Squamous Cell Carcinoma

GUIDELINES FOR MANAGEMENT IN THE PRIMARY CARE SETTING

Cutaneous squamous cell carcinoma (SCC) is a common tumour that can behave in an aggressive manner, in the form of local recurrence and regional or distant metastasis. As local recurrence is a strong predictor for further recurrences and regional metastasis, optimal primary treatment is essential. These management guidelines take into account clinical and histopathological features that help to identify potentially aggressive tumours so that treatment may be optimised. New information from the 8th edition of the AJCC staging for cutaneous cancers has also been incorporated in this document. Staging is only performed for head and neck tumours and may also be applied to other types of cancers such as basal cell carcinoma. For a more detailed discussion, please refer to the separate article entitled 'What's New in Skin Cancer Staging?'

HIGH RISK CLINICAL FEATURES

- High risk anatomical sites (head and neck)
- Tumour diameter >20mm
- Immunosuppression
- Occurrence in sites of previous trauma or pathology e.g. burns scars, radiation scars, chronic ulcers/sinuses
- Rapid growth
- Ill-defined margins, field change or multiple tumours
- Symptoms that may indicate perineural invasion (tingling, pain, paraesthesia, formication, dysaesthesia, impaired motor function)
- Fixation to underlying structures or location over important structures
- Recurrent or incompletely excised tumours
- Regional lymphadenopathy

In cases where biopsy has been performed, **high risk histopathological features** include:

- Tumour thickness >6mm
- Invasion beyond subcutis
- Lymphovascular invasion or high risk pattern of perineural invasion
- Poorly differentiated tumours or aggressive subtypes (infiltrative/desmoplastic, sarcomatoid)

Depending on the circumstances and expertise, the presence of high risk features should prompt consideration of referral for specialist review. Recurrent or previously treated tumours should also be referred.

PRIMARY THERAPEUTIC OPTIONS

Surgical excision

This is the treatment of choice. It should be noted that there is no clear evidence-based information to substantiate minimum excision margin recommendations. Nevertheless, for low risk tumours, a clinical excision margin of 4mm is usually adequate. Tumours with high risk histopathological features on biopsy should be excised with a margin of at least 6mm. For tumours that are >20mm in diameter, a clinical excision margin of at least 10mm is recommended. It should be noted that these are guidelines and clinical practice should take into consideration other factors such as surgical accessibility, patient age, co-morbidities and wound-healing capacity.

Ablative techniques (cryotherapy, curettage and cautery)

These techniques can be considered for low risk tumours and can be used in combination. Biopsy to assess for high-risk histopathological features is essential. If there is breach of the dermis during curettage, formal excision should be performed.

HISTOPATHOLOGY REPORT

This should include

- Tumour thickness in mm, as measured from the granular layer of the adjacent normal epidermis
- Histological differentiation
- Subtype, if applicable
- Tissue level of invasion
- Perineural invasion; including location and diameter of nerves involved, as well as margin clearance

- Lymphovascular invasion
- Margin status

Tumour diameter should be recorded by the clinician prior to excision as tissue shrinkage occurs after excision and also during specimen fixation and processing.

Histological margins

As for surgical margins, there is no clear evidence-based information to substantiate minimum histological margin requirements and, in many instances, adequacy of margin clearance may be determined on a case-by-case basis. However, as a general recommendation, a minimum 1mm margin clearance is desirable for tumours with high risk clinical/histopathological features. For low risk tumours, a clearance of 0.5mm is considered adequate. Narrower margins in low risk tumours may also be acceptable provided that multiple levels have been examined. Detailed clinical history should be provided on the histopathology request form to ensure that all factors are taken into consideration for determination of margin adequacy.

Perineural invasion (PNI)

This is associated with a higher risk of recurrence, metastasis and death, but more recent studies indicate that the pattern of PNI is an important factor in determining clinical stage and further treatment. High risk PNI is usually seen in association with SCC arising in the head and neck, and surgical clearance cannot always be achieved in this location due to anatomical restrictions. Therefore, the patient should be referred for specialist opinion (radiation oncology or hospital skin cancer unit). In locations other than the head or neck, re-excision to achieve a minimum histological clearance of at least 2mm for high risk PNI is recommended. Specialist referral in these cases is also recommended if surgical clearance cannot be achieved.

The high risk pattern of PNI is defined by the presence of any of the following features:

- Involvement of nerves deeper than in the dermis (any size)
- Involvement of dermal nerves ≥0.1mm in diameter

The following features should prompt pathologists to examine deeper levels for high risk PNI:

- The presence of multiple foci of PNI
- Involvement of nerves outside the main body of the tumour
- Foci of inflammation around nerves

Clinical or radiological involvement of named nerves is also a high risk feature that upstages the tumour and necessitates specialist referral.

No further treatment is required if PNI is present in a low risk pattern:

- Incidentally detected (i.e. no clinical symptoms)
- Focal and involves dermal nerves < 0.1mm in diameter within the main body of the tumour
- At least 1mm margin clearance

FOLLOW UP

- No specific follow up is required for low risk tumours that have been completely excised.
- Patients with any high risk features should be followed up at 3 months then every 6 months, including neurological and nodal examination. For those who are immunosuppressed or who have PNI, 6 monthly imaging is recommended. MRI is the most sensitive modality for assessing nerves.
- Patients who have been treated with ablative techniques should be followed up at 3 months then every 6 months for 3 years. This should be followed by at least annual professional examinations supplemented by 3-monthly self-examinations.
- Annual skin examination is recommended for all patients who have had skin cancer.

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