

Synopsis of holistic and integrative dermatology 2011: Conducted by department of dermatology, Kasturba medical college, Manipal December 4th, 2011

Holistic and integrative dermatology is one of the recent subspecialty which considers the individual as a whole in the treatment of a disease. An international seminar on holistic and integrative dermatology was conducted by the Department of Dermatology, Kasturba Medical College, Manipal of Manipal University on 4th December 2011 and was accredited with 3 hours of CME credit by IADVL.

The seminar included some of the prominent international and national speakers like Dr. Alan Dattner, Dr. Valori Treloar, Dr. S.R. Narahari, and Mrs. Gayathri Nayak.

The principle of holistic and integrative dermatology is that health of the skin is a reflection of the health of the body and incorporates standard dermatological treatment with alternative medicine like life style and dietary modifications, herbal preparations, native medications, homeopathy, Ayurveda, yoga, meditation, chiropathy, energy medicine, psychodermatology, and massage and is useful especially in chronic and resistant cases. Each therapeutic system has its own advantages and disadvantages in management and the beneficial effects of each can be utilized on integration [Table 1].

Dr. S. R. Narahari defined integrative medicine as quoted in British Medical Journal as “the practice of medicine that selectively incorporates elements of complementary and alternative medicine into comprehensive treatment plans alongside biomedical methods of diagnosis and treatment.” He explained about the integrative approach being practiced at the Institute of Applied Dermatology with Yoga, Ayurveda, massages and allopathic treatment in cases of vitiligo, psoriasis, lichen planus, and lymphedema -- so-called “difficult to treat dermatoses.”

Mrs. Gayathri Nayak spoke on Yoga in chronic skin diseases. It is based on the principle that relaxation of

mind leads to freshness and suppleness of skin as the mind and the autonomic system are interconnected to and from with the skin. Stress can lead to suppression of the immune system, production of excess hormones, impairment of lymphatic system, activation of mast cells, reduced repair process, altered skin barrier, and damage to collagen. Stressors in life can be physical, psychological, and spiritual [Table 2]. Yogavasistha or the yogic concept of skin diseases classifies dermatoses into Adhija (stress borne) and anadhija (nonstress borne). Anadhija includes infective conditions and other injuries which are best managed by the modern medical system. Adhija can be subclassified into Samaanya (psychosomatic and due to interaction with external world -- which can be best managed by stress management) and Saara (genetic and hereditary conditions). Yoga therapy includes *asanas* or *kriyas* (which lead to decrease in physical stress), *pranayamas* (which decreases psychological stress) and *dhyana* (which leads to reduction in spiritual stress), thus bringing relaxation and balance to body, mind, and soul, respectively.

The third lecture “Nutrition, immune recognition and inflammatory skin diseases and how to understand, diagnose and treat these conditions naturally” by Dr. Alan Dattner, was an indepth evidence based multilayered perspective on the pathogenesis of the skin diseases and the rationale of including natural substances in the treatment of skin diseases. Food substances not only have nutritive value but also affect the prostaglandin system via essential fatty acids thus influencing inflammation, aid or decrease gut permeability, influence various oxidative enzymes, hormones like insulin. Increased gut permeability has been documented in numerous dermatoses and acts probably by molecular mimicry. Nutrition and food supplements like coenzyme Q, carotenoids, bioflavonoids (pycnogenol and silymarin), vitamins C and E, lipoic acid, and glutathione precursors are known to reduce

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Table 1: Advantages and disadvantages of various therapeutic systems

| Allopathy | Ayurveda | Homeopathy | Yoga |
|-----------------------------|------------------------------------|-------------------|--|
| Confirmatory investigations | Minimum side effects | No side effects | Physiology already in text books |
| Control of infections | Management of chronic illness | Based on symptoms | Profound effect on nervous and lymphatic systems |
| Management of acute illness | Patterned at patients subset level | Mental faculty | Mind and physical fitness |

Table 2: Stressors in life

| Physical stressors | Physiological stressors | Spiritual stressors |
|--|---|--|
| Work related, challenges, obstacles, long hours dead-lines, ambitions, success | Strong negative emotions, fear, anger, hurt, jealousy, etc. | Unresolved ethical/value conflicts |
| Unbalanced food and faulty eating habit | Presence of associated psychiatric disorders | Powerful feeling of guilt and sin. Repentance for past actions or future desires |
| Sedentary work style, lack of sufficient physical activity, sound sleep | Marital relationship problems | Loneliness, self-pity, self-blame, lack of purpose |
| Presence of chronic inflammatory, autoimmune allergic process | Financial matters | Religious dilemmas |
| Over indulgence of tobacco, alcohol, drugs, sex | Chronic anxiety, worry, tension, depression | Death, grief, bereavement |

oxidative stress, activate immune system and reduce structural damage. Essential fatty acids give rise to antiinflammatory prostaglandins and thus are vital in inflammatory dermatoses. Liver being the chief organ of metabolism and excretion, the normal state of the liver is quite essential for the cutaneous well-being. Various supplements and foods like silymarin, curcumin, portulaca oleracea, choline, methionine, vitamins B₁₂, B₆ and folic acid, *symplocos racemosa* bark, *Amaranthus spinosa*, and rubiadin are hepatoprotective.

Dr. Valori Treloar spoke on "Acne –Science and clinical pearls." While the pathogenesis of acne is well known, the role of environment and diet is unclear. The level of Apo A1 has been found to be lowered in twins with acne, carbohydrate rich diet, polyunsaturated rich diet, smoking, uncontrolled diabetes and with drugs like β-blockers, synthetic progestones, etc. The adaptation of western diet has seen a rise in acne in India especially in the urban areas. The western and the nonwestern diets show a ω-6:ω3 (omega fatty acids) ratio of 10:1 and 2:1 or 3:1, respectively. Livestock like cattle, chicken, and pigs are being grain fed instead of the traditional grazing diet resulting in elevated ω-6 fatty acids in them which are more inflammatory. ω-6 increases leukotriene B4 and increases sebum secretion also. ω-3 fatty acids on the other hand serve as inhibitors of the proinflammatory cascade. High glycemic food also influences acne via insulin. Insulin raises testosterone, decreases sex-binding globulin, directly stimulates testosterone secretion, and increases insulin like growth factor-1. High fiber diet decreases insulin and helps in acne control. Lack of sleep has also been found to increase the serum insulin levels.

Low antioxidant levels have been detected in acne and antioxidant supplementation has found to improve acne. Zinc serum level has been found to be inversely associated with sebum secretion and zinc is involved in release and synthesis of retinol binding protein. Milk causes decreased absorption of zinc from the gastrointestinal system and increases insulin secretion faster and higher. Topical niacinamide (vitamin B3) has antiinflammatory properties. Flavanoids in citrus food lead to decrease in acne. The integrative approach to acne management can be summarized in Table 3.

The next lecture was on "Holistic dermatology: Skin disease as a manifestation of environment internally, locally and globally" by Dr. Alan Dattner. Many skin diseases are based on inflammatory pathology sometimes from a known cause and many a times an unknown trigger which can be structurally similar. These immune-stimulatory epitopes can be infectious agents, inhalants, drugs, resident flora, food, modified or degenerate self-molecules, and environmental chemicals. Environmental factors can influence an autoimmune disease either by epitope spreading or molecular mimicry. Amino acid sequence similarity has been found between microbial and human proteins. Factors which influence skin autoimmunity or inflammation include genetic factors, diet, pathogens, medications, toxins, psychological and emotional factors, and gut flora. The diet is the largest source of foreign material entry into the body. The causes of enhanced absorption of food epitopes include yeast-induced inflammation, "leaky" gut, disruption of mucosal barrier (NSAIDs, alcohol), malnutrition, lectins, and saponins, improper food digestion

Table 3: Integrative approach to Acne, psoriasis, and atopic dermatitis

| Acne | Psoriasis | Atopic dermatitis |
|--|---|--|
| Diary free dietary trial (supplementation with calcium 400 mg, magnesium 400 mg and vitamin D 1000 IU/day) | Supplements with coenzyme Q10 (50 mg), vitamin E (75 IU), selenium aspartate (48 mcg), vitamin D (1000 IU) | Supplements of Vitamin D (1000 IU), gamma linolenic acid, vitamin E, DHA, ceramides (200 mg) |
| Nutrient dense frequent snacks (to keep insulin levels low throughout day) | Antioxidant supplementation in diet in the form of fruits and vegetables. Increase whole grains, dietary fibers | To search for any food triggers |
| Regular exercises. Weight reduction | Improve body composition and exercise enough (but not too much) | Maintenance of body composition/image |
| Supplementation with vegetable starches | Supplementation with vegetable starches | Surgical treatment of recurrent adenoids, sinusitis |
| Anti-oxidant supplementation in diet in the form of fruits and vegetables | High quality fish liver oil supplements (to stop if any worsening of psoriasis) | Oral probiotics and prebiotics |
| Minimize trans fats, hydrogenated vegetable oils, fructose rich corn syrup. | Minimize trans fats, hydrogenated vegetable oils, fructose rich corn syrup. | Minimize antibiotic use (in pregnant women and infants) |
| Stress reduction | Stress reduction. Yoga <i>asanas</i> and <i>pranayamas</i> for relaxation. Water baths (e.g., Dead sea, blue lagoon) | Stress reduction and relaxation by yoga <i>asanas</i> , <i>pranayamas</i> . Dead sea and blue lagoon baths |
| Zinc, Selenium, vitamin A, niacinamide (topical), fish oils supplementation | Topical cucumin gel. Ox bile supplementation (under supervision) | Topical nicotinamide, mavena B, cyanocobalamin, probiotics |
| Proper sleep 6-8 hours/day | Proper sleep 6-8 hours/day | Proper sleep 6-8 hours/day |
| Reduction of high glycemic diet | Low glycemic and gluten-free diet. | |
| Grass feeding of live stock | Allergy and patch testing, Culture for <i>Staphylococcus</i> Treat <i>Pityrosporum</i> (scalp), <i>Staphylococcus aureus</i> (skin), <i>Candida</i> (skin folds) | |

leading to delivery of increased antigen moieties for absorption. Possible approaches to treatment are as follows: eliminate foods, supplement digestion, improve gut barrier, improve intestinal flora, improve gut barrier, help liver function, nutrients to calm responses, and change electrical potentials; treatment of "leaky" gut: reduce population of *Candida* with probiotics, diet, antiyeast treatments, remove parasites and other pathogens, restore intestinal barrier, remove foods inducing inflammation, heal intestinal mucosa-glutamine, protective mucinous herbs, and reduce microbial reflux from large intestines.

Dr. Valori Treloar spoke on integrative dermatology for psoriasis. Gluten antibodies have been detected in one in seven patients (normal population 1:125) and a 3-month trial of gluten-free diet showed 73% improvement in psoriasis. Intestinal biopsy has also shown altered mucosal pathology. Antigliadin antibodies have also been detected in psoriasis. Fish oil supplementation and gluten-free diet have shown encouraging results. Psoriasis is associated with metabolic syndrome and most antipsoriatic medications tend to worsen the metabolic syndrome. Reactive oxygen species have also been associated with psoriasis. Physical exercise helps in reducing body mass index and reduces TNF- α , and moderate exercise can

also act as an antioxidant. Vitamin D supplementation and sunlight (UV-B) exposure also influence psoriasis. Sleep deprivation leads to increased stress leading to psoriasis flare. The integrative approach to psoriasis is summarized in Table 3.

Dr. Narahari highlighted on integrative management of lower limb edema with pre- and postphotographs of massive lymphedema treated with an integrated approach with massages and medicines (both allopathic and other alternative forms).

Dr. Valori Treloar spoke on integrative dermatology for atopic dermatitis. This session was based on the nonconventional treatment modalities in treatment of atopic dermatitis and was focused on primarily the role of diet in atopic dermatitis. Food allergy may also present with oral manifestations in atopics with symptoms like tingling and itching in the oral cavity. Exposure to antibiotics during pregnancy and in early life predisposes an individual to atopic dermatitis. The use of prebiotics in mothers decreases the chances of atopy by increasing transforming growth factor β_2 in breast milk which increases IgA production. The role of probiotics is controversial with both beneficial and deteriorating effect in atopy. Topical probiotics tend to increase the ceramide levels. An increased risk of

developing atopic dermatitis and severe symptoms has been seen in obese. The integrative approach to atopic dermatitis is summarized in Table 3.

Dr. Alan Dattner's last talk was on energy medicine and the future of holistic and integrative dermatology. Energy medicine is based on addressing the electrochemical nature of our biochemical processes to enhance skin healing. The utility of various energy forms like ultraviolet, LASERs, X-ray, electron beam, electromagnetic, electro-current therapies are well known. Hands on-Reiki, Chi Gung, pulse response, and applied kinesiology are others which have been used. Pulse electromagnetic therapy stimulates vasodilatation and angiogenesis and aids in wound healing, and has antiinflammatory effects and increases secondary messengers. Biofeedback-based devices have also been used therapeutically in wound healing. The future of holistic dermatology is based on integrating and synergizing healing medicines with science and with each other. Various medicine systems tend to name the same thing differently -- hence the need to integrate.

The seminar on holistic and integrative dermatology was an eye opener about the need of treating the

individual as a whole rather than just treating the disease. This is especially true when the patient does not respond to standard treatment. Various studies have shown the benefit of integration and numerous articles in peer reviewed indexed journals have given evidence at molecular and clinical level for the integrative approach.

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