

The Antiseptic

Estd. 1904

Indexed in
IndMED

A MONTHLY JOURNAL OF MEDICINE AND SURGERY

Email: admin@theantiseptic.in

www.theantiseptic.in

Vol. 115 • No. 10

OCTOBER 2018

ISSN 0003-5998 • ₹ 100



**Obsessive - Compulsive Disorder: When Unwanted
Thoughts or Irresistible Actions Take Over**

➔ Page No. 28

EDITORIAL

Phenylketonuria and Alkaptonuria07

GENERAL

Comparative evaluation of traditional detection and rapid tests for Tuberculosis
Prabhat Kumar Mishra, Firoz Naem Khan, Vijay Thawani.....08

Iron Plays a Certain Role in Patterned Hair Loss *Sanjay Agrawal.....10*

Nutraceuticals: Innovative Roles in Stress Reduction *Sanjay Agrawal.....12*

Health effects of Sonic Weapons on Humans
Aarti Mehra, Vijay Thawani, Kamal Uddin Zaidi.....14

Legalizing Marijuana in India for medicinal purpose *Rimjhim Sahu, Vijay Thawani.....17*

CASE REPORT

Seizures: A rare presentation of Wilson disease
Sangumani J., Raghavan K.S., Sudha P., Dinesh Ravichandran20

Purple Urinary Bag Syndrome – A Rare Spot Diagnosis
Sangumani J., Raghavan K.S., Sudha P., Nagma farheen.....22

Liver lesion - an unusual diagnosis! *Mayank Jain.....24*

Jackhammer esophagus *Mayank Jain.....25*

ALTERNATIVE MEDICINE

Approach to Autism in Ayurveda - A Case Study *Naga Lakshmi Bhavanasi26*

Obsessive - Compulsive Disorder: When Unwanted Thoughts or Irresistible Actions
Take Over *Pallavi Dattatray Nikam.....28*

Geography in Ayurveda *Naga Lakshmi Bhavanasi30*

Evaluation of antipyretic activity of arogyavardhini vati in albino rats *Ranjita Kar32*

Clinical Evaluation of Priyangvadi Taila in the Management of Bahya Vidradhi
after Incision and Drainage *Kulkarni N.H., Sachin N. Patil, Sarma J.K., Gopal S.35*

Evaluation of Analgesic Activity of Arogyavardhini Vati in Albino Rats *Ranjita Kar.....39*

Comparative Clinical Study of Tiktaka Ghrita and Madhuyashtyadi Ghrita in the
Management of Parikartika (Fissure-In-Ano)
Kulkarni N.H., Sachin N. Patil, Sarma J.K., Maladkar C.S.41

Occasional Review45

Gleanings47

Glimpse into history48

Case of the month49

Medi Quiz50

Iron Plays a Certain Role in Patterned Hair Loss

SANJAY AGRAWAL

Loss of scalp hair is not a serious life threatening disorder, but it can cause psychological distress and affect quality of life adversely. Hairs are rapidly proliferating organ with much requirement of blood supply. Therefore, the relationship between micronutrients and hair loss has been evaluated in several studies since the 1960s. The most widely cited nutritional causes of hair loss include iron, one of the key micronutrients in metabolism of our body. From its diverse functions, it is well known that iron deficiency (ID) is associated with a lot of pathological conditions. However, its role in hair loss is not well established yet. When reviewing articles which have documented the relationship between ID and hair loss including female pattern hair loss (FPHL), telogen effluvium, alopecia areata, alopecia universalis or totalis, some advocated the association between ID and hair loss and others were against it. This controversy might be caused by study designs, methodology and clinical condition defining hair loss. For detection of ID, serum ferritin level can be used as a very early marker. It is a main iron-binding protein in nonerythroid cells reflecting total body iron stores. It decreases from very early stage of ID as iron reserves go down. Because only ID can cause very low

serum ferritin concentration (FC), a FC is very specific for ID. However, it can play a role in inflammation as a reactive protein, patients with active infection and/or inflammation should not be included in the analysis when we consider FC is used for detecting ID. Hormonal status can affect hair loss and it should be considered when interpreting the clinical condition, too.

The association between ID and hair loss is still a debating issue. Kantor et al. reported that alopecia areata, FPHL and telogen effluvium patients under 40 yr. of age showed lower serum ferritin concentration than controls without hair loss. Rushton et al. also demonstrated that there was significant decrease of hair loss and increase of FC in patients with telogen effluvium who received oral iron therapy. These results are supported by Moeinvaziri et al. who suggested that serum FC and transferrin saturation is lower in patients with telogen effluvium based on the case control study design. In contrast, Sinclair reported that response rates to iron supplementation were not different between low ferritin (< 20 ng/mL) and normal group (\geq 20 ng/mL) in FPHL patients. Olsen et al. also showed no differences in prevalence of ID between female patients with (285 FPHL patients and 96 telogen effluvium patients) or without hair loss (a total of 76 Caucasian women older than 18 yr old). Rushton et al. criticized study of Olsen et al. in that it appears to have some confounding issues and contradictions such as no-

standardized evaluation in blood sampling and no quantitative hair evaluation in control group. Reviewing previous studies, the role of iron in hair loss appears untangled until now. Therefore, we conducted this study in order to find out the relationship between body iron status and various conditions with hair loss. In order to overcome the limitation of retrospective study, we carefully selected patients diagnosed with FPHL and MPHL who had visited our clinic between January 2010 and February 2011 and underwent the screening test at their first visit. We excluded patients with abnormal thyroid function or any medical history which can affect body iron status. For better comparison, age-sex matched healthy controls without complaint of hair loss were selected who had visited the hospital for a check-up which includes all blood tests of initial screening test. ID is a continuum of various status of iron deposition in the body. Iron depletion is the mildest form of ID followed by iron deficient erythropoiesis and iron deficient anemia being the most severe form. Body iron stores can be assessed by serum FC but there is no consensus which ferritin level is the right one to define ID in practice. Although many laboratories use FC of 10 to 15 μ g/L as the lower limits of normal based on reference sample groups, this only gives a sensitivity of 59% and a specificity of 99% for diagnosing iron deficiency. In women of childbearing age, using a cutoff of 10 to 15 μ g/L

Dr. Sanjay Agrawal,
Leading Pharmaceutical Consultant and Editor-in-
Chief of IJMToday,
6/146, Malviya Nagar, Jaipur -302017. Rajasthan.

Specially Contributed to "The Antiseptic"
Vol. 115 No. 10 & P : 10 - 11

yields a sensitivity of 75% and specificity of 98% in diagnosis of ID. A cutoff of 30 $\mu\text{g/L}$ yields a sensitivity of 92% and a specificity of 98%, while a cutoff of 41 $\mu\text{g/L}$ yields a sensitivity of 98% and a specificity of 98%. It might have contributed to the controversy that there is no guideline to define ID. From this study, over 80% of FPHL showed serum FC lower than 70 $\mu\text{g/L}$, while only less than 20% of age matched healthy female controls showed it. No female healthy controls showed serum FC lower than 30 $\mu\text{g/L}$ in this study. Therefore, serum FC lower than 30 $\mu\text{g/L}$ might be a clinically significant indicator for ID especially in female hair loss patients considering their menstrual status. In this study, patients with MPHL show relatively early onset age, which means they appear to visit the clinic earlier than those with FPHL. Patients with FPHL show definitely lower serum FC compared with age/sex-matched normal controls. Female patients with FPHL were divided into two groups based on their menstrual status. Premenopausal patients with FPHL demonstrate much lower serum FC than postmenopausal FPHL patients. When compared with normal age/sex matched controls, statistically significant low serum FC is observed in FPHL

premenopausal patients, while it is not significantly different between FPHL patients and normal controls after menopause. This result implicates that ID plays a certain role in premenopausal female patients with FPHL. However, weak association of ID with FPHL in postmenopausal patients could be addressed from this study. Patients with MPHL show considerably lower serum FC on the average than age-sex matched healthy controls, although the serum level of FC is within normal range. We failed to prove the correlation between onset age and serum FC in MPHL patient, either ($r = 0.12$). However, approximately 20% of MPHL show serum FC lower than 70 $\mu\text{g/L}$ and their age matched controls do not show that low serum FC. This result implicates that screening of iron status in even male patients with hair loss might provide clinical benefits. Clinical manifestations of F type of MPHL looks like those of FPHL in female patients. Therefore, we looked into patients with MPHL according to types (M type, F type and others based on BASP classification), which turns out there was no strong relationship between subtype of MPHL and ID. Patients showing low FC level $< 70 \mu\text{g/L}$ had been

on oral ferrous sulfate (130 mg of elemental iron/day) and serum level of FC doubled after 6 months of supplementation. Clinical response to iron supplementation proves not to be much higher than expected. Especially patients with MPHL patients rated lower PGA and PS when they were on oral iron supplementation. Oral 5 alpha reductase inhibitor is the first line treatment to MPHL patients and if MPHL patients showed lower FC, iron supplementation was first given to patients during almost 6 months until FC became higher than 70 $\mu\text{g/L}$. Therefore, iron supplementation group did not receive any kind of oral 5 alpha reductase inhibitor, which might cause significantly lower PGA and PS. This study owns its value because it demonstrates the first direct comparison between hair loss patients and same number of healthy controls matched by age and sex. It strongly supports the previous studies that ID can be a certain factor of developing or worsening FPHL especially in premenopausal female patients. Its role in MPHL is hard to conclude from this study. However, screening for ID as the first evaluation of hair loss in even male patients might be worthwhile in the clinical field.



Beta blockers in esophageal varices :

- non selective beta blockers used to reduce bleeding in esophageal varices by
 - acting on beta one receptors ; reducing cardiac output
 - acting on beta two receptors causing splanchnic vasoconstriction and reducing portal pressure
- Main mechanism involves in reducing hepatic venous pressure gradient which is the difference between portal pressure and pressure in the intra abdominal part of inferior venacava.....

Criteria for hypersegmented neutrophils-

- One or more cells with five or more nuclear lobe or atleast 4 to 5% have five lobe
- precedes occurrence of anemia
- not specific for cobalamin or folate deficiency
- also found in chemotherapy with 5fu, hydroxyurea, pt on steroid for itp, myelofibrosis

Nutraceuticals: Innovative Roles in Stress Reduction

SANJAY AGRAWAL

Any intrinsic or extrinsic stimulus that evokes a biological response is known as stress. The compensatory responses to these stresses are known as stress responses. Based on the type, timing and severity of the applied stimulus, stress can exert various actions on the body ranging from alterations in homeostasis to life-threatening effects and death. In many cases, the pathophysiological complications of disease arise from stress and the subjects exposed to stress, e.g. those that work or live in stressful environments, have a higher likelihood of many disorders. Stress can be either a triggering or aggravating factor for many diseases and pathological conditions. In this study, we have reviewed some of the major effects of stress on the primary physiological systems of humans.

Stress is a natural physical and mental reaction to life experiences. Everyone expresses stress from time to time. Anything from everyday responsibilities like work and family to serious life events such as a new diagnosis, war, or the death of a loved one can trigger stress. For immediate, short-term situations, stress can be beneficial to health. It can help you cope with potentially serious situations. Your body responds to stress by releasing hormones that increase your heart and breathing rates and ready your muscles to respond.

Yet if your stress response doesn't stop firing, and these stress levels stay elevated far longer than is necessary for survival, it can take a toll on your health. Chronic stress can cause a variety of symptoms

and affect overall wellbeing. Symptoms of chronic stress include.

- Irritability
- Anxiety
- Depression
- Headaches
- insomnia

| Stress Response Mechanism | Impact on Health |
|---|---|
| Protein breakdown | Muscle wasting, food seeking behaviour stimulated (to replace lost energy), weight gain |
| Glucose & fatty acid release | Excessive weight gain, increased insulin response, T2 diabetes, hyperlipidaemia |
| Cortisol to hippocampus brain area | Desensitisation of hippocampus neurones – impaired memory, confusion, brain fog |
| Adrenaline, noradrenaline, increased blood pressure | Osteoporosis, arterial blockages |
| Permanent cortisol release | Inflammation, congestive heart failure or heart attacks |

The Role of Adaptogens

Adaptogens are a natural substance that increase the ability of an organism to adapt to environmental factors and to avoid damage from such factors; they cause a non-specific increase in the resistance of an organism to noxious influences. They must be non-toxic and almost free of side-effects. They exert a normalizing and balancing action both for hypo and hyper stress, improve general mental, physical or emotional performance and promote recovery from stressful situations. Some adaptogens which have shown promising research results are outlined below.

Siberian Ginseng:

Its active ingredients are tetracyclic triterpenoid saponins which differ from those in panax ginseng – another adaptogen. It has been shown to reduce the detrimental effects of stress by conserving vitamin C and diminishing adrenal hypertrophy; however care should be taken as it can also raise testosterone levels, possibly resulting in increased aggression. Siberian ginseng also helps balance blood sugar levels – another important part of stress management – as well as asserting an anti-coagulant effect. Side effects may include heart palpitations, insomnia and hypertension.

Dr. Sanjay Agrawal,
Leading Pharmaceutical Consultant and Editor-in-
Chief of IJMToday,
6/146, Malviya Nagar, Jaipur -302017. Rajasthan.

Specially Contributed to "The Antiseptic"
Vol. 115 No. 10 & P : 12 - 13

RhodiolaRosea:

Rhodiola is a highly active adaptogen which produces a stimulating effect within 30 minutes of administration that continues for at least 4-6 hours. It has been well researched and produced very interesting results, showing improved attention, cognitive function and mental performance in fatigue and in chronic fatigue syndrome as well as supporting immune function and increasing exam performance. It has not been FDA approved to treat or cure any disease however.

SchisandraChinensis:

A traditional Chinese herb, Schisandra has been very well studied in Russia as an adaptogen and has also been shown to have

hepatoprotective properties. In those trials, it was shown to increase endurance and physical efficacy and decrease sickness in factory workers. Schisandra increases levels of nitric oxide which may explain these effects. It has also been shown in clinical trials to improve concentration, coordination and endurance in healthy males.

Glycyrrhiza Glabra (licorice):

Licorice is a saponin, defined as capable of foaming in water. It is one of the most highly regarded herbs used to treat conditions associated with poor adrenal function. As well as balancing oestrogen and progesterone, it also extends cortisol levels by inhibiting its breakdown, thus

aiding low adrenal output. It may cause a slight rise in blood pressure via the increased cortisol in the kidneys and so care should be taken in people with hypertension. Care also should be taken with oestrogen replacements due to its phytoestrogenic properties.

Fish Oils:

Not an adaptogen, fish oils have nevertheless been well studied for their positive effects on adrenal output and the effects of stress. They have been shown to decrease fat mass and salivary cortisol levels and prevent the adrenal response to mental stress in healthy subjects, blunting serum adrenaline, cortisol and fatty acids concentrations.



| | |
|--|--|
| <p>CARCINOSARCOMAS</p> <p>It is a histological diagnosis in which mixture of carcinoma (epithelial origin ie skin) with sarcoma (mesenchymal origin - bone, cartilage, muscle) are seen together</p> <p>4 hypothesis proposed</p> <p>Collision tumor hypothesis - collision of two independent tumor cells resulting in single neoplasm</p> <p>Eg. Skin ca with malignant fibrous histiocytoma in a sun damaged skin</p> <p>Composition hypothesis</p> <p>Here, mesenchymal component represents a pseudosarcomatous reaction to epithelial malignancy</p> <p>Combination hypothesis</p> <p>Both components from pleuripotent origin</p> <p>Conversion/ divergence hypothesis</p> <p>Epithelial component with metaplastic transformation into sarcoma</p> <p>However recent studies suggests monoclonal origin of cells</p> <p>The most commonly encountered carcinosarcomas are uterine and ovarian types.</p> | <p>Treatment of hypothyroidism :</p> <ul style="list-style-type: none"> ■ if no residual thyroid function - levothyroxine 1.6 microgram per kg around (100 - 150) per day.... ■ after treatment for Graves disease - levothyroxine dose is 75 - 125 microgram per day ■ regression of symptoms takes time for around two to three months ■ if TSH levels are oversupressed dose had to reduce from 12.5 to 25 micrograms ■ prolonged suppression of TSH leads to atrial fibrillation and decreased bone density..... <p>Causes for giant T wave inversion are apical HOCM, non q MI, severe RVH, Complete heart block, post pacemaker syndrome, WPW syndrome, subarachnoid hemorrhage, raised ICT, Cocaine abuse, acute abdomen.</p> |
|--|--|

⊘ Allergic Cough

⊘ Cough with RTI

⊘ Smoker's Cough

⊘ Cough with Bronchial Asthma and Bronchitis

⊘ Drug Induced Cough

⊘ Cough with LPRD/GERD*

Free From Cough Discomfort

In Dry and Allergic Cough

Grilinctus[®] Syrup

(Dextromethorphan HBr 5 mg,
Chlorpheniramine Maleate 2.5 mg,
Guaifenesin 50 mg and NH₄Cl 60 mg/ 5 ml)



Grilinctus[®]-L Syrup

(Levocloperastine Fendizoate Eq. to
Levocloperastine HCl 20 mg /5ml)



In Productive Cough

Grilinctus[®]-BM Syrup

(Terbutaline Sulphate - 2.5 mg and Bromhexine
HCL - 8 mg/5ml)



Grilinctus[®]-LS Syrup

(Levosabutamol 1 mg + Ambroxol Hydrochloride
30 mg + Guaifenesin 50 mg / 5ml)



2018

*Laryngopharyngeal/ Gastro-oesophageal reflux Disease
RTI : Respiratory Tract Infection



**FRANCO-INDIAN
PHARMACEUTICALS PVT. LTD.**
20, Dr. E. Moses Road, Mumbai 400 011.