

Skin Complications in RSD

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One of the complications that may occur in RSD of long standing is the appearance of various skin problems. These problems do occur in some 5% of patients with long-standing RSD, and some may prove very difficult to heal. In this brief overview, I'll discuss the most frequently occurring skin problems.

Dark discolouration of the skin

Initially, I thought this was due to excessive production of melanin (skin pigment). But later it became clear that this dark skin actually consists of a thick outer layer of epidermis, which may peel on occasion. The discoloration occurs as a consequence of disuse of the limb (the outer layers of the skin do not wear off), and/or due to extreme hypersensitivity of the limb, impairing proper skin care. This discoloration is



Fig 1.
Example of severe late RSD with skin discolouration, chronic edema (swelling), problems with skin and nail care, bruisable skin and some ulceration.

harmless and does not require special treatment. Washing, scrubbing, or eventually a cream with salicylic acid may solve the problem.

Abnormal nail growth

Most RSD patients may notice that the nails of the



affected extremity may grow faster or slower, and may become harder and brittle. The nails may show a more pronounced curvature, in the axis of the finger and/or in a transverse direction (above). Technically, physicians refer to this as “hour-glass” nails. Cutting these hard nails in the presence of hyperalgesia may prove to be an ordeal.

In the foot, especially the nail of the big toe, this bending of the nail may cause an “ingrown toe nail.” This may require minor surgery, which is always tricky in a limb with RSD. In mild cases I suggest taking a flat or triangular file and progressively thinning the middle area of the nail, so that its “back” is weakened and the



Fig 2. (scan 1.4)
Example of thin, brittle, eczematous skin.

pressure is taken off its sides. Evidently, this filing has to be repeated regularly.

Thin, brittle skin

As a result of tissue atrophy, the skin may become very thin, tight, brittle, and easily bruised (Fig.2). The skin may also take on the appearance of eczema.

Skin ulceration

In worse cases, the skin may break down locally, resulting in slow-healing ulcers next to spots where new ulcers appear (Fig 3,4).



Fig 3 (top) and 4 (above)
Examples of a extensive ulceration of the skin.

Lymphedema

In extreme cases, a persistent severe swelling of the limb may result, possibly due to blockage of the lymphatics (Fig 5). In these cases, deep venous thrombosis has to be excluded. Because compression dressings may cause excruciating pain, they are not a treatment option..The swelling may reside partially with these dressings, but almost invariably recurs after stopping that particular form of treatment.

In cases with the more severe skin changes (numbers 3 to 5), I would suggest comparing the skin temperature with the healthy side. This can be done with an infrared ear-thermometer. If the skin is substantially colder, measures should be taken to improve the blood



Fig 5.
Example of case with severe lymphedema, skin discoloration and ulceration of the leg and foot (the bigtoe is just visible). There also is an extreme equinus position of the ankle joint. This exceptional patient finally developed severe infections in the foot, finally requiring amputation.

circulation to the skin. We usually start with peripheral vasodilator drugs (verapamil, ketanserin etc, in fairly high doses if necessary and possible). If this does not work or results in too many side effects, a sympathetic block may be considered. In the worst cases, we would admit the patient for treatment with an axillary catheter (upper extremity), or an epidural catheter (lower extremity).

Besides providing for optimal blood circulation in the skin, appropriate treatment of the RSD is mandatory. We therefore use an extensive protocol, including antioxydants. Also a protective, padded, well-aired splint may decrease the number of new skin ulcers.

Specific treatment for the skin changes caused by RSD by dermatologic methods, in my experience, has given little benefit; however, various skin creams may have additional therapeutic value.