

USEFULNESS OF MASKS IN DERMATOLOGY

G.M. Di Grazia

Department of Experimental Dermatology (Chair Prof. S.D. Randazzo)
Catania University (Italy)

Received: March 12, 1991.

Key words: Masks; Muds; Seborrheic dermatitis; Acne; Keratoplastic activity.

Synopsis

Masks-aided treatment in certain dermatoses (seborrhea and seborrheic dermatitis, acne, psoriasis, eczema, surface mycoses, acrocyanosis, varices of lower limbs) gives very interesting results.

The stimulation of cutaneous microcirculation and metabolic processes with heated masks, the antiseptic and keratoplastic activity of the sulphur components, the vasodilating capacity of carbon limes, the influence of active ions of iron-arsenic muds on organ function are the basis of the positive effects that can be achieved.

Riassunto

Il trattamento coadiuvante con i peloidi in alcune dermatosi (seborrea e dermatite seborroica, acne, psoriasi, eczema, micosi superficiali, acrocianosi, varici degli arti inferiori) si dimostra di particolare interesse.

La stimolazione del microcircolo cutaneo e dei processi metabolici con i peloidi termali, l'attività antisettica e cheratoplastica svolta dalla componente sulfurea, la capacità vasodilatatrice periferica mediante le torbe carboniche, l'influenza degli ioni attivi dei fanghi ferruginosi arsenicali sulla funzionalità d'organo, sono alla base degli effetti favorevoli che è possibile ottenere.

Heat therapy or use of masks helps the effective pharmacological treatment of many skin pathologies sometimes resolves them.

Masks are types of clays or muds: they are semi-fluid, amorphous materials consisting of a natural solid vegetable, mineral or animal components and a liquid, usually of aquatic origin, part which may also be mineral or rarely marine. Frequently the solid part forms and ripens when in contact with the liquid part, by continuous and complex chemical and biochemical exchanges which bring about an extraordinary enrichment of the overall mass and development of specific macro and micro flora containing bioactivating substances which stimulate skin metabolism.

Sometimes, as for several dermatological peloids, the liquid and the solid components have different origins, but are placed in contact

in basins or tanks where precise conditions of temperature, moisture and agitation create, over a long period, high quality, effective, and virtually natural products.

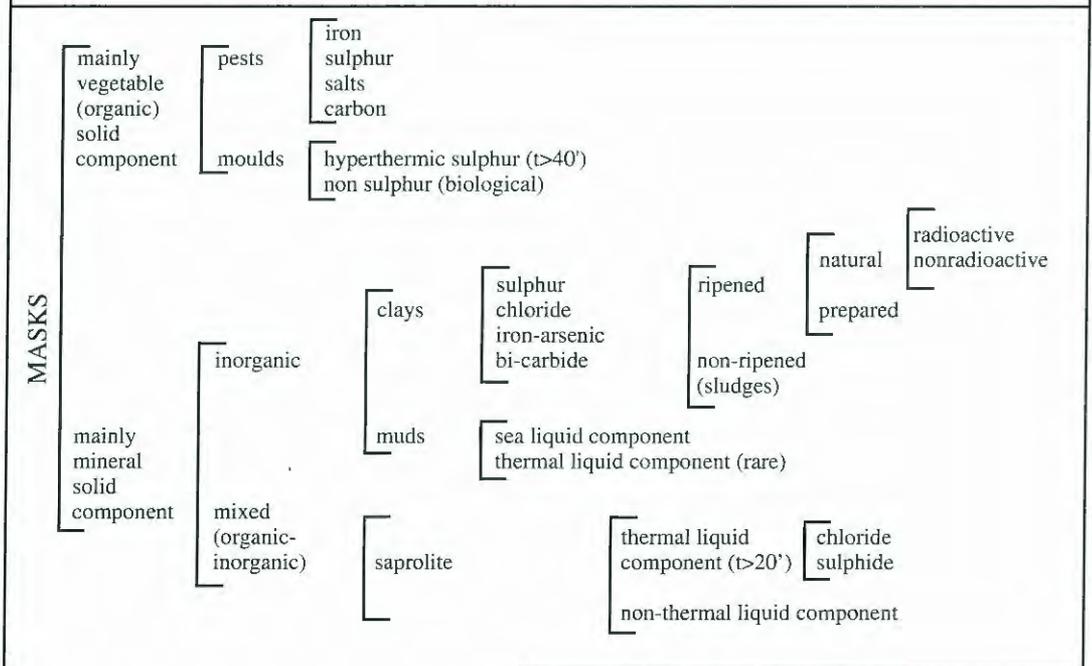
These masks are referred to as "ripened" masks. Ripened masks are then divided into "natural" (obtained through a prolonged maturation in the presence of heat and moisture) and "prepared" peloids (obtained by placing in contact the liquid part with the solid part). The lipid soluble portion of heat ripened masks contains vitamins, steroid substances and phospholipids.

Due to the differences in the composition of the several kinds of peloids, many classifications are possible.

The following classification is based on the qualitative composition of the solid and liquid components.

Table I

CLASSIFICATION OF MASKS



It has already been mentioned how many dermatological diseases benefit from masks and according to the various clinical manifestations and individual conditions the use of a mask with particular physical and chemical features and certain effects will from time to time be indicated.

In general all masks heated to a temperature higher than that of the body strongly stimulate the cutaneous microcirculation and thus help to activate many metabolic processes. This effect alone suggests application in several diseases especially those in which dermo-epidermal metabolic exchanges are to be helped.

In addition, specific components of certain masks frequently can play a major role.

The first of these elements is sulphur. It is well-known for occurring in sulphurous muds and for exerting a keratoplastic action as it participates in the formation of the cysteine molecule from two cysteine molecules, an aminoacid which is plentiful in the epidermis. This process is fundamental in cell reproduction and differentiation.

As well as the keratoplastic activity which proves useful in cicatrization delays, sulphur also has a noticeable keratolytic action and is thus valuable in acne as it helps remove pore-clogging keratin plugs which are directly responsible for comedone formation and blackheads.

It is also worth recalling that, in addition to the fore mentioned comedones and blackheads, acne bearing skin is seborrheic and frequently appears edematous and erythematous. Sulphur masks have proved to be capable of reducing seborrhea noticeably. This action is deemed to be due to a hydrogen-sulfide-mediated inhibition of the oxydation of cysteine into cysteine.

This is a fundamental process in differentiating sebocytes in active sebaceous glands.

Sulphur also has a well-known antimicrobial action and thus plays a valuable part in acne where bacteria (*propionobacterium acnes*, staphylococci) cause the inflammatory reaction by synthesis of antigenic and prostaglandin-like substances.

Thanks to their antiphlogistic, antiseptic, keratoplastic, antifungal and antiparasitic action, sulphur masks are also useful in the therapy of some mycosis, of scabies, psoriasis and subacute-chronic eczema.

In parasitic diseases of the skin sulfide or calcium-sulfide masks are suggested as being rich in hydrogen sulfide. This is recommended also for treatment of seborrhea.

Arsenical and iron-arsenic muds like mineral waters which are their liquid arsenic and iron rich counterparts prove to be very useful in the therapy of chronic eczema, of lichen ruber planus, of acne and psoriasis. The ions act on general metaphase and functional conditions even though such activity only follows the introduction of such ions by drinking or absorption.

There are other masks which are worth mentioning like carbon limes which by causing peripheral vasodilation, can be profitably used in the treatment of varices in lower limbs, acrocyanosis and diabetic peripheral vascular diseases.

It is also significant that clayey muds, regardless of their content, used for face masks, have a favourable peeling effect. The major feature of days is that they shrink as the contained water evaporates. This phenomenon is the basis of mechanical peeling which causes exfoliation of the surface horny layer.

Fucocosmetics (from fucòs - seaweed) utilizes seaweed for developing ripened packs. These consist of carotenoids, phytosteroids, lipoproteins, phospholipids, aminolipids, lipid-linked polysaccharides, which are highly bioactive, normalizing and restoring the skin.

References

1. **Angelini G. (1989):** "Ischia: termalismo e cute". Convegno Termalismo Scientifico e Turismo-Lacco Ameno Ischia (20/21 Ottobre 1989)
2. **Argenziano G. (1985):** "Termalismo e cute". *Puglia salute* (Dossier: Il Termalismo), **3**: 64.
3. **Bartoletti C.A. (1979):** "Medicina estetica in ambiente termale". *Med. estetica*, **3**: 101.
4. **Califano L., Ciaccio I., Como M., Palazzo R., Schepis C. (1983):** "Il fango bisolfuro nella terapia dell'acne". *Convivia medica*, **4**: 459.
5. **Csermely E. (1979):** "Terapia termale e cute" *Giorn. e Min. Dermat.*, **113**: 875.
6. **Cunliffe W.J., Leeds F.R. (1987):** "Evolutions of a strategy for the treatment of acne". *J. Am. Acad. Dermatol.*, **16**: 591.
7. **Dinotta F., Di Grazia G.M., Randazzo G (1991):** "Attività coadiuvante di un fango vegetale naturale nell'acne polimorfa." *Med. Estetica*, **15**: 113
8. **Gualtierotti R. (1989):** "Il ruolo della dermoestetica nel termalismo moderno". *Cosmetic news*, **XII**: 371.
9. **Vegro A. (1978):** "Talassoterapia e medicina estetica". *Med. Estetica*, **2**: 154.