

Recent advances in treatment

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1. Introduction

NON MELANOMA SKIN CANCER (NMSC)

1. Actinic (Solar) Keratoses now considered by many authorities to represent a superficial squamous cell carcinoma
2. Bowen's disease
3. Basal cell carcinoma
4. Squamous cell carcinoma

A world wide epidemic of tsunami proportions of NMSC continues, in part due to the:

- aging of the world's population;
- increased frequency of early childhood sunburns;
- increased exposure to UV light;
- fashion trends (arsenic has made something of a comeback being found repeatedly in some alternative medicine preparations from 3rd world countries but now also available in the West);
- increased leisure, sun-holidays;
- depletion of ozone layer;
- and, more recently, immunosuppression (eg. medication following organ transplant and AIDS).

Squamous cell carcinoma has increased 30%, whilst Basal cell carcinoma have

increased 75% over 10 years in South Wales. It is also likely that similar increases have occurred in other parts throughout the Western world.¹

Clinical appearance

Actinic keratoses

Multiple scaly pigmented or erythematous patches on exposed areas in middle aged or elderly subjects especially those with an outdoor occupation, where the condition may occur even earlier. *Actinic keratosis* may develop into invasive squamous cell carcinomas.

Bowen's disease

Essentially a *squamous cell carcinoma* in situ, often limited to a single patch of 'eczema' that fails to resolve with treatment.

Squamous cell carcinoma

May follow *Actinic keratosis* or Bowen's Disease or present itself anywhere on skin/mucous membranes with squamous epithelium. An ulcer with an indurated border may occur and causative factors also include scarring from burns, lupus erythematosus and lupus vulgaris. Certain genodermatoses such as xeroderma

pigmentosum predispose to *squamous cell carcinoma* as also organ recipients, who have an eighteen fold risk of developing *squamous cell carcinoma*. Metastases from *squamous cell carcinoma* are rare on sun damaged skin but are an important consideration in *squamous cell carcinoma* on scars, mucous membranes, the lip and in organ recipients.

Basal Cell carcinoma

Presents as a pearly nodule or ulcer on hairy skin. It does not occur on mucous membranes or palms and soles except in the rare Gorlin syndrome.

2. Management

Prevention: sun avoidance from 12pm - 3pm period and protection with sun blocks and sun protective clothing.

Surgical treatment

- Excision.
- Moh's surgery is a highly effective very time consuming method of removing layer after layer and submitting to pathology immediately, with layers of skin being removed until borders are completely clear. Time factor makes it in practical for most centers outside the US.

Non-surgical treatment

- Radiotherapy
- Cryotherapy - liquid nitrogen (-196°C) is useful especially for smaller lesions. Can be painful and requires repeated applications.
- Topical - 5-Fluorouracil cream - works well for small superficial lesions but can cause intense inflammatory reaction for weeks and may be disliked by patients.

What's new

Topical nonsteroidal anti-inflammatory agents for actinic keratoses

Published clinical trials have shown that a topical gel containing 3% diclofenac with 2.5% hyaluronic acid may be used for treating actinic keratoses. The 2.5% hyaluronic acid



Figure 1: Actinic keratoses and intra epidermal carcinoma

of non melanoma skin cancer

(excipient) delays the transcutaneous uptake of diclofenac, leading to higher concentrations in the epidermis.²

Imiquimod

This drug has been recently approved for the treatment of actinic keratoses and superficial basal cell carcinoma. In superficial *Basal Cell carcinoma*, it should be used once daily 5 days each week for 6 weeks. In nodular *Basal Cell carcinoma*, curette lesion first. It also works well on all superficial lesions but can cause marked inflammatory reaction.³

Photo dynamic therapy

Following selective accumulation of photoactive porphyrins in neoplastic tissue, red light in presence of oxygen generates reactive oxygen species, which damage cellular membranes, particularly in mitochondria, and lead to cell death. Healthy surrounding tissue that has not accumulated photoactive porphyrins remains undamaged.

Photo dynamic therapy offers many advantages including its non-invasiveness and its ability to treat multiple lesions simultaneously and is, therefore, an interesting alternative for treating certain skin malignancies.

Photo dynamic therapy

Treats both Actinic Keratoses and Basal Cell Carcinomas;

Targets only diseased cells;

Non invasive, minimal scarring;

Fast healing;

Side effects minimal and transient;

High patient preference.

Photo dynamic therapy is simple to perform, is well tolerated, shows excellent clinical results and superior cosmetic outcome, and is therefore preferred by the patients. It has been available in Malta for the past 2 years. Its current use includes:



Figure 2: Before and after Metvix-PDT

Actinic Keratoses resistant to cryotherapy/5 FU/Imiquimod

Superficial Basal Cell Carcinomas and nodular Basal Cell Carcinomas which are difficult to treat surgically or where surgery is undesirable.

Current practices to follow Photo dynamic therapy with Imiquimod as a 'mopping up operation'.

Oral retinoids

Useful in patients with recurrent or multiple lesions but lipid levels must be checked regularly. Not suitable for use in summer months.

Conclusion

Surgery remains the gold standard of treatment but ... the possible reliable and effective non-surgical alternatives are growing fast and will become increasingly relevant and sought after in view of increasing age of patients and consequent poor anaesthetic risk, desire to avoid surgery and wish to achieve best cosmetic results. [5]

References

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