The prevalence of hepatitis C infection in general population in Shiraz, southern Iran
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Background: Hepatitis C virus (HCV) infection is a major blood-transfusion infection with silent epidemic and major global public health problem and diverse prevalence worldwide. Objectives: To determine the prevalence of HCV infection in general population of Shiraz city, Fars province in Iran, and evaluate the real risk factors in these areas.

Methods: A cross-sectional study was performed from March 2010 to April 2011. All of Iranian participants aged equal or above 35 years old were evaluated for HCV antibody with enzyme-linked immunosorbent assay (ELISA). They Confirmed with polymerase chain reaction (PCR).

Results: Fifteen out of 2080 (1181 men and 899 women with minimum age of 35 years and maximum of 83 years old) participants were anti-HCV positive (prevalence 0.72%). The highest prevalence was seen in age ≤45 years old. A statistically significant correlation was found between blood transfusion and presence of anti-HCV antibody (p<0.001). Those with a history of blood transfusion had fifteen fold higher risks for anti-HCV positivity. No statistically significant correlation was found among other variants and positive anti-HCV.

Conclusion: Due to non-significant correlation between other variants and anti-HCV+ except blood transfusion, further evaluation for detection of risk factors is recommended. Moreover, it is emphasized that the donated bloods be evaluated with PCR and the importance of sterility of instruments in medical and non-medical conditions and education of transmission routes be taken into account.

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Canine furious and paralytic rabies: studies of neural tract integrity, blood brain barrier, virus and inflammatory distribution patterns
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Background: Rabies fatality requires an impenetrable blood brain barrier (BBB) as one immune-evasive mechanism. Survival periods are longer in paralytic rabies with lower virus load in the brain than in furious rabies. Whether this phenomenon is associated with leak from BBB and more pronounced inflammation in the case of paralytic rabies is intriguing.

Methods: Group analyses [normal (8), furious (2) and paralytic (4) at early stage] of diffusion tensor imaging (DTI) technique were utilized in the study of BBB [mean diffusivity (MD)] and tract integrity [fractional anisotropy (FA)]. Whole brain probabilistic DTI tractography maps were used for dog brain’s normalization. Fifteen brain and spinal cord regions of furious (5) and paralytic (5) dogs at early stage were included in a comprehensive study. Rabies viral (RV) antigen and viral RNA were quantified. Distribution and degree of inflammation were also evaluated.

Results: DTI (MD and FA) probabilistic maps were more sensitive in detecting and localizing the abnormalities seen in the brain blood transfusion. Nowadays, control of viral infections, including HCV infections, is one of the main tasks of blood transfusion services worldwide. Therefore, the aim of this research was to investigate the prevalence of HCV infection in thalassemia and hemodialysis patients in Kerman, in southeastern Iran.

Methods: In this cross-sectional experimental study, 384 (203 hemodialysis and 181 thalassemia) patients were examined for HCV infection. Demographic data were also collected by questionnaire, and HCV infection was screened by enzyme-linked immunosorbent assay (ELISA) and confirmed by reverse transcriptase-polymerase chain reaction (RT-PCR). Data were analyzed by chi-square and t-test.

Results: Our results showed that 81 (44.7%) thalassemia and 64 (31.5%) hemodialysis patients were infected with HCV. There was a significant relationship between HCV positivity and the frequency of blood transfusion and the duration of dialysis in thalassemia and hemodialysis patients, respectively. Based on our results, the prevalence of HCV infection in thalassemia and hemodialysis patients in the southeastern part of Iran is higher than the other parts.

Conclusion: Therefore, it is suggested that clinical and health authorities in southeastern Iran should pay more attention to preventing the transmission of HCV through blood and blood components.

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and upper spinal cord as compared to conventional MR imaging. In MD probabilistic maps, preserved BBB (no increased MD) was seen in both forms. Cytotoxic edema (decreased MD) was more prominent in paralytic than furious form. Impaired FA, representing disrupted neural tract integrity was more evident at the brainstem of paralytic rabid dogs. The amount of RV antigen was significantly greater in furious rabies. Caudal-rostral polarity of RV antigen distribution was found in both clinical forms with greater magnitude at spinal cord, followed by brainstem, cerebellum, caudate, thalamus, hippocampus, and cerebrum. RV RNA was found at significantly higher levels in most brain regions of furious rabies. RV RNA levels were comparable in spinal cord of both forms. A striking inflammatory response was observed almost exclusively in the brainstem of paralytic rabies.

**Conclusion:** BBB was intact in both furious and paralytic forms of rabies. Longer survival of paralytic rabies may be explained by inflammation at brainstem (visualized as impaired axonal integrity), resulting in retardation of viral advancement to the cerebrum.

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**Measuring herpes zoster and post-herpetic neuralgia associated burden of illness and health care utilization and costs in Korea: A clinical epidemiological study**


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**Background:** Herpes zoster (HZ) - associated pain (ZAP) can be longlasting and disabling, significantly diminishing the patient’s quality of life (QoL) and functional capacity. Recent studies suggest that significant clinical benefits in ZAP prevention can be achieved by vaccination. In order to evaluate the potential impact of a vaccination program in Korea, a thorough understanding of the Korean-specific burden of the disease and associated health care resources is required.

**Methods:** This was an epidemiological study of adults presenting with ZAP across 3 sites in Korea and prospectively followed for up to 6 months. Primary objective was to measure the burden of illness (Zoster Brief Pain Inventory Questionnaire) due to HZ and PHN in Korea. Secondary objectives included the assessment of the associated health care resource utilization (HCRU), and the direct and indirect costs per case of HZ and PHN

**Results:** A total of 151 patients were included in the study, with a mean (±SD) age of 63.6 (±8.5) years and 93 (61.6%) females. The burden of illness ranged from 32 to 182 (ZBPI worst pain severity-duration (AUC)) and was highest immediately after the rash episode (85.1 ±71.3) and in patients whose pain persisted for >270 days. Patient QoL was lowest at baseline after the rash onset and steadily improved over the 180-day period exceeding 0.8 scores by the end of the follow-up period. The most commonly utilized types of HCRU were visits made to the doctor’s office followed by visits made to a specialist outpatients office, with a mean (±SD) utilization at baseline of 3.5 (±5.7), 3.2 (±6.9) times, respectively, while hospital admissions (29.1%) were the third most common HCRU with a mean (±SD) length of hospitalization of 6.1 (±3.5) days. Among patients with a paying job, a mean (±SD) number of 2.67 (±3.89) whole work days was missed at baseline, which decreased to 0.43 (±1.56) at 60 days and reached 0 at subsequent visits.

**Conclusion:** HZ and PHN are associated with a significant burden of illness, impact on QOL, loss of work productivity, and HCRU in Korea. Zoster vaccination aiming at preventing HZ may be particularly useful in improving patient outcomes, reducing HCRU and associated costs.

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**Fatal meningoencephalomyelitis associated with pandemic influenza A (H1N1) virus infection in young women**

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**Background:** Neurologic complications have been described previously in association with respiratory tract infection with seasonal or pandemic influenza A (H1N1). This case report summarizes the clinical characteristic of young patient with aseptic meningitis due to pandemic influenza H1N1 in Slovakia.

**Methods:** Case report.

**Results:** A previously healthy twenty-six years old woman was admitted to our University hospital in Trnava (Slovakia) from other community hospital in July 2011. Clinical symptoms at presentation were fever reaching 37.9◦C, headache, arthralgia and myalgia. Meningeal irritation findings were negative. CT investigation was normal and levels of inflammatory markers was not very high (CRP 34 mg/L). We performed lumbar puncture for possible central nervous system infection. This cerebrospinal fluid (CSF) abnormalities were observed: monocytes 2784 mm3, neutrophils 4 mm3, erythrocytes 3120 mm3, glucose level of 2,5 mmol/L, proteins level of 2,43 mmol/L. We performed lumbar puncture for possible central nervous system infection. This cerebrospinal fluid (CSF) abnormalities were observed: monocytes 2784 mm3, neutrophils 4 mm3, erythrocytes 3120 mm3, glucose level of 2,5 mmol/L, proteins level of 2,43 mmol/L and latex agglutination test was negative. Despite high level of erythrocytes, CSF was not haemorrhagic, therefore the first diagnosis of herpetic haemorrhagic meningitis was established and acyclovir therapy was initiated. But clinical findings not recovered therefore we performed EEG, control CSF and other serological analysis (leptospirosis, borreliosis, listeriosis). Serological and CSF cultures did not demonstrate any infectious agent and HSV PCR analysis was negative too. Disorientation of patient was progressing, output of urine was critically low and lower limbs paraparesis was developed. Brain magnetic resonance imaging (MRI) showed diffuse cerebral oedema and lumbosacral spinal column MRI confirmed myelitis. A surprising finding was positive PCR test on