

Mesa Redonda: Amputados- Prótesis

Skin disorders in stumps of amputees

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Skin of the residual limb in lower limb amputees is exposed to several unnatural conditions. It is exposed to shear and stress forces during weight bearing, possibly leading to stump oedema, blisters, lichenification, verruciform hyperkeratosis, epidermoid cysts, and acro-angiodermatitis. Even malignant skin tumours may develop. Due to the close fitting and warmth of the socket of the prosthesis, the skin tends to perspire more than usual, and moreover the sweat cannot evaporate freely over a substantial area. Because of the increased humidity intertrigous dermatitis may occur followed by infections with dermatophytes and yeasts of the groin and stump. In addition, bacterial infections especially with staphylococcus aureus leading to folliculitis, furunculosis (or boils), cellulitis, pyoderma gangrene, and hidradenitis. Development of infections is influenced by hygiene of prosthesis wearer, moisture and hairiness of skin, and temperature of the environment. Ulcerations may become persistent enhanced by poor nutritional skin status, vascular insufficiency, or localized pressure from a poorly fitted prosthesis.

Allergy for chemical compounds of the socket or liner (a prefabricated sleeve made of silicone material, which is put around the amputation stump) may lead to allergic contact dermatitis. Irritant dermatitis and atopic eczema may also occur. Finally, pre-existent skin disorders (e.g. psoriasis or acne) may be elicited by wearing a prosthesis. The above mentioned types of skin disorders in amputees have been reported by Levy (1-3).

To prevent skin problems several adaptations of sockets and liners have been developed.

It was expected that skin problems would reduce with the introduction of the ICEROSS, a silicon socket (8), because of the better fit and less shear and stress forces. However skin problems also occur in lower-limb amputees with ICEROSS socket.

Skin problems impede daily prosthetic use, and reduce mobility of the amputee, and jeopardize vocation. In literature skin problems are frequently discussed but are scarcely investigated systematically. The impact of skin disorders in a lower limb amputee on activities of daily living, vocation and leisure activities is unknown.

Aim of this lecture is to show skin problems and to discuss (very shortly) literature with respect to incidence and prevalence of skin problems of the stump in lower limb amputees.

Finally a very old and perhaps "strange method" (using fly larvae) will be discussed.

1) Levy SW. Amputees: skin problems and prostheses. *Cutis* 1995;55:297-301.

2) Levy SW. Skin problems in amputees. In: Fitzpatrick TB, Eisen AZ, Wolff K, Freedberg IM, Austen KF, eds. *Dermatology in General Medicine volume 1* New York: McGraw-Hill, Inc.; 1993.

3). Levy SW, ed. *Skin problems of the amputee*. St. Louis: Warren H, Green Inc.; 1983.