1. Cell Prolif. 2012 Apr;45(2):148-57. doi: 10.1111/j.1365-2184.2011.00803.x. Epub 2012 Jan 20.

Proliferation and differentiation potential of cryopreserved human skin-derived precursors.

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OBJECTIVES: Skin-derived precursors are recognized to be a potentially autologous and accessible source of neural precursor cells for drug screening or cell-based treatments, in many neurological disorders. Thus, it is necessary to investigate appropriate methods for cryopreservation of such human skin-derived precursors (hSKPs). The aim of this study was to evaluate different cryopreservation techniques for retention of hSKPs to discover an optimized protocol.
MATERIALS AND METHODS: We cryopreserved hSKPs treated with 0%, 10%, 20%, 30% and 40% foetal bovine serum (FBS) and three concentrations of dimethylsulphoxide (DMSO) 5%, 10% and 15%, with two different storage periods in liquid nitrogen (2 days: short-term storage; and 2 months: long-term storage). Then, we assessed survival and proliferation levels of the cells after freeze-thaw processes, by viability measurement and colony-forming assay. For detecting hSKPs, we used immunocytochemistry and RT-PCR assessments.
RESULTS: Our findings indicated that hSKPs cryopreserved in 5% DMSO without FBS, had better survival and proliferation potentials compared to other working formulations. With various concentrations of cryoprotectants over different time periods, hSKPs retained their differentiation potentiality and were able to differentiate into neurons (NFM and βIII tubulin-positive), glial cells (GFAP-positive) and smooth muscle cells (SMA-positive).
CONCLUSIONS: Results revealed that in only 5% DMSO, hSKPs could be cryopreserved for long-term storage with considerable survival and proliferation levels, without losing multipotency.

PMID: 22260230 [PubMed - in process]

2. Spectrochim Acta A Mol Biomol Spectrosc. 2012 Apr;89:177-86. Epub 2011 Dec 29.

Comparative spectroscopic studies on drug binding characteristics and protein surface hydrophobicity of native and modified forms of bovine serum albumin: possible relevance to change in protein structure/function upon non-enzymatic glycation.

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The interaction between serum albumin (SA) and drugs has provided an interesting ground for understanding of drug effects, especially in drug distribution and drug-drug interaction on SA, in the case of multi-drug therapy. Determination of the impact of various factors on drug-protein interaction is especially important upon significant binding of drug to albumin. In the present study, the interaction of two drugs (furosemide and indomethacin) with native and modified albumins were investigated by using various spectroscopic methods. Fluorescence data indicated that 1:1 binding of drugs to bovine serum albumin (BSA) is associated with quenching of albumin intrinsic fluorescence. The Job's plot also confirmed that drug binds to BSA via mentioned stoichiometry. Analysis of the quenching and thermodynamic parameters indicated that intermolecular interactions between drug and albumin may change upon protein modification. The theoretical analyses also suggested some conformational changes of interacting side chains in subdomain IIA binding site (at the vicinity of W237), which were in good agreement with experimental data. Decrease of protein surface hydrophobicity (PSH) was also observed upon both albumin modification and drug binding.

PMID: 22261105 [PubMed - in process]

3. Thyroid. 2012 Apr;22(4):415-21. Epub 2012 Mar 12.

Eighteen years of continuously sustained elimination of iodine deficiency in the
islamic republic of iran: the vitality of periodic monitoring.

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Background: Two decades ago the Islamic Republic of Iran was among countries most
severely affected by iodine deficiency. Iran has since achieved great success in
the control and elimination of iodine deficiency disorders (IDDs) following the
national salt iodization program, initiated in 1989. The aim of the study was to
evaluate the effectiveness of sustained consumption of iodized salt by Iranian
households and the current status of iodine nutrition in all 30 provinces of
Iran. Methods: Goiters-measured by palpation-and urinary iodine concentration of
children were assessed. In this descriptive cross-sectional study, 36,000
schoolchildren (18,000 girls and 18,000 boys), aged 8-10 years, were randomly
selected, from October 2007 to February 2008, from 30 provinces of the country.
Goiter prevalence and urinary iodine excretion in schoolchildren and the iodine
content of salt at household, factory, and distribution site levels were
measured. Results: The goiter rate in the country was 6.5% (6% grade 1 and 0.5%
grade 2), and the weighted goiter rate was 5.7%. The total goiter rate in
Hamedan, Zanjan, Kermanshah, Mazandaran, and Gilan provinces was over 10%. The
median urinary iodine was 140 μg/L. Urinary iodine levels of 20-50, 50-99, and
≥100 μg/L were noted in 15.3%, 19.8%, and 64.9% of the samples, respectively. In
four provinces, the median urinary iodine was lower than 100 μg/L. The mean (±SD)
and median salt iodine values were 23.2 (±13.8) and 34.7 ppm, respectively, at
the production level, and 32.4 (±14.7) and 32.3 ppm, respectively, at the

distribution level. Ninety-eight percent of households consumed iodized salt, 58% of households had appropriate salt storage, and 27% of the household salts contained <20 ppm. Conclusions: Iran has achieved much in the development of universal salt iodization strategy and elimination of IDDs and currently meets all criteria for sustainable elimination of iodine deficiency. However, the lack of adequate iodine nutrition in some provinces necessitates special attention and proper monitoring.

PMID: 22409203 [PubMed - in process]

4. Bioprocess Biosyst Eng. 2012 Mar;35(3):407-14. Epub 2011 Aug 11.

High level expression of recombinant BoNT/A-Hc by high cell density cultivation of Escherichia coli.

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The carboxylic domain of the Clostridium botulinum neurotoxin heavy chain (BoNT/A-HC), which has been reported as a vaccine candidate, contains the principle protective antigenic determinants. In this study, the high level expression of the BoNT/A-Hc was achieved by high cell density cultivation of recombinant Escherichia coli in a 2-l batch stirred-tank bioreactor. In order to maximize protein expression, post-induction time and IPTG inducer concentration were optimized by the Taguchi statistical design method. Results showed that the middle of the logarithmic phase and an IPTG concentration of 1 mM presented the optimum conditions for the maximum expression of BoNT/A-HC. High cell density cultivation was subsequently carried out as an effective strategy for the high level expression of recombinant BoNT/A-Hc. Consequently, soluble BoNT/A-Hc was produced at the maximum level of 486 mg l(-1), at 3 h post-induction, which was approximately 9.3 and 7.8 times higher than the levels produced by the shake flask and batch culturing methods, respectively.

PMID: 21833619 [PubMed - in process]

5. Genet Test Mol Biomarkers. 2012 Mar;16(3):198-202. Epub 2011 Oct 21.

Lack of Association Between MTHFR C677T and A1298C Polymorphisms and Risk of Childhood Acute Lymphoblastic Leukemia in the Kurdish Population from Western Iran.

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Aims: Polymorphism in genes involved in folate metabolism may influence the susceptibility to acute lymphoblastic leukemia (ALL). The aim of the present study was to determine the role of the two most common polymorphisms of the 5, 10-methylenetetrahydrofolate reductase (MTHFR) gene, MTHFR C677T and A1298C, and their interaction on the susceptibility to ALL. Methods: Seventy-two children with ALL and 109 age- and sex-matched healthy children from Western Iran were screened for MTHFR C677T and A1298C variants by using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP). Results: The frequencies of MTHFR 677T and 1298C alleles in patients were 29.9% and 43.1%, respectively, that were higher than those in controls (24.8% and 38.1%, respectively). Logistic regression analysis was performed and its result in the odds ratios (ORs) for possession of either MTHFR 677T or 1298C allele was found to be 1.98 [95% confidence interval (CI) 0.72-5.4, p=0.18] and 1.48 (95% CI 0.59-3.69, p=0.4), respectively. Also the concomitant presence of both MTHFR 677T and 1298C alleles was not associated with the risk of ALL [OR=2.12 (95% CI 0.8-5.7, p=0.13)]. Conclusion: Our results in a homogenous population with Kurdish ethnic background indicated that neither the MTHFR 677T allele nor the MTHFR 1298C allele is associated with increased risk of ALL.

PMID: 22017305 [PubMed - in process]

6. J Sex Med. 2012 Mar;9(3):844-8. doi: 10.1111/j.1743-6109.2011.02579.x. Epub 2012
Jan 3.

Nonischemic priapism following penile tattooing.

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INTRODUCTION: To our knowledge, here we report the first case of nonischemic
priapism following penile tattooing.
AIM: To report the first case of nonischemic priapism following penile tattooing.
METHODS: A case with tattooing-induced priapism is presented including subjective
reporting, physical examination, and laboratory/radiologic evaluations.
RESULTS: A 21-year-old man, presented with partially rigid penis of 3-month
duration. On examination, the penis was half rigid, with a tattoo on its dorsal
surface, and a smaller tattoo on the glans (Figure 1). The patient initially
stated that the tattoo had been created years ago, but later admitted that he had
it created just before the occurrence of priapism. A traditional tattooist
created the tattoo manually, using a handheld needle. Bleeding from deep penile
tissue for several days complicated the tattooing. Known etiologies of priapism
were investigated and ruled out. Specifically, perineal injury, leukemia, sickle
cell trait, thalassemia, urinary tract infection, neurogenic, neoplastic,
infectious, toxic, and pharmacological causes were actively investigated and
ruled out. There was no history of alcohol consumption or smoking. Aspirated
penile blood was bright red. Cavernous blood gas measurements confirmed high
oxygen and low carbon dioxide content, diagnostic of arterial priapism. There was
no embolization facility in Kermanshah. In fact, there are few experts in
superselective embolization in Iran. We referred the patient for superselective
embolization. However, he underwent a nonindicated Sacher procedure. Predictably,
the procedure was unsuccessful. At present, the patient continues to have
priapism. Because of the painless nature of erections, moderately good

preservation of erectile function during intercourses, and disappointment with
former surgery, the patient declined further therapies, and he lives with his
condition.
CONCLUSIONS: Tattooing should be added to the etiologies of nonischemic priapism.
Considering this case, we discourage penile tattooing.

PMID: 22214310 [PubMed - in process]

7. J Sex Med. 2012 Mar;9(3):758-60. doi: 10.1111/j.1743-6109.2011.02578.x. Epub 2012
Jan 3.

Postcoital penile drug eruption in a co-trimoxazole-sensitive patient following
vaginal use of triple sulfa vaginal cream by his partner.

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University of Medical Sciences, Kermanshah, Iran.

INTRODUCTION: This is a report of a very rare case of proven postcoital penile
drug eruption in a patient following vaginal use of triple sulfa vaginal cream by
his partner.
AIM: To report the rare case of cross-reaction following vaginal use of triple
sulfa vaginal cream in partner.
METHODS: A case of postcoital penile drug eruption in a patient following vaginal
use of triple sulfa vaginal cream in his partner is presented including
subjective reporting, physical examination, and laboratory evaluations.
RESULTS: We report a 42-year-old man with known sensitivity to
trimethoprim/sulfamethoxazole (co-trimoxazole) who developed a penile drug
eruption at the glans after having intercourse with his wife, who was taking
sulfathiazole/sulfacetamide/sulfabenzamide (triple sulfa) vaginal cream. The
nature of the lesion was confirmed by a rechallenge test.
CONCLUSION: To our knowledge, this is the fourth case of proven postcoital penile
drug eruption in a patient following vaginal use of triple sulfa vaginal cream in
his partner. Our case illustrates the importance of history taking. In clinical

practice of urology, it is not rare to see patients who present with strange penile lesions following coitus. To reach a correct diagnosis, one should obtain a drug history of the sexual partner and allergic history of the patient in such cases.

PMID: 22214266 [PubMed - in process]

8. Mol Biol Rep. 2012 Mar;39(3):2723-31. Epub 2011 Jun 17.

Synergism between paraoxonase Arg 192 and the angiotensin converting enzyme D allele is associated with severity of coronary artery disease.

Vaisi-Raygani A, Rahimi Z, Tavilani H, Vaisi-Raygani H, Kiani A, Aminian M, Shakiba E, Shakiba Y, Pourmotabbed T.

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We have previously shown that angiotensin-converting enzyme (ACE) gene D allele is an independent risk factor for early onset coronary artery disease (CAD). Little is known about the concomitant presence of the ACE gene D allele and paraoxonase (PON1) codon 192 arginine (Arg) on the severity of CAD. Regarding the high rate of CAD among Iranians the aim of present study was to examine the hypothesis of synergistic effects between ACE-D and PON1-Arg alleles on predisposition and the severity of CAD in our population. The PON1 192 and ACE insertion/deletion (I/D) genotypes were detected by PCR-RFLP and PCR, respectively in 414 individuals undergoing their first coronary angiography. Patients were placed into one of two groups: CAD and control without CAD or diabetes. We mentioned the synergistic effects of both genes and not ACE gene alone is a risk factor for CAD. We found that PON1 Arg 192 and ACE D allele act synergistically to increase the risk of CAD (OR 1.3, P = 0.044). Our results showed a significant correlation between the possession of both PON1 192 Arg and

the ACE D allele and the extent of CAD in CAD patients and CAD subjects without diabetes, represented by the increased frequency of three-vessel disease with OR 2.7, P = 0.046; $\chi(2) = 4$, P = 0.046 and OR 2.4, P = 0.051; $\chi(2) = 3.8$, P = 0.051, respectively. We found that PON1 Arg 192 and ACE D alleles act synergistically to increase the risk of CAD in CAD patients and CAD subjects without diabetes from west of Iran, who have high frequency of three-vessel disease. Our data suggest that PON1 192 Arg and the ACE D allele in combination with each other can be important independent risk factor for severity of CAD in patients carrying both PON1 192 Arg and the ACE D allele in a west population of Iran.

PMID: 21681430 [PubMed - in process]

9. Mol Biol Rep. 2012 Mar;39(3):2195-200. Epub 2011 Jun 5.

Thymidylate synthase and methionine synthase polymorphisms are not associated with susceptibility to childhood acute lymphoblastic leukemia in Kurdish population from Western Iran.

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In order to determine the influence of polymorphism in thymidylate synthase (TS 28-bp repeat) and methionine synthase (MS A2756G) genes on the susceptibility to acute lymphoblastic leukemia (ALL), 73 children with ALL and 128 age and sex matched unrelated healthy individuals from the Kermanshah Province of Iran were screened. The genotyping of TS 28-bp repeat and MS A2756G polymorphisms were performed by polymerase chain reaction (PCR) and PCR-RFLP, respectively. The frequency of TS 2R allele in patients and controls were 41.5 and 38%, respectively (Odds ratios (OR) = 1.13, 95%CI 0.73-1.74, P = 0.56). The allelic frequency of G allele of MS was higher (25%) in patients compared with healthy subjects (23%) (OR = 1.09, 95%CI 0.67-1.75, P = 0.71). Considering MS AA and TS

3R3R genotypes as reference indicated that individuals with MS GG + TS 2R2R genotypes have 1.3-fold increase in the risk of ALL (OR = 1.3, 95%CI 0.6-2.7, P = 0.5). Our results showed that neither TS 28-bp repeat nor MS A2756G polymorphisms are risk factors for susceptibility to ALL in Western Iran.

PMID: 21643952 [PubMed - in process]

10. Lupus. 2012 Feb 9. [Epub ahead of print]

Matrix metalloproteinase-2 functional promoter polymorphism G1575A is associated with elevated circulatory MMP-2 level and increased risk of cardiovascular disease in systemic lupus erythematosus patients.

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Matrix metalloproteinase-2 (MMP-2) is a zinc dependent endonuclease that degrades type IV collagen, the major structural component of basement membranes. MMP-2 functional promoter polymorphism G1575A affects circulating level of MMP-2 and may be considered an important genetic determinant of cardiovascular disease (CVD) in systemic lupus erythematosus (SLE) patients. In this study, association between MMP-2 1575A allele with serum MMP-2, neopterin and lipid-lipoprotein levels and with SLE and developing CVD was investigated.The present case-control study consisted of 109 SLE patients with and without CVD (mean age, 35.6 years) and 101 gender- and age-matched, unrelated, healthy controls (mean age, 37.1 years) from the population in the west of Iran. MMP-2 1575G/A polymorphism was detected by polymerase chain reaction (restriction fragment length polymorphism) PCR-RFLP, serum MMP-2, neopterin and lipid levels were determined by enzyme-linked immunosorbent assay (ELISA), high-performance liquid chromatography (HPLC) and enzyme assay, respectively.The presence of MMP-2 G1575A allele was

found to be associated with SLE and developed CVD (OR = 1.78, p = 0.029 and OR =
3.43, p = 0.025, respectively). The SLE patients with MMP-2 A (G/A + A/A) allele
had higher MMP-2 activity (301 ± 166 vs. 194 ± 35.5, p = 0.002), neopterin (29.4
± 39.4 vs. 7.3 ± 4.6, p = 0.005), LDL-C (120 ± 25.7 vs. 87 ± 39.3, p = 0.045) and
lower HDL-C (39.6 ± 11 vs. 45.9 ± 11.8, p = 0.031) levels than the control
subjects. There was a significantly positive correlation between MMP-2 level with
neopterin, total cholesterol and TG levels and negative correlation with HDL-C
level in SLE patients with CVD.MMP-2 G1575A allele may be a risk factor for SLE.
The carriers of this allele have high levels of MMP-2, neopterin, total
cholesterol and TG and lower levels of HDL, thus, they are more likely to develop
heart disease.

PMID: 22323339 [PubMed - as supplied by publisher]

11. Angiology. 2012 Feb;63(2):131-7. Epub 2011 May 20.

Association of endothelial nitric oxide synthase gene variant (G894T) with
coronary artery disease in Western Iran.

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Comment in
    Angiology. 2012 Feb;63(2):84-5.

There are conflicting reports about the association of endothelial nitric oxide
synthase (eNOS) gene polymorphism and the risk of coronary artery disease (CAD).
To determine the frequency of eNOS G894T variant and to find the possible
association between this polymorphism with CAD we studied 207 unrelated patients
with total CAD (with and without diabetes) and 92 controls. The eNOS variants
were detected by polymerase chain reaction-restriction fragment length
polymorphism (PCR-RFLP). The presence of GT + TT genotype was associated with
2.1-fold (P = .006), 2.29-fold (P = .006), and 1.93-fold (P = .032) increased
risk of CAD in total CAD, CAD with diabetes, and in CAD without diabetes

patients, respectively. The presence of T allele of eNOS increased the risk of CAD 2.15-fold (P = .001). The levels of low-density lipoprotein cholesterol (LDL-C) and triglycerides (TG) tended to be higher in patients carrier for T allele compared to those with G allele. The results of present study revealed that eNOS G894T polymorphism is associated with increased risk of CAD in our population.

PMID: 21602253 [PubMed - indexed for MEDLINE]

12. DNA Cell Biol. 2012 Feb;31(2):259-68. Epub 2011 Aug 23.

Binding studies of pyriproxyfen to DNA by multispectroscopic atomic force microscopy and molecular modeling methods.

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In this work, multispectroscopic atomic force microscopy and molecular modeling [ONIOM 2(B3LYP/6-31++G(d,p): Universal Force Field (UFF)) level] techniques were used to study the interaction between Calf-Thymus-DNA (CT-DNA) and pyriproxyfen (PYR) insecticide. The binding constant of PYR with double-strand deoxyribonucleic acid (ds-DNA) was obtained by ultraviolet-visible absorbance spectroscopy as 2.8×10(4) at 20°C. Thermodynamic parameters, that is, ΔH, ΔS°, and ΔG, were -53.82 kJ mol(-1), 96.11 J mol(-1), and -82.46 KJ mol(-1), respectively. Thermal denaturation study of DNA with PYR revealed the ΔT(m) of 3.0 and 6.0°C at r(i)=0.5 and 1.0, respectively. The Fourier transform infrared study showed a major interaction of PYR with G-C and A-T base pairs and a minor perturbation of the backbone PO(2) group. Further, PYR induces detectable changes in the circular dichroism spectrum of CT-DNA. In fluorimetric studies, the dynamic enhancement constants (k(D)) and bimolecular enhancement constant (k(B)) were calculated, which showed that the fluorescence enhancement was initiated by a static process in the ground state. The hybrid of quantum mechanical/molecular

mechanics theoretical calculations revealed that the interaction is base sequence
dependent, and PYR interacts more with DNA via the AT base sequence. From the
data we concluded that PYR may interact with ds-DNA via two modes: intercalating
and outside groove binding.

PMID: 21861604 [PubMed - in process]

13. Int J Neurosci. 2012 Feb;122(2):60-8. Epub 2011 Nov 2.

A comparative study of the effects of low-dose topiramate versus sodium valproate
in migraine prophylaxis.

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The present study was performed to evaluate the efficacy of low-dose topiramate
and compare it with sodium valproate that is prevalently prescribed as a migraine
prophylaxis. This was a randomized, double-blind, parallel-group clinical trial
on 56 patients who completed the course of study. Topiramate and valproate were
administered at 50 mg/day and 400 mg/day, respectively, during the follow-up
period. Frequency, intensity, duration, associated symptoms with headaches,
analgesics use, as well as drugs' side effects were studied. Participants
completed MIDAS and HIT-6 questionnaires before and after treatment. Frequency,
intensity, and duration of migraine headaches as well as MIDAS score and
symptomatic medications decreased significantly between repeated follow-up visits
in both groups. Responder rate for patients treated with topiramate and valproate
were 71.6% and 64.3%, respectively, and the difference between the two groups was
not statistically significant. The reduction of headache severity in the
topiramate group was significantly more than that in the valproate group (p =
.027). During the study, no statistically significant reduction in associated
symptoms with migraine were observed in both the groups. Topiramate dose of 50
mg/day with fewer side effects in comparison with its higher doses may be an

appropriate substitution for first-line migraine prophylaxis such as valproate.

PMID: 21950578 [PubMed - in process]

14. J Low Genit Tract Dis. 2012 Jan 5. [Epub ahead of print]

Giant Neurofibroma of Labia Major.

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University of Medical Sciences, Tehran; and 4Pathology Department, Kermanshah
University of Medical Sciences, Kermanshah, Iran.

ABSTRACT: A 21-year-old woman presented with a large, slowly growing, pedunculated mass from her right labia major interfering with her physical
activity. Surgical excision was performed, and pathologic evaluation confirmed
the diagnosis of neurofibroma.

PMID: 22227845 [PubMed - as supplied by publisher]

15. Clin Med Insights Cardiol. 2012;6:1-6. Epub 2011 Dec 6.

Factors predicting coronary sinus rupture following cannula insertion for retrograde cardioplegia.

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BACKGROUND: Coronary sinus rupture (CSR) is a rare preventable complication of
cannula insertion for retrograde cardioplegia. In the hands of an inexperienced
surgeon, this complication has the risk of potential mortality and morbidity, and
its repair is technically challenging. Techniques for repairing CSR have been
reported previously. In this study, we determined predictors of CSR following
coronary artery bypass graft (CABG) surgery.

METHODS: Over a four-year period, we retrospectively analyzed 1500 patients in whom a retrograde coronary sinus catheter was used to administer cardioplegic solution. CSR occurred in 15 patients. (12 women and 3 men). Variables such as age, weight, body mass index, gender, aortic clamp time, pump time, cardiomegaly, ejection fraction, and number of grafts were determined for each patient. Factors correlated with CSR were analyzed using multiple regression analysis, and odd ratios of significant variables were determined.
RESULTS: In multiple regression analysis, factors such as female gender, age, weight, and body mass index showed a significant correlation with CSR, and their odd ratios were 4.2, 1.0, 0.96, and 2.2, respectively.
CONCLUSION: In all 15 cases, a retrograde cannula with a self-inflatable balloon was used and 12 patients were woman with low body mass index. Forceful insertion due to coronary sinus web, fragility of arteries in thin patients, or a small coronary sinus caused CSR in the hands of an inexperienced surgeon.

PMCID: PMC3256954
PMID: 22259260 [PubMed - in process]

16. Exp Parasitol. 2012 Jan;130(1):73-7. Epub 2011 Oct 12.

The opioid antagonist naloxone inhibits Leishmania major infection in BALB/c mice.

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BALB/c mice are susceptible to develop non-healing, progressive infection with Leishmania major (L. major) due to the development of a non-protective Th2 response. Resistance to L. major infection is dependent to Th1 response. Treatment of mice with the opioid antagonist naloxone can promote the activation of Th1 responses. Here we study the effect of chronic administration of various doses of naloxone on susceptibility of BALB/c mice to L. major infection. Our

results showed that naloxone has dose-dependent biphasic effect on L. major
infection in BALB/c mice. While administration of 1mg/kg × 2/day tends to
exacerbate the local reaction to L. major infection, treatment with 10mg/kg ×
2/day of naloxone suppresses the local reaction and progress of infection. On the
other hand treatment of mice with middle dose (5mg/kg whether 1 or 2 times per
day) does not have significant effect on the infection. This study demonstrates
that administration of high dose of naloxone could improve protection against L.
major infection in BALB/c mice, presumably by modulation in Th1/Th2 balance or by
affecting macrophages through binding to Toll-like receptors.

PMID: 22019408 [PubMed - indexed for MEDLINE]

17. Hepat Mon. 2012 Jan;12(1):9-10. Epub 2012 Jan 20.

Intravenous drug use and hepatitis C virus in iran.

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PMCID: PMC3298870
PMID: 22451838 [PubMed - in process]

18. Iran J Kidney Dis. 2012 Jan;6(1):63-8.

Prophylactic effect of mycophenolate mofetil on early outcomes of living donor
kidney transplantation.

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INTRODUCTION: Living donor transplantation allows a priori scheduling and the
recipient can receive immunosuppressive prophylaxis several days before surgery,
which is preoperative induction therapy with oral agents. We evaluated the impact

of preoperative mycophenolate mofetil on the outcomes of living donor kidney
transplantations.
MATERIALS AND METHODS: In a randomized controlled trial was from November 2008 to
November 2010, 99 patients receiving their first living donor kidney
transplantation were divided into the mycophenolate mofetil (500 mg) and placebo
groups, and received 2 tablets per day for 5 days before transplantation.
RESULTS: Forty-nine patients received mycophenolate mofetil and 48 received
placebo. The mean serum creatinine on discharge day and hospitalization period
were significantly less with mycophenolate mofetil compared to placebo (1.62 ±
1.00 mg/dL versus 1.22 ± 0.24 mg/dL, P = 0.03 and 20.8 ± 11.2 days versus 13.5 ±
4.4 days, P < .001, respectively). No delayed graft function was observed. Slow
graft function was 2-fold higher in the placebo group (14.6% versus 8.2%, P =
.32). Acute rejection was seen in 12.2% of the patients with mycophenolate
mofetil and in 29.2% of the controls (P = .04). Serum creatinine levels at
discharge were significantly lower in the mycophenolate mofetil group compared
with that in the placebo group (P = .03).
CONCLUSIONS: Prophylactic administration of mycophenolate mofetil before living
donor kidney transplantation reduced hospitalization period, improved early graft
function, and decreased the risk of acute rejection in the first month
posttransplant.

PMID: 22218122 [PubMed - in process]

19. J Chromatogr B Analyt Technol Biomed Life Sci. 2012 Jan 1;880(1):12-8. Epub 2011
Nov 30.

9-fluorenylmethyl chloroformate as a fluorescence-labeling reagent for
derivatization of carboxylic acid moiety of sodium valproate using liquid
chromatography/tandem mass spectrometry for binding characterization: a human
pharmacokinetic study.

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In High Performance Liquid Chromatographic (HPLC) determination of chemicals with acidic functions, different labeling agents are used to improve sensitivity of the assay. 9-Fluorenylmethyl chloroformate (FMOC-Cl), on the other hand, is a suitable labeling agent, which reacts with both primary and secondary amines and less readily with hydroxyl groups in alkaline conditions. However, the reagent has not been applied in labeling of chemicals with acidic function yet. In this study which is the first report on application of FMOC-Cl in derivatization and analysis of a drug with acidic function, valproic acid (VPA), one of a series of fatty carboxylic acids with anticonvulsant activity, was derivatized using the reagent and quantified in serum samples by HPLC with fluorescence detection. In addition, to document the reaction between the labeling agent and carboxylic acid moiety of the drug, we developed a liquid chromatography-tandem MS/MS (LC-MS/MS) method. Following liquid-liquid extraction, derivatization of the drug and an internal standard was achieved in alkaline medium. The elute was monitored by a fluorescence detector with respective excitation and emission wavelengths of 265 and 315 nm. The present method is more sensitive comparing with other published HPLC procedures for analysis of VPA. The assay is sensitive enough to measure drug levels obtained in human single dose studies with a limit of quantification of 0.01 µg/mL. Also the method is linear over the concentrations range of 0.01-32 µg/mL of VPA in human serum using 100 µL serum sample and 5 µL injection. The coefficient variation values of both inter and intra day analysis were less than 12% and the percentage error was less than 4%. The method performance was studied and the validated procedure applied in a randomized cross-over bioequivalence study of two different VPA preparations in 24 healthy volunteers.

PMID: 22173006 [PubMed - indexed for MEDLINE]

20. J Thromb Thrombolysis. 2012 Jan;33(1):109-15.

Thrombophilic mutations and susceptibility to preeclapmsia in Western Iran.

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The aim of the present study was to investigate the frequency and the possible
association between thrombophilic mutations of factor V Leiden (FVL) and prothrombin G20210A with preeclampsia among Kurdish population of Western Iran.
We studied 198 women with preeclampsia including 128 women with mild and 70 women
with severe forms and 101 healthy pregnant women with uncomplicated pregnancy.
Among cases there were 23 women with early onset preeclampsia and 175 cases with
late-onset preeclampsia. The sample was genotyped by polymerase chain reaction-restriction fragment-length polymorphism using Mnl I and Hind III for
FVL and prothrombin G20210A, respectively. The frequency of heterozygous FVL
mutation was 7.6% among all preeclamptic women (8.6% in mild and 5.7% in severe
preeclamptic women) and 7.9% in controls (P > 0.05). However, the prevalence of
heterozygous FVL were 10.5 and 3.9% among severe preeclamptic women with early
onset and late-onset preeclampsia, respectively (P > 0.05). The prevalence of
prothrombin G20210A were 1.6, 2.9, and 3% among women with mild preeclamsia,
severe preeclampsia and controls, respectively (P > 0.05). The level of serum
triglycerides (TG) was significantly higher among women with preeclampsia compared to healthy pregnant women that was not associated with the two thrombophilic mutations. Our results indicate that neither FVL nor prothrombin
G20210A could be a risk factor for preeclampsia in our population. However, high
prevalence of FVL in preeclamptic women with early onset compared to those with
late-onset preeclampsia may suggest a role for this mutation in predisposition to
early onset preeclampsia that need to be confirmed with larger sample size.

PMID: 22068545 [PubMed - in process]

21. Patient Prefer Adherence. 2012;6:137-42. Epub 2012 Feb 13.

The effects of acupressure on severity of primary dysmenorrhea.

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BACKGROUND: Dysmenorrhea constitutes one of the most frequent disorders in women
of a fertile age. The objective of this research was to determine the effects of
acupressure at Sanyinjiao (SP6) point and DiJi (SP8) point on pain severity of
primary dysmenorrhea and the associated systemic symptoms.
MATERIALS AND METHODS: In this crossover clinical trial, 50 females aged 18-30
years old who met the study criteria and were under the care of Sarpolezahab
Health Center were selected. Subjects were randomly assigned to one of two groups
and evaluated during three menstrual cycles. We evaluated pain severity using the
McGill pain scale and associated systemic symptoms using a verbal
multidimensional scoring system. Data acquired from 42 cases were analyzed using
SPSS software, with a P value of <0.05 considered significant.
RESULTS: The findings of our study indicate that the severity of dysmenorrhea
pain diminishes significantly for up to 2 hours following treatment with
acupressure at the SP6 and SP8 points (P < 0.001). Furthermore, the severity of
associated systemic symptoms reduced significantly after acupressure at the SP6
and SP8 points, except for nausea and vomiting. Comparison of the severity of
systemic symptoms with acupressure at the SP6 and SP8 points revealed no
significant difference except for severity of fatigue, which was reduced
significantly further with SP6 point compared to SP8 point (P = 0.004).
CONCLUSION: Acupressure at the SP6 and SP8 points can reduce pain severity of
dysmenorrhea for up to 2 hours after application, and these points may be used to
alleviate the severity of systemic symptoms accompanying dysmenorrhea.

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