

Cancer Association of South Africa (CANSA)

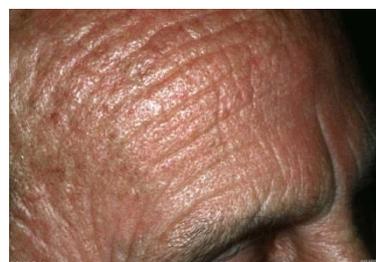


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Fact Sheet on Solar Elastosis

Introduction

Solar elastosis (also known as Actinic Elastosis) is an accumulation of abnormal elastin (elastic tissue) in the dermis of the skin, and in the conjunctiva of the eye, which occurs as a result of the cumulative effects of prolonged and excessive sun exposure, a process known as *photoaging*. It is most commonly found on the face, lips, ears, back of the hands, forearms, scalp or neck.



[Picture Credit: Solar Elastosis]

Solar Elastosis

Solar elastosis is a medical condition in which the skin modifies its colour (often times it is yellowish) and it becomes thicker, as a direct result of sun damage. It is especially encountered in people with fair complexion.

In the case of elastosis, the collagen layer is damaged and the elastic layer overcompensates by accumulating elastin excessively. The accumulation of abnormal elastin is not only noticed on the skin but also on the eye conjunctiva. It would seem that prolonged and excessive exposure to the sun is the main culprit behind solar elastosis.

Incidence of Solar Elastosis in South Africa

The National Cancer Registry (2014) does not furnish any information regarding the incidence of Solar Elastosis.

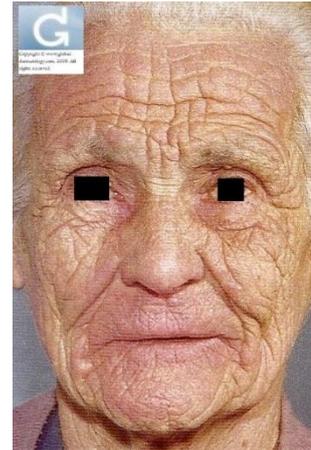
Pathophysiology of Solar Elastosis

Cells within Solar Elastosis show characteristic UV-induced gene mutations.

[Picture Credit: Solar Elastosis 2]

Histologically Solar Elastosis share features with squamous cell carcinoma (SCC). It is an epidermal lesion characterised by:

- Collections of atypical, pleomorphic keratinocytes in the basal layer which can extend to the upper granular and cornified layers.
- The epidermis being abnormal in architecture, with acanthosis, parakeratosis, and dyskeratoses. Cellular atypia is present with keratinocytes varying in size and shape.
- Mitotic figures being present.



It has features of Bowen's disease or carcinoma *in situ*:

- They can be distinguished more by the degree of cellular change and the extent of the lesions rather than differences in the features of individual cells.
- Often, marked hyperkeratosis and areas of parakeratosis with loss of the granular layer are present.
- A dense inflammatory infiltrate is usually present.

Causes of Solar Elastosis

Solar elastosis affects people who have had long term sun exposure and is a feature of photoageing. It affects individuals of all skin types but its yellow hue is more obvious in fair skin individuals. Solar elastosis is also a manifestation of premature skin ageing caused by smoking.

Treatment of Solar Elastosis

The best treatment of solar elastosis is prevention. One can prevent sunburn and the related skin conditions by protecting one's skin whenever outdoors by wearing a broad rim hat, protective clothing, and sunscreen with SPF of at least 30. However, if one sees signs of solar elastosis, there are antiaging skin care products and treatment available.

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Solar Elastosis

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Solar Elastosis 2

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