

Study on Irritant Contact Dermatitis & Homeopathy

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INTRODUCTION

Irritant dermatitis includes several inflammatory reactions, which follow non-immunological damage to the skin. This may be the result of an a/c toxic insult to the skin, or due to the result of repeated and cumulative damage from both physical and chemical agents. Irritant dermatitis is also called as the irritant contact dermatitis (ICD).Irritant dermatitis is not a uniform entity of disease each irritant exerts its particular noxious effects on the skin³⁶

Dermatitis is a term used to denote a polymorphic pattern of inflammation of skin characterized by erythema, edema, vesiculation, oozing, crusting, papules scaling and lichenification.

Contact dermatitis includes:

- 1) Irritant contact dermatitis
- 2) Allergic contact dermatitis
- 3) Phototoxic, photoallergic and light aggravated contact dermatitis
- 4) Immediate type contact dermatitis

Irritant contact dermatitis is due to non-immunological damage to skin.

Allergic contact dermatitis leads to type IV hypersensitivity and cell mediated immune damage to skin. Here the offending agent is a hapten and it combines with skin protein to become antigenic.

Photo dermatitis involves immunological and non-immunological damage to skin due to exposure to sun.

Immediate type contact dermatitis also leads to both immunological and non-immunological damage to skin.

Irritant contact dermatitis due to soap detergents commonly affects housewives and cleaners who immerse their hands in water and detergent. It is presumably due to the combination of asteatosis, exposure to mild irritants such as soap and mild trauma. e.g. wringing out dishcloths.

ICD is one of the greatest health problems. This problem is on the increase as the new brands of soaps and detergents marketed are having many additives like perfumes, antibacterial, antimicrobials coloring agents etc which act as sensitizers. Hygienic measurements like avoidance of soaps and detergents is not wholly possible for many owing to the cultural and socio economic conditions. Modern school medication offers sudden relief for all the symptoms but there is resurgence of the symptoms on discontinuing the medication and when the patient is again, exposed to soaps and detergents. Many patients are not able to continue modern medicines because of their disastrous side effects and also due to economic reasons. Homoeopathic medicines becomes their only hope and aid, as the cure affected is rapid, gentle and permanent without any deleterious effect.

Homoeopathy has for its foundation, solid concrete facts united by great natural principles. The practical demonstration of Homoeopathy is committed to its personal representatives whose ability, acquired technical proficiency and logical consistency can bring to the system a scientific stand and success. Master Hahnemann through years of closest observation and careful experimentation has constructed this system on the basic principles of similia similibus curenter, minimum dose and single remedy. The structure is further raised on the fundamental principles, which are consistent with the universal laws and the framework is being furnished by years of study and experiments by the younger generations of homoeopaths. A humble effort in this regard is made on attempting to study the efficacy of homoeopathic medicines in the management of irritant contact dermatitis due to soap and detergents with the help of experienced hands in homoeopathy.

It is not ICD as such, which is the object of our consideration, but the man affected with ICD. The man is affected in the internals and it is the manifestation of internals, which present as ICD. It should be given due thought that, all people exposed to the noxious effects of soaps and detergents are not having the disease manifestation. Why is some people peculiarly disposed to have this disease? What brought forth the disease manifestation? What is behind the cell disturbance or life perversion in the affected part?

Hahnemann through his diligent study and 12 years of accurate observation and experimentation came to the fact that the ostensible disease manifestation was a mere fragment of a much more deep seated primitive evil, which he called miasm. Thus miasms were discovered to be the unknown primitive malady,

which caused all ailments and symptoms. Understanding miasm involves understanding sum total of all the sufferings of the patient, which in turn involves a comprehensive study of the etiology, symptomatology, pathology and life situation of the patient. So in the succeeding pages, the subject matter is dealt with, due stress on etiology, symptomatology, pathology, diagnostic criteria's and miasmatic interpretation.

AIMS OF THE STUDY

To ascertain the effectiveness of homoeopathic medicines in the management of irritant contact dermatitis due to soap and detergents. There are many effective homoeopathic medicines for this malady but until now nobody has undertaken a scientific study in this manner based on statistical data.

In addition to this special attention is given to

- 1) Trace out the prominent miasm behind the malady.
- 2) Relation of irritant contact dermatitis to the socio-economic status of the patient.
- 3) Whether medicinal management is effective, if so to what extent.
- 4) Are there cases beyond the scope of homoeopathic treatment?

REVIEW OF LITERATURE

Irritant contact dermatitis is caused by direct chemical or physical damage to the skin. It is not a uniform entity of disease, each irritant exerts its particular noxious effects on the skin and each occupation has its special risk of substance and mode of physical contact. Everyone is susceptible to the development of an irritant contact dermatitis if exposed to an irritant (toxic) agent in sufficient quantity. It occurs particularly where the stratum corneum is thinnest. Hence, it is often seen in the finger webs and back of the hands rather than the palms.

Examples of common irritants 50

Wet work Soluble coolants
Solvents Vegetable juices
Detergents Wet cement

With all of above the skin may hit at several target sites

There are two main types of irritant contact dermatitis acute and chronic. The acute form occurs after exposure to an agent or agents causes an early impairment in the function of the stratum corneum and an acute inflammatory reaction (Fig 1:1). The chronic form follows repeated exposure to the same or different factors causing cumulative damage until an inflammatory reaction ensues that persists even after further exposure is stopped. Thus clinically apparent disease occurs only after a subliminal damaging effect has occurred. (Fig 1:2). Chronic irritant dermatitis is mostly due to the summation of various adverse factors. These factors are together known as the 'loading factors'. (Fig1:3). These include individual predisposition, atopy, impaired resistance, skin temperature, repair capacity, high baseline trans epidermal water loss, scratching, rubbing etc. Many of these are not strong enough to cause irritant dermatitis as such but when taken together they are enough to weaken the skin and develop irritant contact dermatitis. These minor irritants may also act as perpetuating factors once the dermatitis has become established. Repeated exposure to some of the milder irritants may in course of time produce a hardening effect. This process makes the skin more resistant to the irritant effect of the given substance.³⁵

Anatomy – Microstructure of skin

The epidermis is a compound tissue consisting mainly of a continuously self-replacing stratified keratinized squamous epithelium. The chief cells of epidermis are the keratinocytes, there are other cells called melanocytes, Langerhan cells and lymphocytes. Sensory nerve endings are also sparsely present in the epidermis. Epidermis serves as an important barrier to the loss of water and other substances through the body surface and to their permeation from without. Experiments measuring diffusion of water from the exterior show that the entire stratum corneum provides an effective though not complete barrier. The water barrier is composed of intercellular glyco lipid sheets or lamellae derived from the lamellar granules of the stratum granulosum.⁴⁴

Development

Embryonic skin consists of a single layer of ectodermal cells overlying a mesenchyme. From this surface epidermis and its appendages and dermis are formed. Surface ectoderm gives rise to the keratinizing general surface epidermis and its appendages, the pilosebaceous units, sudoriferous glands and nails. Some of the ectodermal cells become the keratinocytes. Non-keratinocytic cells of the epidermis are immigrant

cells of different developmental origin. The dermis is composed of irregular connective tissue. The connective tissue is developed from the mesenchyme.

Histology of normal skin

The cells produced by mitosis in the germinal layer adjacent to the dermis undergo maturational changes concerned with the production of keratin. The outer keratinised layer is shed continuously and is replaced by the progressive movement and maturation of cells from the germinal layer. The rate of mitosis in the germinal layer generally equals the rate of desquamation of keratin from the outer surface. This process of maturation of basal cells through to desquamation takes approximately 28 days in humans.

The phases of this dynamic process are represented in five morphological layers.

- 1) The stratum germinativum or stratum basale B: is the germinal layer of the epidermis. This layer is also sometimes referred to as stratum malpighii
- 2) The stratum spinosum or prickle cell layer S: So named for the prickly appearance of the cells at high magnification. This layer contains cells, which are in the process of growth and early keratin synthesis.
- 3) The stratum granulosum or granular layer G: is characterized by the presence of granules within the cells, which contribute to the process of keratinisation.
- 4) The stratum lucidum L: is only present in extremely thick skin and appears as a homogeneous layer between the stratum granulosum and the keratinised layer.
- 5) The stratum corneum or cornified layer C: consists of flattened, fused cell remnants composed mainly of fibrous protein keratin.

Histology of epidermis

The epidermis is a non vascular stratified epithelium of ectodermic origin the deeper layer five layers which consists is living, it consists of several strata of polyhedral cells resting on a single stratum of columnar (basal) cells. The superficial layer, the horny layer or stratum corneum, is dead, it consists of several strata of dry, flattened, scaly cells perpetually being rubbed away and are perpetually being replaced by cells of the germinative layer.

Irritant dermatitis due to detergents and soaps

SYNONYMS

House wife's eczema, asteatotic hand eczema, wears and tears dermatitis and traumiterative dermatitis.

DEFINITION

Is a chronic inflammatory reaction of the skin, to a series of repetitive and damaging insults which include both chemical irritants and harmful physical factors such as friction, micro trauma, low humidity, heat, cold, solvents, degreasing agents such as soap and detergent and desiccant effects of water. Irritant contact dermatitis due to soap clinically manifests as a spectrum of disease ranging from a little dryness, redness or chapping (irritant reactions) through various types of eczematous dermatitis. It mostly affects thin exposed skin, mostly on the back of hands, webs of fingers etc. Housewife's dermatitis remains confined to hands.

Epidemiology

Irritant contact dermatitis accounts for 4-7 % of all dermatological consultations. It accounts for almost all reported cases of occupational diseases. Hand eczema affects more than 2% of all the populations. Over 20% of females will suffer from hand eczema at some stage of their life.

Incidence and Prevalence

The disease exists in all countries, it is more prevalent in some places than in others. Prevalence varies from country to country. Measures like wearing protective gloves are found to reduce the incidence of irritant contact dermatitis.

Seasonal change

Chapping of skin during winter predispose to irritant contact dermatitis and increases its incidence. Other factor, which increases the incidence of irritant contact dermatitis, includes technical factors like concentration of irritant, vehicle, exposure time etc.

AGE

Age has little influence on capacity for sensitization. Occupational sensitization may occur only after decades

of contact with a sanitizer. Sensitivities may also fade with time but this is probably due more to lack of exposure rather than age per se. The inflammatory response is however diminished in elderly patients. Young, adults are more likely to have irritant dermatitis.

SEX

As name suggests irritant dermatitis due to soap is more common in females so it is also called housewife's dermatitis .HORMONES

Pregnancy may either improve or flare up contact dermatitis. Irritant dermatitis may flare up premenstrually. No systemic studies on the capacity for sensitization as related to menstrual period have yet been performed.

Constitutional and Genetic Factors

Development of ICD presupposes an individual susceptibility. In humans susceptibility does not follow mendelian inheritance.

It is found that atopics have an increased risk of developing irritant hand eczema.

Interaction of constitutional, cumulative and allergic factors

In many cases of hand dermatitis, constitutional irritant and allergic factors will co-exist. A hand eczema that starts as contact dermatitis may continue as an apparently constitutional, post insult form of eczema.

Associated detergents may promote sensitization and lower the threshold for the elicitation of allergic contact dermatitis. It is however, often very difficult to verify a suspicion of allergic sensitivity to an ingredient in soap or detergent unless all ingredients in soap or detergents are tested separately and at appropriate concentrations. Allergic factors may play a part in the persistence and reactivations of some cases of irritant or constitutional hand eczema.

In case of soaps and detergents, soap and detergent part acts as the irritant but the antimicrobials, the antibacterials, formaldehyde, perfumes etc. added during the manufacture acts as the sensitizers. Further if the patient uses rubber gloves it adds to the sensitivity .

Environmental factor

Low ambient humidity is the single most important factor as far as the water content of the stratum corneum is concerned. Although the effect of temperature and humidity are to some degree interrelated , cold alone will reduce the water content and plasticity of stratum corneum and lead to cracking of the corneum (horny layer).

Low temperature and humidity reduces the water content of stratum corneum and leads to cracking of stratum corneum. Simultaneous exposure to these factors may maintain a dermatosis or cause transition from a simple chapping to a more eczematous dermatitis.

Occlusion promotes percutaneous absorption and may facilitate skin irritation and enhance the effect of irritants to which an individual has previously been exposed. Increasing the water content of stratum corneum by occlusion can enhance percutaneous absorption of certain substances many times. It is of practical importance that rubber and plastic gloves, waterproof adhesives and the natural folds of skin provide such occlusion. Soft paraffin by itself has an occlusive effect.

Alkaline solutions have a deleterious action on the horny layer and promote percutaneous absorption.

Cross-links in the Keratin are broken and water can penetrate into the fibrils and cause the swelling of horny layer. If reducing substances are present the damages is still greater. Irritants damage the stratum corneum directly or indirectly by damaging the basal layer of epidermis or otherwise by inducing abnormal keratinization. Damage in either form will lead to increased skin permeability.

Percutaneous absorption is also facilitated by inflammatory changes in the epidermis. Thus an irritant contact dermatitis can promote penetration of allergens and conversely an allergic contact dermatitis the penetration of irritants.

Thus it could be seen that an irritants like detergents and soaps will produce cell damage if applied for sufficient time in sufficient concentrations. Immunological process are not involved and dermatitis occurs without prior sensitization. Irritants penetrate skin and alter skin cells. Dermatitis arises when the repair capacity of skin is exhausted and when the penetration of chemicals excites and inflammatory response. The detergents causes damage by gradually exhausting the horny layer, denaturing the keratin, removing

stratum corneum lipids and altering the water holding capacity of skin. This eventually leads to damage to the cells of the epidermis.

Pathophysiology

Irritant contact dermatitis includes several inflammatory reaction patterns, which follow non-immunological (usually chemical) damage to the skin. This may be the result of an acute toxic insult to the skin or due to repeated and cumulative damage both physical and chemical. Detergents and soap may cause both conventional irritant and non-immunological reaction pattern, which vary from individual to individual depending upon the application site, nature of chemical applied and the degree of damage to the skin.

The skin provides the first and most important line of defense against exogenous noxious agents and this is one of its primary physiological functions. This defense is however, far from perfect as many substances penetrate readily into and through the epidermis even when it is intact. The surface film is the first line of defense. It is composed of sebum emulsified with sweat and break down products from the horny layer. The buffer capacity of the surface film varies considerably from one body region to another, but in reality it has negligible influence on percutaneous absorption and on the barrier function of skin. The barrier function of the skin mostly resides in the stratum corneum. Damage to or a reduction in stratum corneum is therefore normally followed by an increase in the percutaneous absorption and in trans epidermal water loss. (The stratum corneum, having a predominantly lipid intercellular composition is more susceptible to lipid soluble irritants). The main barrier to water transport through the skin is attributed to these lipids and when the lipids of the stratum corneum are removed by solvents, water transport rates through the skin will increase.

The flexibility and cohesion of the horny layer depend mostly on its water content. The cell walls of the keratin layer constitute a lipid containing, semi-permeable membrane that encloses the water soluble substances as in an envelope. If the water holding substances are reduced, the water content of the stratum corneum decreases and superficial cracks develop. This collection of in situ water holding substances is referred to as natural moisturizing factor. The principle components include sodium pyrrolidone, carboxylic acid, sodium calcium lactate, amino acids, urea and a sugar protein complex. These substances bind three – four times their own weight of water. Following the removal of cell wall lipids by exposure to a solvent, subsequent immersion in water for 2 minutes will remove as many of the water-soluble substances from the keratin layer as a 2-hour immersion in water.

A detergent effects the combined removal of both lipids and water holding substances and thus predisposes to chapping. Washing with a slush of ice and acetone has a three – fold effect of removing both lipids and water holding substances

Most cases of housewife's eczema are ICD resulting from repeated skin exposure to low-grade cutaneous irritants, particularly soaps, water and detergents. It is the cumulative ICD from repeated mild skin irritation from soap and water. For e.g. hand washing frequency of more than 35 times per day was associated strongly with occupational hand dermatitis in intensive care worker's .

The pathogenesis of ICD involves resident epidermal cells, dermal fibroblasts, endothelial cells and various leukocytes interacting with each other under the control of a network of cytokines and lipid mediators. Keratinocytes play an important role in the irritation and perpetuation of skin inflammatory reactions through the release of and response to cytokines. Resting keratinocytes produce some cytokines constitutively. Irritants can induce epidermal keratinocytes to release inflammatory cytokines (interleukin 1, TNK α), chemotactic cytokines (IL8, IL10), growth promoting cytokines (IL - 6, IL - 7, IL - 15 granulocyte – macrophage colony stimulating factor, transforming growth factor α) and cytokines regulating humoral versus cellular immunity (IL - 10, IL - 12, IL - 18). Intercellular adhesion molecules 1 promote the infiltration of leukocytes into the epidermis causing a cutaneous inflammatory reaction.

Significantly increased number of dividing keratinocytes is present 48 and 96 hours after exposure to an ionic emulsifying agent like soaps and detergents.

Soap if kept in contact with skin for a long time causes irritant dermatitis . No immunological mechanism take part in this reaction.⁴³

Histopathology

Cellular changes seen in the skin vary according to the chemical nature and concentration of the irritant applied, duration of exposure, severity of ensuing response and time. Histological examinations reveal

some degree of intercellular edema or spongiosis in epidermis. Spongiosis is usually less pronounced than seen in allergic contact dermatitis. Parakeratosis is observed widely.

The histology of c/c ICD is one of hyperkeratosis with areas of parakeratosis, moderate to marked epidermal hyperplasia (acanthosis) and elongation of the rete ridges.

Clinical feature

Acute irritant contact dermatitis is often the result of one single overwhelming exposure to an irritant or a series of brief physical or chemical contacts. This results in acute inflammation of the skin and is usually associated with an immediate sensitization of burning or stinging. The initial reaction is usually strictly limited to the site of application or contact, the concentration of the substances diffusing outside the area of contact almost immediately falls below the critical threshold necessary to provoke a reaction. The rapidity of acute irritant responses usually makes the cause obvious as the toxic reaction occurs within minutes. The duration of application necessary to provoke a reaction varies considerably and milder injuries may only induce a transient non – eczematous dermatitis or irritant reaction. Irritant effects may be considerably enhanced by occlusion (and care must always be taken to ensure that irritants also do not penetrate gloves or protective clothing).

Cumulative insult dermatitis develops as a result of a series of repeated and damaging insults to the skin. These insults include both chemical irritants and a variety of physical factors like friction, micro trauma, cold etc. Susceptibility to cumulative insult dermatitis will depend not only on the level of exposure but also on the site, age and individual predisposition, atopy and those with impaired resistance due to coexistent or recently healed eczema. The elderly, those with fair and dry skin, those with an atopic background (personal or family history of asthma, hay fever or eczema) are more vulnerable.³⁸ Individuals with a history of eczema or dermatitis, those with active eczema or chronic skin ulceration and those with high baseline transepidermal water loss appear to be at an increased risk of developing an irritant contact dermatitis. Once the stratum corneum skin barrier has been breached, a great number of normally innocuous substances can perpetuate an irritant contact dermatitis. Scratching, rubbing and even topical treatment may on occasions become causes or persistence. Chronic irritant dermatitis may therefore be due to the summation of various adverse factors many of which would not in themselves be strong enough to cause irritant contact dermatitis but which taken together are enough to weaken the skin and lead to the development of cumulative irritant contact dermatitis. These minor irritants may also act as perpetuating factors once the dermatitis has become established.

Occupational dermatosis

Irritant contact dermatitis is one of the greatest public health problems. In the industry, most outbreaks of dermatitis is not due to allergy but due to the introduction of irritants into the work process or changes in the environment such as humidity or excessive drying. Irritant eczema accounts for the majority of industrial cases and work losses.³⁹

ICD has a spectrum of disease, which ranges from a little dryness, redness, or chapping irritant readily through various types of eczematous dermatitis. Cumulative irritant dermatitis most commonly affects thin, exposed skin. E.g. back of hands and webs of fingers. It often begins as a few localized patches of dry, slightly inflamed or chapped skin and the tendency to disseminate is normally less than with constitutional or contact allergic forms of eczema. It tends to be static and less pleomorphic than other forms of eczema.

Occupations with high incidence involves

- 1) Housework
- 2) Cleaning
- 3) Catering
- 4) Nursing
- 5) Hair dressing etc

Most workers however even those working in high risk occupations usually develop only minor degrees of dermatitis and constitutional factors are therefore probably important in those who develop more severe forms of dermatitis.

Clinical varieties

Ring eczema-An irritable patch of eczema begins under a ring and tends to spread in a typical manner to

involve the adjacent side of the middle finger and the adjacent area of the palm. Transference of the ring to the other hand is often rapidly followed by the appearance of eczema at the new site. This type of eczema is probably due primarily to concentrations of soaps and detergents beneath rings, but micro trauma especially friction also plays a role.

Dry palmar eczema – Palmar skin becomes dry and criss crossed with superficial cracks and with damaged horny layer and is unable to respond with its normal pliability to hand and finger movement. These cracks often stand out white against an erythematous background. In addition to the palmar involvement there may be dryness and chapping of the skin over the dorsa of the knuckle joints.

Acrodermatitis continua - Deep vesicles and pustules with moderate inflammation , affecting the acral portion of the fingers . It is recurrent and persistent with atrophy of the skin , nails and digitis .Trauma and chemical irritants are the precipitating and perpetuating factors 40.

Dyshidrotic eczema – It involves multiple intensely pruritic small papules and vesicles occurring in the thenar eminence , hypothenar eminence and the sides of the fingers .37

Fingertip eczema-It involves the palmar surface of the tips of some or all the fingers. The skin is dry, cracked and sometimes breaks into painful fissures. Usually it remains localized. It may occasionally extend down the palmar surfaces of the fingers and merge with palmar eczema. Two patterns may be distinguished. The first and most common one involves most or all of the fingers, more predominantly those of the master hand and particularly the thumb and forefinger.

Diagnostic criteria 50

A detailed history is required because the diagnosis of ICD rests on the history of exposure of the affected body site to the cutaneous irritant.

Primary subjective symptoms include the following

- 1) History of sufficient exposure to a cutaneous irritant.
- 2) Onset of symptoms occurs within minutes to hours of exposure in simple acute ICD. The onset of signs and symptoms may be delayed by weeks in cumulative ICD.
- 3) Pain, burning, stinging or discomfort exceeding prurities early in the clinical course occur.

Less important subjective criteria include the following

Onset of dermatitis within 2 weeks of exposure.

Reports of many other coworkers or family members affected.

Individuals with history of atopic dermatitis (especially of the hands) are more susceptible to ICD particularly of the hands.

1. Rietschel proposed the primary diagnostic criteria for ICD as follows.

Macular erythema, hyperkeratosis or fissuring predominantly over vesiculation.

Glazed, parched or scaled appearance of the epidermis.

Healing process beginning promptly on withdrawal of exposure to the offending agent.

Minor objective criteria

Sharp circumscription of the dermatitis.

Lower tendency for the dermatitis to spread than the cases of allergic contact dermatitis.

Morphologic changes suggesting small differences in concentration or contact time producing large difference in skin damage.

Other criteria include the following

ICD may be manifested by vesicles particularly on the hand.

Reports of many other coworkers or family members affected.

Activity: Activities of early living with work may be reduced by severe ICD.

Diagnosis of ICD – soap

By their clinical pattern

Sites of lesion are palm, fingertips, webs of fingers.

Signs includes erythema, dry chapped skin, cracking vesiculation

Symptoms are burning, stinging, itching, associated with loss of pliability of skin and reduced movement of fingers.

Glazed, parched and scaled appearance of the epidermis.

- 1) History of exposure
 - 2) A bacterial culture can be obtained in cases complicated by secondary bacterial infection
 - 3) Patch test-Patch testing can be performed to diagnose contact allergies but no patch test exists that can prove a cutaneous irritant is responsible for a particular case of ICD.
 - 4) Skin biopsy can help to exclude other disorders such as tinea, psoriasis or cutaneous T cell lymphoma. But skin biopsy of skin lesions of palms and soles has several potential pitfalls. The stratum corneum and epidermis are particularly thick on palms and soles. This makes the histological diagnosis more difficult and increases the possibility that the biopsy specimen lacks sufficient dermis for optimal diagnosis. An overly deep skin biopsy of the thinner area can cut the motor nerve, which is the recurrent branch of the median nerve. A deep biopsy may also leave a chronic painful scar.
- So the diagnosis of contact dermatitis due to soap rests mainly on the clinical presentation and history of exposure.

Differential diagnosis of irritant contact dermatitis

1. Psoriasis – Psoriasis is a chronic inflammatory skin disorder characterized by erythematous, sharply demarcated papules and rounded plaques, covered by silvery micaceous scales. Psoriasis of the palms is frequently mistaken for hyperkeratotic eczema. In psoriasis scales will be adherent, thick pearly white and more abundant. Lesions will be symmetrically distributed and there will be nail changes like nail pitting.

2. Tinea – It appears as unilateral hand dermatitis. Tinea is a dermatophyte infection caused by the members of the species trichophyton, Microsporum and Epidermophyton. Tinea is often chronic and is characterized by variable erythema, oedema, scaling, purities and occasionally vesiculation. It can be detected by mycological examination. Unilateral scaling of the palm should always suggest a possible infection with Trichophyton and a discoid plaque clue to T verrucosum.

3. Lichen planus – Lichen planus is a papulosquamous disorder of unknown etiology. The lesions are pruritic, polygonal, flat topped violaceous papules in a pattern of It is characterized histologically by acanthosis and hyperkeratosis and clinically by thickened appearance of the skin. Scaling, crusting fissuring and lichenification occurs. Lichenification is the cutaneous response to repeated rubbing or scratching.

4. Pompholyx – is characterized by sudden onset of crops of clear vesicles, which appear deep seated. Itching may be severe preceding the eruption of vesicles. There is no erythema, but a sensation of heat and prickling of the palms may precede attacks.

5. Nummular eczema: Nummular eczema is characterized by coin like lesions of small oedematous papules that become crusty and scaly. In this the plaques of papulovesicles tend to occur symmetrically on the limbs.

6. Allergic contact dermatitis

In allergic contact dermatitis exposure to an allergen is followed by an allergic reaction characterized by erythema, vesiculation and severe pruritis. If exposure is chronic the skin becomes thickened and scaly. Allergic contact dermatitis is very similar to ICD in its manifestations. Allergic contact dermatitis is due to delayed or cell mediated immunity. On exposure to allergen an immune response occurs whereas in ICD a non immune response is seen. In Allergic contact dermatitis patch test is +ve while in ICD patch test is negative. In ACD tiny quantities may be sufficient to cause allergy while in ICD certain minimum exposure is necessary.

Complications

- o ICD increases the risk of sensitization to topical medications
- o Skin lesion becomes colonized secondarily or infected particularly by staphylococcus aureus.
- o Secondary neuro dermatitis (lichen simplex chronicus) may develop in individuals with ICD, particularly in those with workplace exposure or under psychological stress.
- o Post inflammatory hyper pigmentation or hypo pigmentation may occur in areas affected by ICD or persist after resolution of ICD in individuals with more pigmented skin.

Prognosis

The medical prognosis depends on the possibility of avoiding repeated and continuous exposure to the irritant. To assess prognosis, in a study of 408 patients, who were followed up, one-quarter were

unchanged or worse. Repeated exposure to some of the mild irritants may in time produce a hardening effect. This process makes the skin more resistant to the irritant effects of the given substance. Prognosis is good for non-atopic individuals

Relapses: Relapses or chronicity are due not only to re-exposure to allergens and irritants but also to other contributory mechanisms.

- 1) The barrier function of skin is impaired for months or even years after an attack of dermatitis. Recovery is prevented by exposure to irritants in concentrations, which might well be tolerated by normal skin.
- 2) Inappropriate treatment, overzealous use of cleansers may prolong the course of dermatitis.
- 3) Secondary infection leads to relapses.
- 4) Stress is common in c/c dermatitis and may be both a consequence of eczema and a trigger.
- 5) A number of constitutional factor predispose to chronicity.
- 6) There appears to be an inherent tendency in almost any eczema to become continuous to chronic.

Specific tests: - No specific tests are necessary and it is easy to recognize irritant contact dermatitis. There are no specific tests that can reliably show what the effect of an irritant will be in each individual case. Patch test are done for allergic contact dermatitis and are not diagnostic to ICD. Almost all of the soaps, detergents and shampoo's are irritants under patch test occlusion and probably leads to false negative responses.³⁴

Management

Contact dermatitis can only be properly managed once it has been diagnosed and any relevant constitutional factors identified. All local and exciting elements should be removed as soon as possible ⁴¹. Patients should avoid irritants for several months after complete healing.

Advice to patients

To speed healing, and prevent dermatitis from returning, you must now take great care of your hands and allow your skin to heal and recover its natural resilience/strength (This may take many months).⁴⁹

1. Washing hands: Use lukewarm water and soap substitute. If soap is used, find a soap with no fragrance tar or sulphur, use it sparingly, rinse thoroughly then dry thoroughly (especially webs and wrist).
2. Avoid contact with detergents and other cleaning agents. Always dilute them according to manufacture's instructions. Keep outside of containers clean or you will contaminate your hands with the product.
3. Use plastic gloves and wear gloves in winter.
4. Rings should not be worn during wet work even when your hands are better. Never wash hands with soap when wearing rings. Keep the inside of rings clean (brush under running water).
5. When washing use running water and a pot brush rather than a cloth.
6. If gloves are worn, use plastic rather than rubbers preferably use cotton lined glove. This allows the sweat to be absorbed rather than being rubbed into the dermatitis. Gloves should not be worn for long periods (max 20 min). If water enters a glove remove immediately. Have several pairs of plastic and cotton gloves. Wash them regularly. Plastic gloves should be quite dry inside before use – French chalk, talc helps.
7. Washing, machines and dishwaters are a great help, but avoid contact with detergent powder – use a measure with a handle.
8. Water softeners are helpful but too expensive. Try adding water softeners, to dish water, washing water, baths etc. as less soap /detergent is required.
9. Polythene occlusion and occlusive bandages are the best way to control the eczematous process .⁴²

Homoeopathic concept in ICD

We know that it is the patient, the sick man that is to be treated and not the disease, because the so called disease is not really the disease , but only an expression of it. If we can treat the sick man and bring him back to health, that is to say, if we can make him perform the normal functions and processes of life, the above so called disease will automatically disappear. Because, having been enabled to perform the normal functions and processes of life, the man will no longer be sick to develop abnormalities in any direction. To treat a sick man one ought to know what caused the man to be sick.

The reason for the cause of disease used to baffle the minds of medical men for long. The entity that was behind the names of numerous forms and varieties of disease was beyond comprehension. It was the genius of Hahnemann who settled the enquiry into the cause of disease by his famous discovery of miasm as the producer of all disease of manifestation. An understanding of miasm, its classification, the manifestation and its mode of treatment are essential for the proper understanding of disease and ways to its cure.

A simple form of ICD comes under the Hahnemann classification of **inappropriately called chronic diseases**.

§77 Those diseases are inappropriately named chronic, which persons incur who expose themselves continually to avoidable noxious influences,.. . These states of ill-health, which persons bring upon themselves, disappear spontaneously, provided no chronic miasm lurks in the body, under an improved mode of living, and they cannot be called chronic diseases.

Cumulative chronic irritant contact dermatitis comes under the Hahnemannian classification of true natural chronic diseases due to chronic miasm. In **§72** he defines chronic disease as disease "... with small, often imperceptible beginnings, dynamically derange the living organism, each in its own peculiar manner, and cause it gradually to deviate from healthy condition, in such a way that the automatic life energy called vital force, whose office is it to preserve the health, only opposes to them at the commencement and during their progress makes imperfect, unsuitable useless resistance, but is unable to extinguish them, but must helplessly suffer (them to spread and) itself to be ever more and more abnormally deranged, until at length the organism is destroyed.

As the main symptoms of this disease are localized on the external part of the body, it takes the form of local malady of dynamic origin.

§ 201 "It is evident that man's vital force when encumbered with chronic disease which it is unable to overcome by its own powers, adapts the plan of developing a local malady on some external part. Solely for this object, that by making and keeping in a diseased state this part which is not indispensable in human life, it may thereby silence the internal disease which other wise threatens to destroy the vital organs,..... The local affection, however is never anything else than a part of the general disease, but a part of it increased all in one direction by the organic vital force and transferred to a less dangerous (external) part of the body, in order to allay the internal ailment"31.....

In the treatment of local maladies Hahnemann says

§205 The homoeopathic physician never treats one of these primary symptoms of chronic miasms, nor get one of their secondary affections that result from their further development by local remedies (neither by those external agents that act dynamically, nor yet by those that act mechanically) but he cures Only the great miasm on which they depend, where upon its primary as also its secondary symptoms disappear spontaneously.....".

As no external disease can arise, persist or grow without the participation of the living whole, the medicinal treatment must be directed against the whole by means of internal medicines. This can be affected by taking in conjunction, the external character of local affection and all the changes, sufferings and symptoms observable in the patient's health to form a complete picture of the disease before searching among the medicines. The remedy corresponding to the totality of the symptoms is selected, which will be the true homeopathic medicines.

In 'A dictionary of domestic medicine and homoeopathic treatment with a special section on disease of irritants,' J.H.Clarke says

The skin is often the outlet for chronic delicacies to manifest themselves upon. In these cases care must be taken not to treat them as if they were merely local affections. Many persons who suffer from eczema notice that they are much better when the disease is out than when it is in and it must always be regarded as a misfortune when a skin disease disappears and some internal disease shows itself instead. The only proper treatment for all such affections is that which regards the constitution as a whole .25

J.H.Allen in his book 'The Chronic miasm' says 'The skin is the mirror or the reflector of the internal stress, the internal dynamics, the internal working of this human machine. It has in the skin, its reflectors, its kaleidoscope its kinetoscopic views of its internal movements and multiple shadings of disease, its lights and its shadow that go to make up a picture, thrown upon the human canvas, the skin, showing much of perverted life action in the organism.3

Chronic miasm in ICD

Irritant dermatitis according to the theory of chronic miasms , is a condition of three great miasms - Psora , syphilis and sycosis . These three miasms are seen in varying combinations. The miasm in the background is Psora, according to the progress of pathology we can find a syphilitic predominance .

Miasmatic expression

In indications of miasm by Dr. Harimohan Choudhary 5

Psora – The characteristic of psoric skin is intense itching and burning. Itching is more frequent and more unbearable late in the evening, before midnight, heat of bed and undressing. Psoric skin is generally dry, rough and unwashed with or without little pus and blood. Vesicles of the itch, patient rubs and scratches, better for a few moments immediately after which there is a long continued burning of the affected parts.

Syphilis – Eruptions with scales thick and heavy. An urge for destruction seems to run throughout the syphilitic miasm.

Sycosis – There is erythematous eczema. There is chronic inflammation with oedema. There is formation of cracks with oozing of sticky fluid.

J.H.Allen in his book 'The Chronic miasm' 3says the skin of psoric patient is dry, rough, dirty or unhealthy looking. The more you bathe it, the rougher it becomes as it cannot endure water. Pseudo Psora presents as eczema fissum and itching of the skin. There is very little suppuration in psoric skin diseases, they are apt to be dry, with scanty suppuration, scropurulent and occasionally bloody. There is no itching in syphilitic and very little soreness, itching is wholly a psoric symptom the vesicle is also a psoric lesion when found in non-syphilitic case. The scales and crusts of syphilis are always thick and heavy, while those of Psora are thin, light, fine and small and usually quite general over the affected part. Sycotic skin will be oily and greasy.

Eczema fissum – This is a chronic form found in patients of a tubercular taint. It is typically a manifestation of latent syphilis upon a psoric base. It is aggravated by cold, wet weather and working in water. It affects those parts where the epidermis is thickest, as on the hands and feet. The slightest irritation of the skin, such as handling of irritants, exposure to various kinds of weather the excessive use of water or soap etc. are prone to get this disease. The skin becomes dry, hard and thick. The fissures are sometimes superficial but may extend deeply into corneum with raw, tender and bleeding surfaces. The skin may remain dry or there may be oozing of a sticky honey – like secretion, and often bleeding from deeper fissure

Dr.Samuel Hahnemann in 'The Chronic disease their peculiar nature and their homeopathic cure'1 says that eruptions, arising from time to time and passing away again, voluptuously itching, pustules especially on the fingers or other parts which after scratching burn belongs to internal Psora. Dryness of the skin of the whole body belongs to Psora.

In 'Notes on the Miasm' by Dr. Proceso Sanchez Ortega 4he says syphitics has cold and pale skin which is red, hot exconated and ulcerated. There will be erythema and discolouration of various kinds. Sycotic will have pruriginous red spots, tubercles and nodosities along with warty excrescences and condylomas. The basic psoric condition is deficiency or lack, so it will be manifested as cold skin with great sensitivity to cold and dampness.

Dr. J.T.Kent in his lectures on the homoeopathic philosophy 24gives us some guidelines for the treatment of skin diseases. He says "If you are treating a vicious form of scaly eruption, dry hard horny scales, you will, under accurate prescribing, notice these scaly formations disappear but after the vital force has become strong enough, you need not be surprised to see vesicular eruptions develop, for the original so called disease had changed from its vicious squamous form to the milder vesicular form. The different eruptions change into varying forms but they are all from one cause and will come back in their successive stages under homoeopathic treatment".

According to Dr.J.T.Kent it is the perverted thinking, which leads to Psora, and perverted action, which leads to syphilis and sycosis.

Dr.Subrata Kumar Banerjee in 'Miasmatic Diagnosis'23 gives a comparison of dermatological symptoms. Psoric skin: dirty dry, harsh skin, itching without pus or discharge, sensation of burning, scaly eruptions and tendency of recurring skin diseases. Cracks of hand and feet.

Syphilitic skin – All sorts of ulcers, boils which do not heat fast with discharge of fluid and pus, which is offensive and spreads. Skin is ulcerated with pus and blood. There is putridity and offensiveness of all discharge.

Tubercular skin – Skin disease is aggravated at night by touch, warmth of bed, after itching and amel. By cold.

Dr. H.A.Roberts in 'The principles and art of cure by homoeopathy'50 gives the indication of Psora as... "

skin is dry, rough, dirty or unhealthy. In all psoric conditions, itching is a persistent symptom. There is very little suppuration; there may be a few vesicles or a papular manifestation. With a dry skin there is a decided tendency for fine thin scales.

In syphilis there are pustular eruption which suppurate. The most striking character of syphilitic eruption is that they do not itch. There is very little soreness. If these eruption progress to scaling and crusts, as they usually do they are very thick and occur in patches or circumscribed spots.

In sycosis skin tends towards overgrowth and extra deposits. All manifestations of unnaturally thickened skin belongs to this group.

Dr. Phllis Speight in 'A Comparision of the Chronic Miasms Psora, Pseudo-Psora, Syphilis, Sycosis'22 gives the indication of

1) Psora – Skin is dry, rough, dirty or unhealthy looking has an unwashed appearance. Pruritis – Very little suppuration in psoric skin diseases – apt to be dry with scanty suppuration seropurulent and occasionally bloody. Eruptions often popular in form accompanied by intense itching. Usually color of skin unless an inflammatory process is present. Itchiing - Scales and crusts thin and light, fine and small and usually quite general over affected part.

2) Syphilis – Syphilis are arranged in circular groupings, ring or segments of circles. Copper coloured or raw ham color, brownish or very red at their base. No itching and very little soreness. Scales and crusts thick and heavy, patchy and in circumscribed spots.

3) Sycosis – Scales patchy and in circumscribed spots. Eczema – exfoliata.

Dr . R .Patel in his 'Chronic miasms in homoeopathy and their cure with classification of their rubrics (symptoms in Dr. Kent's repertory) 21 says

a) Extremities chapped hands , working in water – P

b) Extrimities chapped fingers -P

c) Extremities chapped fingers about the nails – P

d) Extremities chapped fingers tips –P

e) Extremities cracked skin hands – Latent Psora

f) Extremities cracked skin hands, itching – Psora

g) Extremities cracked skin hands , winter in - Psora

Medicinal management

In **Constantine Herring's** 'The guiding symptoms of our materia medica .' medicines and its indication are 19

1) Graphites

I I Skin of hands hard & cracked

I Constant chafed soreness between fingers

I Raw and moist places between fingers

I Violent itching and burning

2) Nitric acid

I I Rhagades deep, bleeding

I Eczema on inner sides of 1 hand

3) Petroleum

I I Tips of fingers rough, cracked, fissured, sticking, cutting pain

I Skin of hands cracked and rough

I Deep bloody rhagades on hands, thick crust worse during winter

I Burning in palms of hands

4) Psorinum

I I Itch in hands, finger joints

I Itching between fingers, vesicle

I Pustules on hands

5) Sepia

- I Burning of palms and hand
- I Skin on palms peels off
- I Itch and scabs on hands
- I I Hand sweats profusely

6) Sarsaparilla

- I Fingers burning under nails with itching
- I Deep rhagades on fingers with burning pains
- I I Sides of fingers burning
- I Tips of fingers feel bruised and sore

7) Silica

- I I Cracking of skin on arms & head
- I I Burning itching with forefinger
- I Burning in finger tips

8) Calc carb

- I Severe itching on inner part of forearm. Small water blisters from scratching
- Π Vesicles on fingers
- I Burning sensation on back of hands

9) Natrum.mur

- I I Skin of hands especially around nails, dry cracked
- I I Small red vesicles on arms
- I I Blistering tester in finger, containing watery fluid

10) Sulphur

- θ Eczema
- I I irritating rash on arms for two months.
- I I Burning of hands
- I I Rhagades in hands especially between fingers, on finger joints and in palms

New drugs for chapping⁴⁸

A.C.T.H or Corticotrophine

Fine powdery desquamation of skin . Cracks in the right thumb , dryness of palm , pruritis of hands < heat of bed .

Alloxane :Hands dry , cracked . Skin unhealthy , eruptions papulous and pruriginous .

Molybdenum metallicum :Dry skin , dry eruptions squamous eruptions with itching

Paloondo :Redness with sensation of heat , dryness of skin with pruritis .

Phenobarbital (phenylethylmalonylurea)

Heat of fine parts of skin. Pruritis with stinging and burning with little amelioration by heat and cold .

Smarting pain and discharge . Erythema more or less intense Vesicles upto dishydrosis Skin dry or weep by scratching .

Rubrics with medicines

1)In the **Kents** 'Repertory of Homoeopathic Materia Medica' rubrics are given in the chapter 'Extrimities'⁶

CHAPPED hands

Calc, Calend, Graph, Hep, Petr, Rhus-t. Sars, Sep, Sulp

Alum, aesc, ana, arn, kalic-c, lyco, mag-c, merc, nat-c, nat-m, sil, zinc

apis, am-c, aur, carb-ac, ham, hydr, kreos, puls.

Working in water: Calc Sulph

Rhust, sep

Alum, ant-c, cham, hep, merc, sars.

CRACKS

Hands : **Alum, Calc, Grap, Petr, Nitac, Sars, Sil, Sulph, Zinc**

Aesc, am-c, aur, aur-m, carb-s, cist, hep, lach, Lyc, merc, nat-c, nat-m, psor, puls, rhust, sep. anan, ant-c, arn, bar-c, cench, cycl, kali-c, kali-s, kreos, maland, phos, rhus-v, ruta, sanic, sec.

Burning: *petr,*

sars, zinc

Cold from - *sanic, zinc*

deep and bleeding – **Nit.ac Petr.**

merc

Alum, sanic

Itching – *merc, petr*

Wetting from **calc, sep, sulph**

Cist, puls, rhust

alum, ant-c, kali-c, nita, sars, zinc

Winter in **Calc, petr, sep, sulph**

Cist, merc, psor, sanic,

alum

Rubrics are also found in chapter skin.

Chapping:

Calc, Graph, Hep, Puls, Rhus-t, Sars, Sep, Sulph

aesc, cycl, lach,

alum, ant-c, arn, aur, bry, cham, kreos, lyc, mag-c, mang, merc, nat-c, nat-m, nit-ac, petr, ruta, sil, viol-t, zinc.

Cracks : Calc, Carb-s, Graph, Petr, Puls, Sars, Sep, Sulph

Aesc, ant-c, arn, aur, bad, carb-an, cham, cycl, hep, kali-s, kreos, lach, lyc, mang, merc, nat-c, nat-m, nit-ac, paeon, psor, rhust, sil, zinc.

Alum, aloe, am-c, bor-c, bry, calc-c, carb-r, con, hydrastis, kali-c, mag-c, olnd, osm, phos, ruta, teucr, viol-t.

2) In synthesis 'Repertorium Homoeopathicum Syntheticum' by Dr. Fredrick Schroyens' the Rubric chapped hands has medicines.7

Calc, Calen, Graph, Hep, Petr, Rhust, Sars, Sep, Sulph

Aes, Alum, Arn, Ana, Kalic-c, Lyco, Mag-c, Merc, Nat-co, Nat-m, Zn.

am-c, alum-sil, apis, aur, calc-sil, carb-ac, cench, sil, ham, hydr, kali-s, kreos, prim-o, psor, puls.

Working in water

-calc

-rhust, sep.

-alum, ant-c, cham, hep, merc, sars

Fingers – Nat-m

Nails about the – Nat-m

Tip – bar-c

Cracked hands -

Wetting from

-Calc, sep, Sulph

-Cist, puls, rhust

-Alum, ant-c, calc-c, kalic-c, nit-a, petr, rhus-v, Sars, zn

Deep and bleeding

Nit-a, petr

Merc, sars

Sanicula

Winter in

Calc, sep, sulph*Cist, Merc, psor, Sanic*

Alum, Calc-s

Palms of

Cist, Merc- i.r, Petr, Sulph

3) In the 'The concordance repertory of the material medica by **William.D.Gentry**' rubrics are found in the chapter 'The skin'

Chapped-

Inflamed eruptions forming crusts, which become detached in open air and adjoining skin is c, sars

Cracked – skin becomes dry, chafed, rough and c. in places-Natr.c

Skin of hand is hard and c. in many places – Graph

Cracks – Rhagades, deep c and fissures causing great pain, bleeding and suppurating – petr.

4) In Dr.Boger Boeninghansen's characteristics and repertory 23 remedies are given

Upper Extremities –chaps

Hands and f.on

SUL

Alu, Aur, Calc, Caust, Cist, Cyc, Grap, Hep, Nat-m, Nitac, Rut, Zn.*Kre, merc, natc, rhust*

arn, bar-c, mag-c, sars.

H . palms

– *Alu, cist, graph, kre*

merc-i-r,petr.

F.tips

– **Petr, Graph***Sars*

Alum, aur, bar-c, bell, merc, sil

Skin and exterior body

Eruptions

Chapped ,cracked ,etc

PULS, SEP, SUL.,

Calc-c, Cyc, Hep, Lach, Rhus-t*Alu, arn, aur, cham, kre, lyc, mang, nat-m, nit-ac, petr, sars, vio-t, zin*

Ant-c , bry, grap, kali-c, merc, nat-c, rut, sil,.

Cracks,

after washing

CALC-C

Ant-c, Puls*bry, cham, rhustox*

Kali-c, lyco, nit -a, Zin

5) According to Repertory to the more characteristic symptoms of the material medica by Constantine

Lippe, the medicines indicated are 10**Upper extremities**

Rhagades-

Hands- **Alum, Aur, calc, Hep, Ntr-m, Petr,Rhus, Sulph, Zn**

Arn, Bar-c , Creos , Cycl,Graph,Kalic, Lach, Mgn-c , Merc, Ntr-c, Ruta, Sil

--deep and bleeding **Merc**

Petr,Sars

Skin Rhagades

Calc, Hep, Lyco, Puls, Sars, Sep.

Aloe, alum arn, aur, cham, creas, cycl, lach,

Mang, Merc, Nitr-a, Nux, Petr, Phosp, Rhust, Zn.

6) In Boeninghausen's therapeutic pocket book rubrics are found in the chapter skin.11

Eruptions -

Chapping- PULS, SEP, SUL,

Calc-c, Hep, Lach, Rhus,

Alum, Arn, Aur, Cham, Kre, Lyc, Mang, Nat-m, Nit-ac, Petrol, Sars, Viol-t, Zinc.

Ant-cr, Bry, Graph, K.carb, Mag.c, Merc, Nat.c, Ruta, Sil.

Cracks.

-After Washing-

CALC-C, SEP, SULP

Bry, Cham, Rhus, Sars

Ant-cr, puls, Nit-ac, Zinc

-Deep, Bloody -

Merc, Sars

Petro, sulph

Puls

7) In the Repertory part of Boerickes' 'Pocket manual of homoeopathic 'materia medica' rubrics are in the chapter Locomotor system.12

Hands

Chapping *Calc-c, Graph, Petrol, Nat-c*

Alum, Castor, Cistus, Lyc, Mag-c,

Nat-ars, Sars, Sulphurous-ac

Palms

Chapping, fissuring - *Ran b, Calc fl.*

8) In J.H.Clarkes "A clinical repertory to the Dictionary of 'materia medica'" the medicines given under chapped hands are 13

chaps

3.Lyc, Natr-c, Petr, Prim-o, Sars, Sul-ac

2.graph, puls

9) In Knerr's ' Repertory of Herring's guiding symptoms of our materia medica' in the chapter skin rubrics given are 14

Rhagades

I I CALC, GRAPH, PETR, SULPH

I Aesc, Bad, Carb an, Hep, Kal-s, Lyc, Merc, Nat-c, Nat-m, Nit-ac, Paeon, Rhust, Sep, Sil

I I Phos

I Alum, Am-c, Arn, Ars-s-f, Aur, cham, cycl, hydr, Lach, Mag-c, Mang, Olnd, Puls, Sars, Zinc

10) In Phataks 'A concise repertory of homoeopathic medicines', the rubric given is 15

Cracks, fissures, chaps

Ferr, graph, ign, Merc, sep, sil, sulph

Ant-c, Ant-t, Calc, Calc f, Cist, Flac, Hep,

Lyc, Merc-c, Mez, Mur-ac, Nat-m, Phos,

Puls Rat, Rhust, Sars

11) The outlines of materia medica by Buck Henry the clinical dictionary part gives medicines for chapping 16

Chaps on the skin - ALUM, HEP, MERC, PETRO, ZINC.

Ant c, Calc, Cham, Clem, Dulc, Graph, Nit a, Rhus, Sass, Sep,

Sulp

12) 'A textbook of materia medica and therapeutics, characteristic, analytical & comparative ' by **A.C**

.Cowperthwaite in its clinical index part medicines given 17 are -

Rhagades,

Graph.

Calc carb, Flour. ac, Hep.s, Merc, Nitr ac, Petrol, Sars, Sil, Sulph.

13) A pocket manual or repertory of homoeopathic medicine by **J.Byrant**¹⁸

CHAPS, cracks, fissure, rhagades. Remedies in general

CALC, HEP, MERC, PETR, SEP, SULPH

alum, ant, graph, lyc, mang, nitracid, puls, sass

arn, aur, carbon, natr-m, rhus, sil, zinc.

Deep and Bleeding

MERC, CALC, SIL

Cham, Petr

Calc, puls, sulph

Finger (in the)

MERC, PETR,

Sass

Finger Joints (in the)

Mang, Phos

Hands (in the)

HEP, PETR

Alum, merc, sass, sulph, zn

Ant, graph, nita, rhus.

Water (from working in the)

CALC

Ant-t, sass

Hep, puls, sep, sulph

14) In 'Homoeopathic Medical Repertory' by Robin Murphy the rubrics given are

Skin²⁶

Chapping

GRAPH, HEP, PULS, RHUS-T, SARS, SEP, SULPH

Aesc, cycl, lach, kali c

Alum, alumn, ant-c, arn, aur, bry, cham, kreos, lyc, mag-c, mang, merc, nat-c,

Nat-m, nit-ac, olnd, petr, ruta, sil, viol-t, zinc.

Cracks in

Washing after

CALC, SEP, SULPH,

Ant-c, calc-s, puls

Alum, cham, bry, kali-c, lyco, nita,

Therapeutics

In John.R.Kippax in 'A handbook of diseases of the skin' says "Washerwoman's itch is an inflammation of the skin occurring on the hands in washerwomen. He defines such eczema as caused by excessive use of strong potash soap and other irritating agents as artificial eczema. 33

Special pathology and diagnostics with therapeutic hints by **C.G.Raue**, eczema is defined as which consists of diffuse, superficial dermatitis, which causes numerous little vesicles upon an inflamed, irregular surface, sometimes these vesicles are intermingled with pustules, at other times exudation may not be abundant enough to raise the epidermis into vesicles, but only loosens it, so that it dies off and forms a scaly surface or the epidermis is actually thrown off, leaving a raw moist surface behind which in some cases, becomes covered with a thin scurf, in others with a thick crust. One of the causes of eczema are direct irritation of the skin by irritating substances. In the bends of the extremities there is scanty exudates, which dries with the loosened epidermis with cracks in different direction. On the palms of the hands it scarcely ever occasions a vesicle..³⁰

In 'Diseases of the skin their constitutional nature and cure' – **J.C.Burnett** says 'The treatment of skin diseases as merely local affairs concerning the skin only, as is now current with nearly all medical men of all schools – all over the world, is in my opinion, nothing less than a crime against humanity and eminently characteristic of the cultured shallowness of the medical profession of today.'³²

Quick bed-side prescriber by **J.N.Shingal** gives therapeutic indications²⁷ -

Chapped hands and cracks in finger tips- 1) cracks at the ends of fingers and on the back of hands often much itching, skin rough and bleeding (Petr). 2) Dryness and cracking about fingernails, palms hot and perspiring (Nat mur).

Eczema – on hands, fingers – on hands and fingers (carbon.v, Merc-s, sulph and sep).

Eczema – hands and weeping eczema – fluid comes out on scratching, give Graphites 200 & 1000 in chronic cases and lower dilution in acute cases.

Finger – cracks – cracks at the ends of fingers and on the back of hands skin rough or bleeding often much itching (petroleum).

A Manual of Materia medica, Therapeutics and Pharmacology with clinical index by **Alexander.L.Blackwood** in Clinical index part therapeutic indications are given

Rhagades – Graphites. It is of service in eczema, rhagades, excoriations and ulcers of skin that are characterized by a stick glutinous discharge that is oozing out all the time.28

Clinical therapeutics by **Hoynes Temple.S** says sepia is one of our most important remedies for deep cracks and rhagades worse from washing in the water, itching eruptions burning after scratching.

Silecea benefits in eczema when dry crusts are formed. Narrates on case with large warts on hands with deep rhagades always bleeding – frequent haemorrhage tested with Nitric acid 30 every 4 days for 20 days, then Nitric acid 200 followed by Nitric acid 1000 cured. (Dr.Gaillard)29

Dr. J.H.Clarke in his 'A dictionary of domestic medicine and homoeopathic treatment says for chapped hands the best treatment for chapped is to rub them well every night with glycerin or glycerin jelly. More pleasant, but not always so effective is "Landine cold cream".25

Richard Hughes in 'The principles & practice of Homoeopathy' says 'In simple recent Eczema you will very rarely have occasion to use any medicine but Rhus.

In Chronic Eczema – when the original vesicles have become transformed into Crusts, Rhagades and Thickenings – Arsenic is again an excellent remedy; but Homoeopathy has discovered another in Graphite's, with which, as a rule, you will do well to commence the treatment.51

In Otto Lesser Text Book of Homoeopathic materia medica46

Rhagades – Acid nit, Anti crud, Graph

In Homoeopathic Therapeutics – Samuel Lilenthal47

Principle remedies –

1.Alum calc, Hep, Hydrast, Lyco, Merc, Petro, Puls Rhus, Sep, Sulph

2.Arn, Aur, Cham, Cycl, Lach, Magn, Natr m, Nitr. Ac, Sass, Sil, Zinc

RHAGADES OF THE HANDS

From working in water

1. Calc, Hep, Sep, Sulph

2. Alum, Ant, Cham, Merc, Rhus, Sass

In Materia Medica of nosodes with repertory – **by O A Julian**48

Medicines for Cracked/Fissured/Chapped

B.Morg, B.Gaert, Baci – 7, Dys-co, Morg G, Malan, Prot, Psor, Pyro, Syph, Tub

Materials and Methods

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. It indicates the general pattern of organizing the procedure for gathering reliable and valid data for the researchers .

Research approach - Experimental

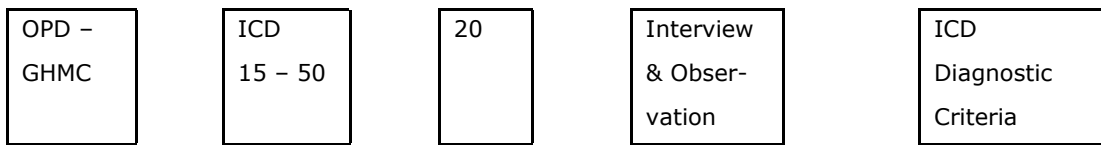
Materials

Setting of the study

Study was conducted in the OPD of Govt. Homoeopathic Medical College, Calicut from April 2003 to April 2004. This hospital was selected as it is a well-equipped teaching institution and it was convenient for the investigator to collect the data.

Population

The term population refers to the aggregate or totality of all objects, subjects or members that confirm a set of specifications. The population of the present study consists of women with ICD due to soap and detergents aged 15-50.



Setting Population Sample Technique Assessment
Fig 1:4 Schematic Design of the study

Sample Selection

Sample consists of women with ICD who satisfies both the inclusion and exclusion criteria.

Inclusion criteria

- 1) Patients aged 15-50 years
- 2) Only women are selected
- 3) Subjects satisfying the diagnostic criteria
- 4) Subjects who have consented to participate in the study.

Exclusion criteria

- 1) Non-co-operative subjects
- 2) Subjects with diabetes and pregnancy
- 3) Subjects with other systemic disease or congenital abnormalities.

Methods

All patients with a clinical diagnosis of irritant dermatitis due to soap were taken up for detailed with special reference to the history of present illness and nature and distribution of skin lesions. Systemic physical examination was done in all patients to exclude the possibility of other diseases.

Essential routine investigation of blood and urine were done in all patients.

In each case selection of medicine was based on the data such as aetiological factors (predisposing, precipitating, aggravation and amelioration factors), mental generals, physical generals, concomitance, characteristic particulars, common symptoms if highly prominent, repertorial approach and clinical indications.

In all cases potencies were selected on the basis of similarity of the drug, susceptibility of the patients, intensity of the disease, pathological advancement and age of the patient.

Medicine were repeated only when a quantitative increase in the symptoms and other clinical features of the disease were noticed. In between the period of medication all patients were kept under blank tablets continuously.

Tools and technique

Assessment tool was developed after literature review and in consultation with experts . A dermatologist and a research methodologist were consulted. Five major areas were identified as important parameters and each item were rated on a scale 0- 3.

- 0 = Absence of symptoms
- 1 = Mild symptoms
- 2 = Moderate symptoms
- 3 = Severe symptoms.

Changes in the score were noted.

Follow up

All patients were reviewed on one week ,two week or four week interval, accordingly to the convenience of the patient and the stage of the disease. Each case followed for a minimum of 4 months from the commencement of the treatment.

Diet and Regimen

All patients were directed to continue with the same diet as earlier. All of them were directed to stop the use of all the medicines prior to the start of this treatment.

Effectiveness

Effectiveness of the treatment was assessed on the basis of relief of symptoms and clinical improvement. Changes in the score before treatment and after treatment were used for assessing the effectiveness of the treatment .

Analysis

The cases observed from the time of occurrence of the disease up to the date of study were taken as the control and a comparative study is done with the present situation of the patient .Various facts obtained during this study were treated according to the statistical principles for final conclusion.

MASTER CHART

	Name	Age	Religion	Duration	Past History	S. E. Status	FH	Occu- pation	Win- ter	T. H	Asso. Comp.	Criteria		Dur. · Of Tt	Med- icine	MI AS M
												BT	AT			
1	Bichu	40	Muslim	10yr	Fibroid uterus	M.C	Nil	H.W	Nil	1yr	Nil	P ₃ E ₃ I ₂ C ₀ A ₃	P ₁ E ₁ I ₁ C ₀ A ₁	5m	semp	Ps-10 Sy-p-0 Sy-c-0
2	Hafsat h	26	Muslim	6yr	Cracks Sole Pain leg	LC	Nil	H.W	Nil	3yr	Blee-ding, Oozing of fluid	P ₃ E ₃ I ₃ C ₂ A ₃	P ₂ E ₁ I ₁ C ₂ A ₂	5m	petro	Ps-6 Sy-p-3 Sy-c-1
3	Devi	40	Hindu	1yr	Gastric Ulcer	LC	Nil	H.W	Nil	Nil	Burning	P ₃ E ₃ I ₂ C ₀ A ₃	P ₁ E ₁ I ₁ C ₀ A ₁	5m	lyco	Ps-8 Sy-p-1 Sy-c-1

4	Jaseela	33	Mus	4 yr	Chicken pox	MC	Nil	H.W	Nil	3 m	Burning	P ₃ E ₂ I ₃ C ₂ A ₃	P ₁ E ₁ I ₁ C ₀ A ₁	6 m	Sup	Ps o-6 Sy p-4 Sy c-0
5	Ajitha	27	Hin	4 yr	Chicken pox	MC	Nil	Tailor	W.A	3 yr	Burning, bleeding	P ₃ E ₃ I ₃ C ₂ A ₃	P ₀ E ₀ I ₀ C ₁ A ₀	10 m	Graph	Ps o-8 Sy p-2 Sy c-0
6	Pushpa	45	Hin	8 yr	Pain chest, Knee Joint	LMC	Nil	H.W	Nil	3 yr	Oedema	P ₃ E ₂ I ₃ C ₂ A ₃	P ₂ E ₁ I ₁ C ₁ A ₂	4 m	Nat.m	Ps o-8 Sy p-1 Sy c-1
7	Aseena	17	Mus	2 yr	Eczema	LMC	Nil	Student	Nil	1 yr	Burning, vesicle, blackish	P ₂ E ₃ I ₃ C ₂ A ₃	P ₁ E ₁ I ₁ C ₁ A ₁	6 m	Graph	Ps o-5 Sy p-2 Sy c-3
8	Dilsharya	20	Mus	2 yr	erup.leg c.pox Jaundice	LC	Nil	H.Job	Nil	1 yr	Blackish, bleeding	P ₃ E ₃ I ₃ C ₃ A ₃	P ₂ E ₂ I ₁ C ₁ A ₁	10 m	graph	Ps o-8 Sy p-2 Sy c-0
9	Suprya	23	Hin	1 yr	Nil	LMC	Nil	Tel Operator	Nil	Nil	Burning	P ₃ E ₂ I ₃ C ₂ A ₃	P ₁ E ₂ I ₁ C ₁ A ₁	5 m	Se pia	Ps o-8 Sy p-2 Sy c-0

10	Sabira	36	Mus	6 yr	Measles	UMC	Nil	H.W	Nil	6 m	Nil	P ₃ E ₂ I ₂ C ₂ A ₃	P ₁ E ₁ I ₁ C ₁ A ₁	7 m	Sulph	Ps o-7 Sy p-3 Sy c-0
11	Kamal	50	Hin	2 yr	Nil	LMC	Nil	H.W	W.A	1 yr	Nil	P ₃ E ₂ I ₂ C ₂ A ₃	P ₁ E ₁ I ₁ C ₁ A ₁	7 m	Ar s Al b	Ps o-6 Sy p-2 Sy c-2
12	Suhara	33	Mus	3 yr	Burning leg	LMC	Nil	H.W	Nil	Nil	Burning	P ₃ E ₂ I ₂ C ₁ A ₃	P ₁ E ₂ I ₁ C ₀ A ₁	5 m	Se p	Ps o-8 Sy p-2 Sy c-0
13	Sareen	24	Mus	8 yr	UTI	LMC	Sister	H.W	Nil	1 yr	Burning oozing	P ₂ E ₃ I ₃ C ₀ A ₃	P ₁ E ₂ I ₁ C ₀ A ₁	5 m	Ma lan	Ps o-9 Sy p-0 Sy c-1
14	Jameel	26	Mus	1 m	Eczema Cracks sole	LMC	Nil	H.W	Nil	Nil	Burning	P ₂ E ₂ I ₃ C ₂ A ₂	P ₁ E ₀ I ₀ C ₀ A ₀	4 m	Ar s Io d	Ps o-6 Sy p-4 Sy c-0
15	Sajitha	21	Mus	5 yr	VSD	LC	Nil	H.Job.	W.A	3 yr	Nil	P ₃ E ₂ I ₂ C ₂ A ₂	P ₁ E ₁ I ₁ C ₁ A ₁	7 m	Se p	Ps o-8 Sy p-2 Sy c-0

16	Haseen	22	Muslims	1 yr	Erup leg Measles	LC	Mother	H.W	W.A	3 wks	Nil	P ₃ E ₃ I ₂ C ₃ A ₃	P ₂ E ₁ I ₁ C ₁ A ₁	5 m	Gr ap	Ps o-9 Sy p-1 Sy c-0
17	Reeja	28	Hindu	5 yr	Tonsilitis	LMC	sister	H.W	Nil	6 m	Burning Oozing	P ₃ E ₂ I ₂ C ₁ A ₂	P ₁ E ₁ I ₁ C ₀ A ₁	5 m	Ar s Al b	Ps o-7 Sy p-2 Sy c-1
18	Amina	38	Muslims	3 yr	LBA	LC	Nil	H.W	W.A	2yr	Burning	P ₃ E ₂ I ₃ C ₀ A ₃	P ₁ E ₁ I ₁ C ₀ A ₁	4 m	lyc o	Ps o-10 Sy p-0 Sy c-0
19	Kamarunnees	18	Muslims	2 ^{1/2}	Chicken Pox Br.asthma	M.C	Nil	H.Job	Nil	Nil	Burning Oed-ema	P ₂ E ₃ I ₃ C ₂ A ₂	P ₃ E ₃ I ₃ C ₃ A ₃	7 m	Gr ap h	Ps o-8 Sy p-1 Sy c-1
20	Suhara	33	Muslims	1 yr	LBA	LC	Nil	H.W	Nil	8 m	Nil	P ₃ E ₃ I ₃ C ₂ A ₂	P ₁ E ₁ I ₁ C ₁ A ₁	5 m	Su lp h	Ps o-6 Sy p-3 Sy c-1

- 1) B.T- Before treatment
- 2) A.T- After treatment
- 3) L.C -Lower class
- 4) L.M.C- Lower middle class
- 5) U.M.C-Upper middle class
- 6) S.E.status- Socio-economic status.
- 7) Mus-Muslim
- 8) Hin-Hindu

- 9) Pso- Psora
- 10) Syp-Syphilis
- 11) Syc- Sycosis
- 12) P- Peeling of skin
- 13) E- Erythema
- 14) I-Itching
- 15) C-Cracks
- 16) A-Activities of daily living.

Table: 6 Changes in the clinical features after treatment

No	Peeling						Erythema						Itching						Cracks						
	BT	AT	<	>	S	D	BT	AT	<	>	S	D	BT	AT	<	>	S	D	BT	AT	<	>	S	D	
1	3	1		1			3	1		1			2	1		1			0	0					
2	3	2		1			3	1		1			3	1		1			2	2				S	
3	3	1		1			3	1		1			2	1		1			0	0					
4	3	1		1			2	1		1			2	0				D	2	0					D
5	3	0				D	3	0				D	2	0				D	2	1		1			
6	3	2		1			2	1		1			2	1		1			2	1		1			
7	2	1		1			3	1		1			3	1		1			2	1		1			
8	3	2		1			3	2		1			3	1		1			3	1		1			
9	3	1		1			2	2			S		2	1		1			2	1		1			
10	3	1		1			2	1		1			2	1		1			2	1		1			
11	3	1		1			3	1		1			2	1		1			2	1		1			
12	3	1		1			3	2		1			2	1		1			1	0					D
13	2	1		1			3	2		1			3	1		1			0	0					
14	2	1		1			2	0				D	3	0				D	2	0					D
15	3	2		1			3	1		1			2	1		1			3	1		1			
16	3	1		1			2	1		1			2	1		1			2	1		1			
17	3	1		1			2	1		1			2	1		1			1	0					D
18	3	1		1			2	1		1			3	1		1			0	0					
19	2	3	1				3	3			S		3	3			S		2	3	1				
20	3	1		1			3	1		1			3	1		1			2	1		1			

Peeling
 < - 1case - 5%
 case - 6.25 %
 > - 18 cases - 90%
 cases - 62.5%
 S - 0%
 case - 6.2%
 D - 1case - 5%
 case - 25%
 N - 20 cases - 100%
 cases - 80%

Erythema
 < - 0%
 > - 16 cases - 80%
 S - 2 cases - 10%
 D - 2cases - 10%
 N - 20 cases - 100%

Itching
 < - 0%
 > - 16 cases - 80%
 S - 1 case - 5%
 D - 3 case - 15%
 N - 20 cases - 100%

Cracks
 < - 1
 > - 10
 S - 1
 D - 4
 N - 16

Abbreviations -

- | | | |
|--------------------------|----------------------|---|
| 1) BT - before treatment | 4) > - amelioration | 7) N - No. of patients having the symptom |
| 2) AT - after treatment | 5) S - no change | |
| 3) < - aggravation | 6) D - disappearance | |

Observations and Discussions

20 patients who attended the organon of medicine and homoeopathic philosophy out patient department of Govt. Homoeopathic Medical College Hospital from April 2003 to April 2004 were studied. The statistical analysis is based on the data obtained from these patients, who completed the treatment.

Table: 1 Distribution of irritant contact dermatitis to soap & detergents

Age group in years No. Of patients Percentage

15-20 3 15%
 21-25 4 20%
 26-30 4 20%
 31-35 3 15%
 36-40 4 20%
 41-45 1 5%
 46-50 1 5%
 Total 20 100

Among the age groups maximum prevalence is noted in adults between the age group 21 – 40 years. Out of 20 cases observed ,12 cases belonged to this age group. Second in prevalence is the age group of 15 – 20 years . Two out of 20 cases came under this age group. There is only one case each in the age groups 41 to 45 and 51 to 55 years.

Table: 2 Distribution of irritant contact dermatitis to soap and detergents according to socio – economic status.

Among 20 patients of various socioeconomic classes included in the study, disease is commonly seen in the lower middle class family 8 cases (40%), followed by lower class with 7 cases (35%) and middle class, 4 cases (20%) then upper middle class with 1 case (5%).

In this study the disease was mostly noted in housewives, 17 cases (85%), 2 cases (10%) were people occupied in other fields like tailoring, office work etc. 1 case (5%) is a student.

Table: 3 Distribution of irritant contact dermatitis to soap and detergents according to occupation.

Occupation No.Of Patients Percentage
 Housewives 17 85%
 Students 1 5%
 Unskilled workers 2 10%
 Total 20 100%

Table: 4 Distribution of irritant dermatitis due to soap & detergents according to past history.

Past History No. Of Patients Percentage
 Chicken Pox, measles, Jaundice 6 30%
 Skin 5 25%
 Respiratory complaints 1 5%
 CNS 1 5%
 CVS 1 5%
 Locomotor 4 20%
 Glandular 1 5%
 Psychiatric complaints 0 0%
 Genito Urinary complaints 2 10%
 GIT 1 5%

In the analysis of history of past illness it is observed that 30% cases suffered from infections diseases like chicken pox, measles, jaundice. About 25% suffered from skin disease and 10% of case suffered from diseases of locomotor system and 20% of cases had CNS, CVS, glandular complaints.

Table .5: Distribution of clinical features in irritant contact dermatitis.

Presenting Symptoms No of Patients Percentage
 Peeling of skin 20 100%
 Erythema 20 100%
 Itching 20 100%
 Burning 9 45%
 Cracks 16 80%
 Oozing of fluid /vesiculation 6 30%
 Bleeding on scratching 3 15%

The commonest mode of presentation of irritant dermatitis due to soap and detergents under this study were peeling of skin, itching and erythema, in 20 patients i.e. 100% of cases. The next commonest complaint was cracks in 16 patients(80%). Burning was seen in 9 patients (45%). Vesiculation or oozing of

fluid was seen 6 cases (30%). Bleeding or scratching in 3 cases (15%).

Family history of irritant dermatitis due to soap and detergents revealed that 3 cases (15%) have similar complaints among the family members.

Out of 20 cases studied (6 patients) 30% of cases complained of having an aggravation of complaints during winter seasons.

Effectiveness of treatment was assessed by the change in clinical features before and after treatment. It was seen that peeling was present in all 20 patients 90% (18) got relief, 5% (1) there was aggravation and in 5% there was complete disappearance of the symptoms.

Erythema was seen in 100% (20) of the cases. 80% (16) got relief, there was no aggravation of erythema with treatment. 10% (2) of cases there was no change in erythema and 10% (2) of cases erythema completely disappeared.

Itching was seen in 100% (20) of cases. 80% got amelioration. 15% (3) there was no itching after treatment. In 5% (1) of cases there was no change.

Only 80% (16) of patient had cracks in palms 62.5% had relief after treatment. 6.25% of cases there was aggravation. In 6.25% of cases no change was observed and in 25% (4) of cases there was complete disappearance of cracks.

Table: 7 Distribution of miasmatic expression in ICD due to soap and detergents
Miasmatic expression in 20 cases

In 20 cases the psoric miasm predominate with 70.5% of symptomatology belonging to it. It is followed by syphilitic miasm, which cover 20.5% of symptoms, followed by sycotic miasm, which cover 4.5% of symptoms.

Table 8: Distribution of medicines found effective in ICD due to soap & detergents

Out of 20 patients treated Graphities was indicated in 25% of the cases (5 patients), Sepia in 20% of the cases (4 patients) , sulphur in 15% of the cases (3 patients) , Lycopodium in 10% of the cases (2 patients) , Ars alb in 10% of the cases (2 patients) , Natrum mur in 5% of the cases (1 patient) , Malandrinum in 5% of the cases (1 patient) , Petroleum in 5% of the cases (1 patient) and Ars iodide in 5% of the cases (1 patient). In 4 cases a change in plan of treatment was required. These patients were previously on homoeopathic treatment and was getting relief with that medicine. So the medicine was not changed. However the relief was found to be temporary. So a change of remedy was required.

Of two cases both on sepia one was changed to Ars Alb and another to Sulphur. Two cases on psorinum were changed to graphities. These medicines was found to be indicated on retaking the case. One patient on graphities had aggravation. All the potencies ranging from 30 to CM were used. In one case 50 millesimal potency was used.

Statistical Analysis

The diagnostic criteria includes

Peeling – P
Erythema – E
Itching – I
Cracks – C
ADL – A

Marks given are

0 – absent
1 – mild
2 – moderate
3 – severe

Test of significance

a) Questions to be answered. Is there any difference in the symptoms of the case before and after treatment?

b) Null hypothesis H₀: No difference in the symptoms of the case before and after treatment.

Test of significance determined by using paired t test

$T = z / (sz / \sqrt{n})$ $sz = \frac{\sum(z-z)^2}{n-1}$ $z = x - y$
 Table :9 Changes in the score before and after treatment

X	Y	Z=x-y	$\sum(z-z)^2$
1	11	4	0.25
2	14	8	6
3	11	4	7
4	12	4	8
5	13	1	12
6	12	7	5
7	13	5	8
8	15	8	7
9	12	6	6
10	12	5	7
11	13	5	8
12	11	5	6
13	11	5	6
14	11	1	10
15	11	5	6
16	14	6	8
17	10	4	6
18	11	4	7
19	12	15	3
20	13	5	8

$$Z = 6.75$$

$$t = z$$

$$sz / n$$

$$sz = \frac{(\sum z - z)^2}{n - 1}$$

$$(\sum z - z)^2 = 147.7125$$

$$sz = 147.7125 / 19$$

$$= \sqrt{7.77}$$

$$= 2.788$$

$$t = 6.75 \times 20$$

$$2.78$$

$$= 6.75 \times \sqrt{4.47}$$

$$2.78$$

$$= 30.19$$

$$2.78$$

$$= 10.86$$

Comparison with tabled value:

This critical ratio, t, follows a distribution with (n-1) degrees of freedom. The 5% level is 2.09 and 1% level is 2.86 for 19 degrees of freedom. The calculated value 10.86 is greater than the table value. Therefore the null hypothesis is rejected. **Homoeopathic medicines are effective in the treatment Of ICD .**

Summary

Irritant dermatitis is not only an occupational problem, but also a cosmetic problem. Patients become reluctant to appear in the public due to the disfigurement of their hands. In this study 20 patients who attended O.P department of Organon of medicine from April 2003 to April 2004 were included. These patients belonged to various socio- economic status and of age group between 15 - 50 years. The results of the study were evaluated using statistical principles.

Maximum age groups affected were between 21-40 years. Housewives were found to suffer more than those who were pursuing other occupation. Looking into the socio-economic condition of the patient and analyzing whether there is any relationship between irritant dermatitis and socio-economic status it could be seen that

a definite relationship existed. Lower middle class and lower class people were more prone to develop irritant dermatitis. About 30 % of the patients had previous history of infectious diseases and 25% had previous skin complaints .15% of patients had family history of similar complaints and 30% of patients had winter aggravation. Psora was found to be the miasm in the background and as pathology progressed Syphilis was found to become prominent.

The study aims at determining the efficacy of homoeopathic medicines in the management of ICD. The evaluation is based on clinical improvement. As per the advise of my guide, the major signs and symptoms were included as the basic criteria for the diagnosis.

All the cases had peeling, itching and erythema while only 80% of the patients had cracks on palms. 90% got relief for peeling of skin and in 5% of cases it completely disappeared. 80% got relief for erythema and 10% of cases it completely disappeared. 80% got relief for itching in 15% it was no more. In 25% of the cases there was complete disappearance of cracks and 62.5% had relief.

From the analysis of the above results it is obvious that the homoeopathic medicines are quiet effective in preventing the recurrence of the major features of ICD and also is effective in reducing the intensity of the chronic, long lasting manifestations.

The effectiveness of homoeopathic treatment was evaluated by statistical analysis of the pre-treatment and post-treatment disease intensity scores, which were given to each case. After statistical analysis, the calculated value was 10.86, which was well above the tabled value at 5% and 1% levels $P < 0.01$. Thus this study provides an evidence to say that homoeopathic medicines are effective in preventing the recurrence of the complaints and lessening the intensity of the complaints .

Medicinal management was found to be very much effective, in 25% of the case Graphities was indicated, in 20% of the case Sepia was indicated, in 15% of the case Sulphur was indicated, in 10% of the case Lycopodium was indicated, in 10% of the cases Ars Alb was indicated, Natrum Mur, Malandrinum, Petroleum, Ars iod were found to be indicated in 5% of the cases. One case treated with Graphities showed aggravation. All potencies ranging from 30 to CM were used. In one case 50 millesimal potency was used. There were no cases that were beyond the scope of homoeopathic management. An aggravation was found to happen on using Graphities in one patient. It needs assurance and confidence on the part of physician and patient while managing the aggravated condition.

Recommendation

Irritant dermatitis due to soap and detergents is one of the greatest public health problems as it interferes with the daily activities of the patient. It is also one of the social problems as majority of the patients belong to the poor socio-economic group. Inability to work with their hands means loss of work and money, which in turn leads to poverty.

Various steps are recommended on the basis of this study to improve the health status of the patient. If these measures are given due consideration it will improve the health status of the community.

It is seen that many manufacturing firms are adding perfumes, antimicrobials, antibacterial agents, colouring agents etc to soap and detergents in order to make their products attractive to the consumer. These agents acts as sensitizers and perpetuate and aggravate irritant dermatitis. Government should set up regulation to decrease the amount of sensitizers in soap and detergents. Legal measures should be taken against companies marketing soaps and detergents with strong sensitizing agents. Names of the ingredients should be labeled on the products, so that patients will be able to select a soap and detergent which is less irritant to them. As majority of the patients are from low socio – economic condition, compensation should be granted for the injury sustained at their work place. Protective clothing should be provided by the employees. Awareness programmes about the ICD should be conducted and patients should be advised to stick on to hygienic measures. Occupational site survey should be carried out by the officials to assess the problem in the workplace and initiate preventive and curvative measures.

Suggestions

When this study was summarized many suggestions for further investigation came up.

- 1) To assess the ph of soap and detergents and find out their relationship with irritant reaction

- 2) To assess the potential of soap and detergents to cause irritant reaction by testing on laboratory animals and on human volunteer subjects
- 3) To find out whether the soap and detergents causing a marked irritant reaction in the cruder form can be used as a curative agent in an some in a highly potentised form,

These suggestions are put forward for further study and research on this subject which may help to enrich this subject and enhance the scope of homoeopathy in this field.

CONCLUSION

The following salient conclusions have been drawn on the present study after summarizing its findings.

- 1) Homoeopathic medicines are effective in the management of ICD
- 2) There are no specific medicines for ICD but there is a specific medicine for each patient suffering from ICD
- 3) Age group mostly affected in between 21 – 40 years
- 4) Incidence is mostly seen in housewives
- 5) More than one fourth of the cases shows winter aggravation
- 6) There is also a chance for the family members of the patients to be affected by ICD
- 7) Incidence of the disease is more in lower middle class and low socioeconomic classes and much scarce in upper middle class and high class families

Recommendation

Various steps are recommended on the basis of this study to improve the health status of the patient. If these measures are given due consideration it will improve the health status of the community.

It is seen that many manufacturing firms are adding perfumes, antimicrobials, antibacterial agents, colouring agents etc to soap and detergents in order to make their products attractive to the consumer. These agents acts as sensitizers and perpetuate and aggravate irritant dermatitis. Government should set up regulation to decrease the amount of sensitizers in soap and detergents. Legal measures should be taken against companies marketing soaps and detergents with strong sensitizing agents. Names of the ingredients should be labeled on the products, so that patients will be able to select a soap and detergent which is less irritant to them. As majority of the patients are from low socio – economic condition, compensation should be granted for the injury sustained at their work place. Protective clothing should be provided by the employees. Awareness programmes about the ICD should be conducted and patients should be advised to stick on to hygienic measures.

Homoeopathic medicines are found to be very effective in the management of ICD. Many of the patients were able to carry on with their daily activities after the treatment, which they could not do so before. Normal pliability of skin was found to be regained after the treatment. Patients were able to use soaps and detergents without much flaring of symptoms as before.

Suggestions

When this study was summarized many suggestions for further investigation came up.

- 1) To assess the ph of soap and detergents and find out their relationship with irritant reaction.
- 2) To assess the potential of soap and detergents to cause irritant reaction by testing on laboratory animals and on human volunteer subjects.
- 3) To find out whether the soap and detergents causing a marked irritant reaction in the cruder form can be used as a curative agent in an some in a highly potentised form.

These suggestions are put forward for further study and research on this subject, which may help to enrich this subject and enhance the scope of homoeopathy in this field.

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