Short cut

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Baghbanian M, Shabazkhani B, Ghofrani H, Forutan H, Dariani N, Farahvash M, et al. **Efficacy of endoscopic ultrasound guided fine needle aspiration in patients with solid pancreatic neoplasms.** *Saudi J Gastroenterol 2012;18:358-63.*

Endoscopic ultrasound guided fine needle aspiration (EUS-FNA) is important for the early diagnosis of pancreatic cancer when curative treatment may be available. This descriptive, prospective study evaluated 53 patients with pancreatic solid tumours referred to Imam Khomeini educational hospital in Tehran from 2010-2011. EUS-FNA was completed in all patients without significant complication and was diagnostic in 87%.The frequency of non-diagnostic results was significantly higher in masses smaller than 3 cm (p<0.002). Patients with non-diagnostic results were younger than those with malignant cytopathology (52 ± 7.5 y vs. 66 ± 7.5 y, p<0.001). Adenocarcinoma was detected in 68% of patients. The sensitivity, specificity, positive predictive value, negative predictive value and accuracy of EUS-FNA was 88%, 100%, 100%, 70% and 90% respectively. The authors conclude that EUS-FNA is a safe and effective procedure for the histopathologic diagnosis of pancreatic solid tumours.

Cole SW, Conti G, Arevalo JM, Ruggiero AM, Heckman JJ, Suomi SJ. **Transcriptional modulation of the developing immune system by early life social adversity.** *Proc Natl Acad Sci U S A 2012;109:20578-83.*

This interesting study investigated the influence of early life social conditions on adult disease risk in four month old rhesus macaques (Macaca mulatta). Changes in the basal gene expression profilesof peripheral blood mononuclear cells (PBMCs) were compared innewborn animals randomly allocated to be maternally-reared (MR) (n=5), peer-reared (PR) (n=4) and PR with an additional inanimate surrogate mother (surrogate/peer-reared (SPR)) (n=4).Genes mediating immune activation including cytokine signalling, metabolic activation and T-cell proliferation were up-regulated whilst genes involved in severalinnate antimicrobial defences including type I interferon antiviral responses were down-regulated in PR and SPR animals compared with the MR cohort. This study demonstrates that the basal transcriptome of primate immune cells may be shaped by social conditions during the first four months of life with possible implications for health in later life. Future studies should investigate larger samples and health trajectories to clarify the impact of social conditions on genomic dynamics.

Alavian SM, Tabatabaei SV, Ghadimi T, Beedrapour F, Kafi-Abad SA, Gharehbaghian A, et al. **Seroprevalence of hepatitis B virus infection and its risk factors in the West of Iran: a population-based study.** *Int J Prev Med 2012;3:770-75.*

Although hepatitis B virus (HBV) infection is a prominent cause of chronic liver disease in Iran, a lack of region-specific epidemiological data exists to guide public health interventions. This population-based serological study of 1613 healthy subjects (age range 6 to 65 years) from Kurdistan province, Western Iran evaluated the seroprevalence of HBV infection and associated risk factors. Subjects were selected by random cluster sampling and all completed a riskfactor questionnaire and underwent testing for hepatitis B surface antigen (HBsAg), hepatitis B core antibody (HBcAb) and anti-hepatitis D virus (anti-HDV) antibody. The prevalence of HBsAg and

HBcAb positivity was 0.80% and 5.02% respectively. No HBsAg carriers were positive for anti-HDV antibody. Advancing age and married status were independent risk factors for HBV seropositivity. To reduce intrafamilial HBV transmission the authors recommend that prior to marriage, couples should be screened for HBV infection and vaccinated if appropriate.

*Safaee A, Fatemi SR, Ashtari S, Vahedi M, Moghimi-Dehkordi B, Zali MR. **Four years incidence rate of colorectal cancer in Iran: a survey of national cancer registry data — implications for screening.** Asian Pac J Cancer Prev 2012;13:2695-98.*

This retrospective study, designed to inform colorectal cancer (CRC) screening in Iran, analysedincidence data from 19,617 CRC patients registered in the Iranian annual of National Cancer Registration report from 2005 to 2009. The overall mean age atCRC diagnosis was 58.9 ± 15.4 yearsand 56% of patients were male. Of note, approximately 25% of patients were aged less than 25 yearsat diagnosis, in contrast with similar studies in Western populations demonstrating older age distributions. This may reflect a younger population age structure or a strong, currently ill-defined, genetic contribution to CRC aetiology in Iran. The overall age standardised rate (ASR) for CRC was 38.0 per 100,000 and increased with age (ASR 8.26 for less than 50 years old, 29.73 for over 50 years old).The authors recommend that CRC screening in Iran should commence at 50 yearsof age.

*Zendehdel K, Marzban M, Nahvijou A, Jafari N. **Six-fold difference in the stomach cancer mortality rate between Northern and Southern Iran.** Arch Iran Med 2012;15:741-46.*

Stomach cancer, the most common cancer in Iran, has a high mortality rate although regional differences have been poorly characterised. This epidemiological study evaluated the geographical variation in stomach cancer mortality and established risk factor prevalence in Iran. Data was collected from the Iranian National Causes of Death Registry and literature review. The average age-standardised mortality rate (ASMR) for stomach cancer in Iranian males (15 per 100,000) was approximately two-fold greater than that

identified in females (8.1 per 100,000). For both sexes, a decreasing ASMR from North to South Iran was observed ranging from Kurdistan (29.1 per 100,000 (male), 18.0 per 100,000 (female)) to Hormozgan(5.0 per 100,000 (male), 2.3 per 100,000 (female)). Although the ASMR was two-fold greater in rural areas compared with urban areas in Kurdistan, rates were equivocal in other provinces. There was limited data evaluating region-specific H. pylori prevalencein Iran although correlation with stomach cancer ASMR was noted in Ardabil (high)and Sistan-Baluchistan (low) provinces.

The authors postulate that the observed six-fold difference in ASMR between North and South Iran may be due to established risk factors includingH. pylori infection, tobacco use, diet, living in a rural area and a lack of refrigerator use although further studies are necessary to determine their exact role.In the meantime, primary prevention programmes for stomach cancer should be targeted to high incidence areas.

*Biesiada G, Czepiel J, Ptak-Belowska A, Targosz A, Krzysiek-Maczka G, Strzalka M, et al. **Expression and release of leptin and proinflammatory cytokines in patients with ulcerative colitis and infectious diarrhea.** J Physiol Pharmacol 2012;63:471-81.*

In addition to the regulation of satiety and lipid metabolism, leptin, an immunomodulator, may play a central role in the pathogenesis of inflammatory bowel disease (IBD). This prospective study investigated the intestinal mucosal expression and serum concentration of leptin and proinflammatory cytokines (interleukin (IL)-1β, IL-6 and tumour necrosis factor (TNF)-α) in 80 adult patients with IBD, including 50 patients with ulcerative colitis (UC) and 30 patients with infectious diarrhea. The acute disease and post-recovery/remission phases were compared.

Serum concentrations of leptin, TNFα, IL-1β and IL-6 were significantly elevated during UC exacerbation compared with the remission period (p<0.001, p<0.01, p<0.01, p<0.001 respectively). Furthermore, serum concentrations of leptin correlated with levels of TNFα (r=0.52, p<0.001) and IL-1β (r=0.50, p<0.001) but did not correlate with the disease exacerbation severity defined by

Montreal Classification. In both disease groups (i.e. patients with active UC or infectious diarrhea) the mucosal expression of leptin mRNA was greater andleptinprotein reduced compared with post-recovery/remission levels ($p<0.05$). There was no significant change in serum leptin concentrationsduring infectious diarrhea and following recovery although serum leptin directly correlated with levels of TNFα ($r=0.25$, $p<0.03$), IL-1β ($r=0.65$, $p<0.001$) and IL-6 ($r=0.63$, $p<0.001$).

Compared with UC, the short-term inflammatory reaction associated with infectious diarrhea may enhance mucosal leptin expression but be insufficient to significantly change serum leptin levels. The authors conclude that leptin may serve as a useful predictive marker of inflammation in IBD.

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