
Excerpts from Persian Medical Literature

The Effect of Transfusion of Packed Red Blood Cells on Arterial Blood Gas Parameters in Patients Undergoing General Anesthesia for Elective Surgery

Transfusion of blood products is associated with a number of changes in metabolic parameters. The objective of this study was to assess the effect of transfusing packed red blood cells on arterial blood gas parameters in patients undergoing general anesthesia for elective surgery.

Forty adult patients who underwent general anesthesia for elective surgeries and who received a 250 to 350 mL of packed cells were studied. The arterial samples were taken from patients before and after the transfusion. The results were presented as mean \pm SD. Chi-square and paired sample *t*-tests were used for data analysis.

There was no statistically significant difference between the two samples regarding arterial pH, base excess, PaO₂, and PaCO₂ before and after the transfusion. There was, however, a significant decline in the arterial bicarbonate concentration and buffer base after the transfusion.

We, therefore, concluded that transfusion of packed red cells as much as 250 to 350 mL in those undergoing general anesthesia could not influence the blood gas parameters significantly.

Authors: Dabbagh A, Agah M, Golchin M, Malek B.

Source: *Blood (Khoon)*. 2006; **3 (2)**: 111 – 120.

Telecytology for the Diagnosis of Pleural Effusion Smears

Telecytologic diagnosis of pleural effusion smears is potentially useful because it could allow more efficient use of cytopathologist resources and expertise. The objective of our investigation was to evaluate how well this type of review correlates with a review in which the entire slide is available for examination by the pathologist.

Thirty-five pleural effusion smears with different diagnoses were selected retrospectively. They included 16 benign, 5 suspicious for malignancy, and 14 malignancies confirmed by two expert cytopathologists. For each slide, fields number 3 to 11 containing abnormal cells were scanned. Pathologists reviewed all glass slides and the digital images separately. Diagnoses based on selected digital images were compared with those based on conventional review. The Kappa was calculated to measure the level of agreement between two methods.

The inter-observer Kappa value for three observers of the glass slides was 76%. The inter-observer Kappa value for the digital images was 67%.

The disagreement between a pathologist's glass slide and digital diagnose (mean intra-observer Kappa value = 73%) was greater than that for different pathologists reviewing glass slides (mean slide inter-observer Kappa value = 76%). Overall, the level of intra- and inter-observer reproducibility of pleural effusion slides, consisted of direct smear after centrifugation and cytospin preparation, is good to excellent.

Authors: Ayatollahi H, Tabatabaee A, Sharifi N, Sadeghian MH, Esmaeili H, Bordbar-Azari J, et al.

Source: *Iranian Journal of Basic Medical Sciences (IJBMS)*. 2006; **9 (2)**: 131 – 135.

The Molecular Analysis of β -Thalassemia Mutations in Lorestan Province, Iran

Thalassemia is the most common monogenic hereditary disease worldwide. We conducted this study to determine the prevalence of common β -thalassemia mutations in Lorestan Province, northwestern part of Iran.

One hundred and thirty chromosomes from 65 unrelated homozygous β -thalassemia patients from Lorestan Province, northwestern part of Iran were studied for β -globin gene mutations by ARMS-PCR.

The most common mutations of the Mediterranean region were examined in this study. We found a different mutation spectrum in Iran compared with the data obtained by other authors. The most common mutation was codons 36/37 (-T), with a frequency of 33.8%, followed by the four mutations of IVS-II-1 (G→A), IVS-I-110 (G→A), frame-shift codons (FSC) 8/9 (+G), and IVS-I-5 (G→C) with frequencies 27.7%, 11.5%, 10.8%, and 4.5%, respectively. The less frequent alleles, IVS-II-745 (C→G), codon 5 (-CT), IVS-I (25 bp deletion) and frame-shift CD44 (-C) with the following frequencies 1.6%, 0.8%, 0.8%, and 0.8%, respectively, accounted for only 3.9% of mutations. No mutations in codon 30 (G→C), codon 39 (C→T), IVS-I-6 (T→C), and IVS-I-1 (G→A) were detected. The frequency of unknown alleles was 7.6%.

These data suggest that the pattern of mutations in Lorestan Province is different from those reported for the Mediterranean and other thalassaemic regions in Iran.

Authors: Kiani AA, Mortazavi Y, Zeinali S, Shirkhani Y, Delfan B, Kashi M.

Source: *Yakhteh (The Cell), Medical Journal*. 2006; **8(2)**: 88 – 91.

Cognitive Dysfunction and Neurological Soft Signs in Patients with Schizophrenia

The objective of this study was to determine the correlation between cognitive and neurological impairments with each other and with other prognostic factors in patients with schizophrenia. In a cross-sectional study, using a convenient sampling, 30 (18 males and 12 females) patients with schizophrenia admitted to a psychiatry ward over one year, were examined by Mini-Mental Status Examination (MMSE); their selected neurological soft signs were determined by the Neurological Evaluation Scale (NES). The collected data were processed using Fisher's exact test, Kendal's Tau-b test, Mann-Whitney's U test, and Wilcoxon rank sum test.

The MMSE score had a statistically significant correlation with age at the disease onset and rhythm tapping sign — a soft sign related to movement coordination. There was a significant correlation between the total neurological soft sign score and the age at the disease onset as well as neuroleptical equivalent dosage. Furthermore, correlation between the measures of severity of the disorder and MMSE score was statistically significant.

There is a correlation between the MMSE score and some prognostic variables in schizophrenia, such as age at the disease onset and some neurological soft signs; it is possible to consider the problem detected in this test as one of the factors related to the prognosis of the disorder.

Authors: Amini A, Davari M, Abiri F.

Source: *Cognitive Science*. 2005; **7 (4)**: 1 – 7.

Indication of Lumbar Puncture in Infants Presented with Febrile Convulsion

It is frequently thought that lumbar puncture (LP) is a mandatory procedure in all children presenting with febrile convulsion since convulsion may be the sole clinical manifestation of bacterial meningitis. The present study was conducted to assess whether meningitis could be recognized using readily available clinical information.

During the study period, 254 consecutive previously-healthy children aged six months to five years who were brought to the pediatric department of a teaching university hospital after their first febrile convulsion were studied. LP was performed for all patients. Children with febrile convulsion and meningitis served as cases and those with febrile convulsion but no meningitis, served as controls. The following factors were compared between groups: age, lethargy, irritability, vomiting, nuchal rigidity, bulging fontanel, headache, drowsiness, toxicity, coma, complex seizure, and prior antibiotic use.

Of 245 infants, 12 (4.7%) had meningitis. The following risk factors were significantly associated with meningitis: lethargy ($P < 0.0006$), irritability ($P < 0.0008$), vomiting ($P < 0.0001$), nuchal rigidity ($P < 0.0001$), bulging fontanel ($P < 0.05$), headache ($P < 0.006$), drowsiness ($P < 0.0001$), toxicity

($P < 0.00012$), coma ($P < 0.005$), complex seizure ($P < 0.04$), and prior antibiotic use ($P < 0.0002$). All children with meningitis had at least one of the following risk factors: prior antibiotic use, or positive clinical manifestations.

We found that clinical manifestations and type of convulsion (simple or complex) could be used to diagnose meningitis. Therefore, there is no need for routine LP in all children who present with febrile convulsion. However, LP is mandatory in infants younger than 12 months or those who have received prior antibiotics.

Authors: Ghotbi F, Katouzian B.

Source: *Journal of the Faculty of Medicine (Pejouhesh)*. 2006; **30 (1)**: 25 – 29.

A Ten-Year Survey of the Thyroglossal Duct Cyst in Firouzgar and Hazrat-e-Rasoul Akram Hospitals

One of the most common complaints of patients referred to ENT clinics is neck mass that accounts for 10 – 15% of patients. However, thyroglossal duct cyst is the most common congenital neck mass and the second common childhood neck mass that is usually presented before five years of age. However, it sometimes remains asymptomatic until adolescence. Except lymphadenopathy, it is the most common noncancerous neck mass and should be differentiated from other neck masses. The fact that incomplete or incorrect treatment may lead to recurrence and difficulty in next attempts indicates the necessity of knowledge and awareness on the part of physicians to decrease the rate of recurrence and complications by adopting a correct surgical approach. The present study was carried out to determine different clinical manifestations of the above-mentioned cysts and their incidence rates among Iranians to help doctors diagnose and treat the cases properly.

In this study, we investigated charts of patients who were admitted to Hazrat-e-Rasoul Akram and Firouzgar Hospitals between 1991 and 2002 with the diagnosis of thyroglossal duct cyst confirmed by histopathological reports.

Fifty-four patients (53% males and 47% females) participated in the study. The mean age for males and females was 21 and 17.7 years, respectively. The major complaints consisted of neck mass (68%), discharge from anterior cervical region (30%), local abscess (4%), and lingual mass (2%). Regarding the location of the mass or fistula, 42 (82%) cases presented in midline cervical area, 3 (6%) in the right cervical areas, 5 (9.8%) in left cervical area, and 1 (1.9%) was intralingual. Concerning mobility, 31 (61%) patients presented with mobile masses or fistulas, and 15 (30%) with immobile masses; in other cases, the required data was not available.

Although, the patients of the present study were reported to be older than those of similar studies, other signs and symptoms were the same.

Authors: Javadi M, Maleki Delarestaghi M, Rezaii R.

Source: *Journal of Iran University of Medical Sciences*. 2006; **13 (51)**: 91 – 96.

Changes in the Etiology and Epidemiology of Upper Gastrointestinal Bleeding in a Population Study

Acute upper gastrointestinal bleeding (UGIB) is a common medical emergency. In the past years, important changes have been taken place that might have influenced the incidence, etiology, and outcome for patients with acute UGIB. The objective of this study was to determine the trend in the incidence, management, and prognosis of patients with UGIB over 14 years in a region in center of Iran.

All patients with UGIB who hospitalized in hospitals of Semnan from 1991 through 2004 were evaluated in a retrospective study. The patients with permanent residency in this area and age more than 15 years enrolled into the study. The patients were divided into two subgroups based on endoscopic diagnosis; peptic ulcer (PU) and nonpeptic ulcer (non-PU). Again, analysis was performed by dividing the patients to acid-peptic disorders (APDs) and non-acid-peptic disorders (non-APDs).

Eight hundred and seventy-three patients (617 males [70.7%]) with a mean \pm SD age of 46.9 ± 21.2 years were enrolled in the study. The incidence rate of UGIB was decreased from 98.4 to 40.1 in 100,000 person per year over this period ($P < 0.001$). The incidence rate of bleeding due to PU and non-PU was also decreased. However, in the second analysis, although the rate of APDs was decreased, the rate of non-APDs was remained unchanged during the study period.

In regard to the prognosis, the rates of endoscopic therapy, surgery and mortality were not changed significantly over this period.

The overall incidence of UGIB, and bleeding due to APDs was declined in recent years that may be due to better approach to PUs and eradication of *Helicobacter pylori* and widespread use of proton pump inhibitors and H₂ blockers in APDs.

Authors: Mousavi S, Toussy J, Zahmatkesh M, Fatemi R, Babaei M, Rabizadeh MA.

Source: *Scientific Journal of Iranian Association of Gastroenterology and Hepatology (Govaresh)*. 2006; **11 (2):** 80 – 85.

Causes of Mortality in Fars Province

Analysis of death statistics of each province, according to main variables such as gender, age, and living place, and comparing them with such data from other provinces, the whole country, and other countries, is necessary for health programming and priority setting.

In this cross-sectional study, the death statistics of Fars Province during 2001 were collected from several available sources. Causes of death were registered based on the death witnesses and verbal autopsies. These data were analyzed and compared with corresponding data from 18 other provinces and of the world statistics.

The crude death rate in the Fars Province in the year 2001 was 373.1 per 100,000 population. The most prevalent groups of death causes in the province, and also in the country, were cardiovascular disease (135 per 100,000), imprecise and nonwell-defined symptoms and conditions (54.6 per 100,000), unintended accidents (50.8 per 100,000), and cancers (32.5 per 100,000). The most prevalent subgroups, except for subgroups of imprecise and nonwell-defined symptoms and conditions, were myocardial infarction (66.5 per 100,000), and traffic accidents (34.9 per 100,000).

The results imply the importance of controlling the risk factors of ischemic heart diseases and traffic accidents. In the case of cancers, although the mortality rate of cancer in the province is lower than other provinces, it needs to be recognized as a health priority in the province.

Authors: Javadi M, Maleki Delarestaghi M, Rezaii R.

Source: *Hormozgan Medical Journal*. 2006; **10 (1):** 47 – 56.