Household Ocular Injuries: A Case Series

To determine the natures and types of household eye injuries, we prospectively analyzed data from 100 consecutive patients with household eye injuries (104 eyes) referred to emergency room of Farabi Eye Hospital, Tehran, Iran in October 2003. Standardized international classification of ocular trauma (Birmingham Eye Trauma Terminology) was used for classification.

Household ocular trauma represented 4.85% of all ocular emergencies (2061 patients) referred to the emergency room during that period. Male to female ratio was 1.13 and the mean age was 26 ± 18 years (range, 1 – 73). The cornea was involved in 50% and the sclera, lens, and retina each was involved in 4.8%. There was severe visual loss (best-corrected distance visual acuity < 20/200) in 4% of the patients. The most frequent household ocular injury was globe injury (93.7%) including mechanical (72.1% closed and 4.8% open), chemical (14.4%), and thermal (1.9%) injuries.

Closed mechanical injuries were the most common type of household ocular injury in our series. Considering the high rate of household eye trauma, more effective preventive measures should be taken at home.

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Long-Term Outcomes of Surgeries on 41 Patients with Medulloblastoma

Medulloblastoma that is classified as a primitive neuroectodermal tumor in WHO classification primarily affects pediatric population and constitutes about 25% of all intracranial neoplasms in this age group. Epidemiological characteristics of this neoplasm are somehow different in developing countries because diagnosis is usually made in advanced stages of the disease.

In this study results of surgeries on 41 patients and outcome of adjuvant therapy between 1982 and 2005 have been reported. Signs and symptoms, imaging, removal degree, management of hydrocephaly, and shunt insertion policy as well as the complications and mortality were reviewed in this series. Resections were evaluated with postoperative contrast enhanced computed tomography.

This was a study based on medical data of 41 patients with a 23-year follow-up. Twenty-seven (66%) of the patients were male and 14 (34%) were female. When operated, the mean age of the patients was 10.8 years (range: 6 m - 32 yr). The patients were followed between 6 and 261 months (mean follow up was 52 m). Sixty one percent had disease free survival.

Ventriculoperitoneal shunt was used more frequently in our series, which is probably because of late diagnosis in developing countries and our policy for precraniotomy shunting. Radiotherapy plays a major role in controlling the disease total resection may lead to neurological deficits.

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Toxocariasis Seroprevalence in Children

Human toxocariasis is due to the migration of *Toxocara* species larvae into the human body. Humans, especially children are infected by ingesting either embryonate eggs from soil, dirty hands, raw vegetables, or larvae from undercooked organs of paratenic hosts such as chicken, cattle, and sheep. Three clinical forms of toxocariasis are described including visceral larva migrans, ocular larva migrans, and covert toxocariasis. Seroprevalence is high in developed countries, especially in rural areas. In order to determine the
seroprevalence of toxocariasis in children in Mahidasht area of Kermanshah Province, western Iran, an enzyme linked Immunosorbent assay (ELISA) test with synthetic *Toxocara canis* antigen was performed.

A total number of 260 children (2 – 12 years old) of both sexes were examined. The percentage of blood eosinophile and total IgE level was determined by ELISA test. Alternative three-day stool samples were examined and epidemiological data were obtained by means of a questionnaire given to the parents.

The total prevalence was 8.46%. No significant difference in the frequency of infection according to age and gender was observed (*P* > 0.05). 1.15% of cases were reported as geophagic, but their serologic test for *Toxocara* was negative. No significant difference was observed in this study between dog ownership and *Toxocara* infection (*P* > 0.05).

This study can effectively increase the population awareness about potential zoonotic hazards and also anthelmintic treatment of dogs by veterinarians and more efficient control of stray dogs.

**Authors:** Akhlaghi L, Ourmazdi H, Sarafnia A, Vaziri S, Jadidian K, Leghaii Z.

**Source:** Journal of Iran University of Medical Sciences. 2006; 13(52): 48 –57.

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**Efficacy and Safety of Oral versus Intravenous Vitamin C in Hemodialysis Patients with Functional Iron Deficiency**

Hemodialysis patients with functional iron deficiency often develop resistance to recombinant human erythropoietin (rHuEpo). Recent studies suggest that intravenous (IV) ascorbic acid may circumvent rHuEpo resistance, while oral ascorbic acid is readily attainable. The aim of this study was to evaluate the efficacy and safety of oral versus intravenous vitamin C on functional iron deficiency and whether this can improve anemia in hemodialysis patients.

In this study, 31 hemodialysis patients with serum ferritin >100 µg/L, transferrin saturation < 30%, and hemoglobin (Hb) <11 g/dL were selected and randomly divided into the oral and IV groups. The IV group received vitamin C 1.5 g, administered weekly and the oral group, 125 mg vitamin C daily for two months. Hb, ferritin, serum iron, transferrin saturation, and serum oxalate were measured at the beginning of the study and 2 months later. Independent sample *t*-test was used for intergroup comparison. *P* < 0.05 was considered significant. Mean Hb difference was 1.1 ± 0.7 g/dL in the oral and 0.1 ± 1 g/dL in the IV group, which was significantly higher in the oral group (*P* = 0.02). There were no significant differences between the two groups in the delta means of ferritin and transferrin saturation (*P* = 0.5, *P* = 0.3). Delta means of serum oxalate in the two groups were 0.05 ± 0.4 mg/L, and 0.1 ± 0.3 mg/L respectively, which shows a non-significant difference (*P* = 0.3).

Oral ascorbic acid significantly increased Hb in hemodialysis patients suffering from functional iron deficiency. Considering the feasibility and cost-effectiveness, clinicians could consider oral instead of IV ascorbic acid in rHuEpo hyporesponsive patients undergoing hemodialysis.

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**Hepatitis C in Golestan Province, Iran**

Hepatitis C is one of the most important etiologies of chronic liver disease, which can lead to progressive liver cirrhosis and hepatocellular carcinoma. The purpose of this study was to determine the prevalence of hepatitis C in east of Golestan Province (northeast of Iran).

By random selection 2,123 inhabitants (female: 1387) with mean age of 41.3 ± 14.8 years from northeast of Iran were studied. The samples taken were fresh sera for searching hepatitis C virus antibody (HCV Ab) using ELISA method. A recombinant immunoblot assay (RIBA) was done for the positive HCV Ab samples tested by ELISA as the next step.

Of the total of 2,123 samples, 56 samples were HCV Ab positive (ELISA). Twenty of the 56 samples were also RIBA positive.
According to ELISA results the prevalence of HCV Ab positive samples in females was 3.1% (44 of 1387 samples) and in males was 1.6% (12 of 714 samples). Totally we found that the prevalence of hepatitis C through ELISA method was around 2.6%. This rate reduced to 1% considering RIBA positive samples, which is the definite test in hepatitis C diagnosis.

This study is the first to determine hepatitis C in general population in Iran. A comparison between the hepatitis C prevalence in northeast Iran and other parts of the world showed that Iran has a relatively lower prevalence (Asia: 3.55% Africa: 5.17% America: 1.9%).

Authors: Ghadir MR, Jafari E, Amirian MT, Rezvan H, Amini S, Pourshams A.

Effects of Cadmium on Cellular and Subcellular Structures of Cerebellar Purkinje Cells in Four-day Postnatal Developing Rats

This experiment was conducted to evaluate the effects of cadmium on cellular and subcellular structures of cerebellar Purkinje cells in developing rats.

Materials and methods: forty adult female Wistar rats served as subjects in this experiment. The animals were assigned randomly to four groups: control I, control II, experiment I, and experiment II. Cadmium chloride solution (3 mg/kg) was injected intraperitoneally to the rats in experiment groups I and II on day 8 and 16 of pregnancy. Whereas normal saline was injected intraperitoneally to the rats in the control group I and II on day 8 and 16 of pregnancy, respectively. After delivery, the four-day postnatal neonate rats of the four groups were perfused intracardially with 2.5% fixative glutaraldehyde solution. After appropriate procedures, the histological slides were examined by light and electron microscopy. Then the number of Purkinje cells were counted, and cellular and subcellular characteristics of Purkinje cells were evaluated.

Our quantitative data showed that there was a significant reduction in the number of cerebellar Purkinje cells in experiment group I and II comparing with control group I ($P_1 < 0.000$) and II ($P_2 < 0.005$). Also, the number of Purkinje cells significantly diminished in experiment group I comparing with experiment group II ($P < 0.005$). On the other hand, the qualitative microscopic assessment of the specimens showed considerable changes such as Purkinje cells deaths, heterochromatin nuclei, unclear nucleolus, deterioration of mitochondrial membrane and cristae, formation of numerous abnormal vacuoles in mitochondria, and separated particles of cytoplasm with cellular components in the experimental groups.

The present experiment clearly identifies cadmium as a toxic metal poison in rat embryos. Our findings lead us to conclude that presence of cadmium during pregnancy not only induces negative growth effects on neonate rat, but also causes degenerative changes and diminishes the number of Purkinje cells in the cerebellum.

Authors: Amini A, Faghihi A, Mehdizadeh M, Negahdar F, Shariati T, Fereshtehnejad SM.

Malignancy after Renal Transplantation

Long term use of immunosuppressive medications in transplant recipients in order to prevent acute and chronic rejection increases the risk of cancer. This study evaluates the incidence of cancer in different organs after renal transplantation and immunosuppressive therapy.

This is a retrospective analysis of malignant tumors in renal graft recipients with more than one year graft survival. Patients were assessed according to their age, sex, diagnosis of cancer, immunosuppressive drugs, donors, and period of dialysis before transplantation.

Evaluating all existing files in selected private clinics in Isfahan 350 patients were reviewed. Of them 289 patients (186 men and 103 women, mean age: 42.17 ± 13.09 years) were included. They were followed up over a mean period of 52.46 ± 33.24 months. Six patients (2.1%) were diagnosed as having cancer. All of them were male with a mean age of 51.17 ± 14.7 years (range: 26 – 68 years). Tumor presented at a mean
time of 51 months (rang: 15 – 82 months) after transplantation. There were two patients with basal cell carcinoma, two patients with squamous cell carcinoma, and two patients with lymphoma. Two patients died of progressive malignant disease. Age, period of dialysis before transplantation, and using immunosuppressive and anti-rejection drugs had no significant impact on development of post transplant malignancy.

The frequency of tumors in these patients is lower than that reported by other centers, probably due to short period of follow up and low incidence of cancer in our general population. The risk of malignancy was 28 fold higher among transplant recipients than in general population. High risk of cancer in this group, confirms the necessity of routine examination for organ transplant recipients before and after transplantation.

Authors: Shahidi S, Seirafian B, Shayegan Nia B, Adilipour H.

Erratum

In the article entitled “Inter- and Intra-observer variability…..”, which was published in AIM journal, January 2007, Volume 10, Number 1, pages 48 – 53, the institutional affiliation of the 8th and 9th authors i.e., Dr. Mehdi Mohamadnejad MD and Farhad Zamani MD, must be changed to:

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