers	368 (30.5)	780	704	1484	2.02
Non-smokers	840 (69.5)	1640	1978	3618	2.15
Total	**1208**	**2420**	**2682**	**5102**	**2.11**

mass media and legislation to make cigarette smoking expensive for the consumer and unprofitable for the manufacturer.

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References

1. Trosclair A, Husten C, Pederson L, Dhillon I. Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, CDC. Cigarette Smoking Among Adults – United States, 2000. MMWR July 26, 2002; 51 (29): 642-645. Available from URL: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5129a3.htm
2. Siddiqui S, Ogbeide DO, Al-Khalifa I. Smoking in a Saudi Community: prevalence, influencing factors and risk perception. ***Fam Med*** 2001; 33: 367-370.
3. Al-Damegh SA, Saleh MA, Al-Alfi MA, Al-Hoqail IA. Cigarette smoking behavior among male secondary school students in the central region of Saudi Arabia. ***Saudi Med J*** 2004; 25: 215-219.
4. Hasim TJ. Smoking habits of students in college of Applied Medical Sciences, Saudi Arabia. ***Saudi Med J*** 2000; 21: 76-80.
5. Jarallah JS, al-Rubeaan KA, al-Nuaim AR, al-Ruhaily AA, Kalantan KA. Prevalence and determinants of smoking in three regions of Saudi Arabia. ***Tob Control*** 1999; 8: 53-56.
6. Al-Shahri MZ, Al-Almaie SM. Promotion of non-smoking: The role of Primary Health Care Physicians. ***Ann Saudi Med*** 1997; 17: 515-517.

Surgical beds in neonatal intensive care unit

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Tertiary health centers with centralized neonatal intensive care units (NICU) provide finest care to the sick neonates. However, these units are often full to capacity with reversal of infant-bed ratio. The increased proportion of surgical beds is blamed to be one of the reasons for over-occupancy of the NICU. Although, there is no allocated quota for surgical beds and babies admission is on first come first served bases but it has been observed that surgical infants occupy a major portion of the NICU at any given time. Further that many of these neonates for example: the clinically stable cases of delayed passage of meconium with suspected diagnosis of Hirschsprung's disease requiring rectal washes, do not even meet the arbitrary admission criteria of intensive care unit.[1] Thus, there arises a need to look and document the real status of bed consumption by the surgical cases in the NICU. For this purpose, we carried out the present study.

Neonatal intensive care units at Royal Hospital in Muscat, Oman has 30 beds providing centralized care to all high-risk neonates admitted from different regions of the country. It is one of the main tertiary care centers of the capital; the only one with the facility of neonatal surgery. Records of all admission and discharges to and from the NICU are kept as medical files, computer database and NICU register. For this study, we utilized the NICU register. Our aim was to look at the number of beds occupied by surgical cases as compared to medical cases. A cross-sectional survey of bed occupancy was carried out for 2 consecutive months from January 2004 to February 2004. Data were collected from the admitting register of the NICU. The surgical cases were short-listed from the total admissions.

The medical cases were then separately counted for bed days. Total admitted days (from date of admission to the day of discharge or death) were counted as occupied bed days.[2] In cases of death on the same day, the stay was counted as one day (one occupied bed day). One day of stay in NICU cost ranges from 10-30 Omani Riyal (approximately 28-79 US dollar or 16-48 Sterling pound). After counting the total surgical and medical admission with the occupied bed days, the proportion was calculated by dividing the surgical bed days and the medical bed days by the total bed days. Results

Table 1 - Bed occupancy in neonatal intensive care units by the Surgical and Medical cases.

Admissions	January 2004	February 2004	Total
Total admissions	52	51	**103**
Surgical admissions	9	6	**15**
Medical admissions	43	45	**88**
Total bed days occupied by all cases	763	554	**1317**
Total bed days occupied by surgical cases (%)	73 (9.5)	81 (14.6)	**154 (11.6)**
Total beds occupied by medical cases (%)	690 (90.5)	473 (85.4)	**1163 (88.4)**