A lucky catch

RADIATION ONCOLOGY

A simple lesion prompts quick treatment for this potentially dangerous condition.

THE AUTHORS

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HAVE AN INTERESTING CLINICAL CASE?
Send it to grandrounds @cirrusmedia.com.au
Photos are encouraged.

Background

A 72-YEAR-old fisherman presents with a one-month history of an irritated left cheek lesion. He denies a history of bleeding or altered skin sensation. He is otherwise well, with treated hypertension. He is a distant ex-smoker, current non-drinker, with no documented allergies.

Examination and investigations

There is a raised, erythematous lesion measuring 5mm in the midface region. No other cutaneous lesions of concern are seen, but evidence of sun damage and prior skin excisions is noted. There is no palpable pre-auricular, parotid or cervical lymphadenopathy. Focused assessment of the trigeminal (fifth) and facial (seventh) cranial nerves is normal. A punch biopsy confirms squamous cell carcinoma.

Management

He proceeds to undergo wide local excision with primary closure without complications. Histopathology demonstrates a 7mm, poorly differentiated SCC invading into the reticular dermis. The tumour is clear of resection margins by at least 5mm in all directions. No evidence of lymphovascular space invasion is present, but perineural invasion, involving nerve twigs up to 0.35mm in diameter, is observed within the tumour and at an advancing edge.

Discussion

Perineural invasion denotes direct malignant infiltration of the potential space surrounding a peripheral nerve, and occurs in about 5% of cutaneous head and neck non-melanoma skin cancers.[1]

There is a direct relationship between increasing involved nerve diameter and adverse clinical outcome.[2]

Clinical perineural invasion may present with altered sensory symptoms (for example, formication, pain, numbness) or muscle weakness. In the head and neck region, this mandates urgent referral to a multidisciplinary specialist clinic for assessment, because direct transmission towards the skull base and central nervous system can occur.

Incidental perineural invasion lacks clinical signs or symptoms, and is diagnosed histologically. This is a "high-risk feature" according to the current American Joint Committee on Cancer Staging system, because it can be associated with an increased risk of local recurrence.[3]

Further surgery with wider margins and/or adjuvant radiotherapy may be recommended in select patients deemed to be at risk of residual occult disease.

Both options carry potential risks, and side effects need to be balanced against their expected benefits in a shared decision-making process. There are no widely adopted guidelines in Australia defining best practice because high quality data is lacking.[1]

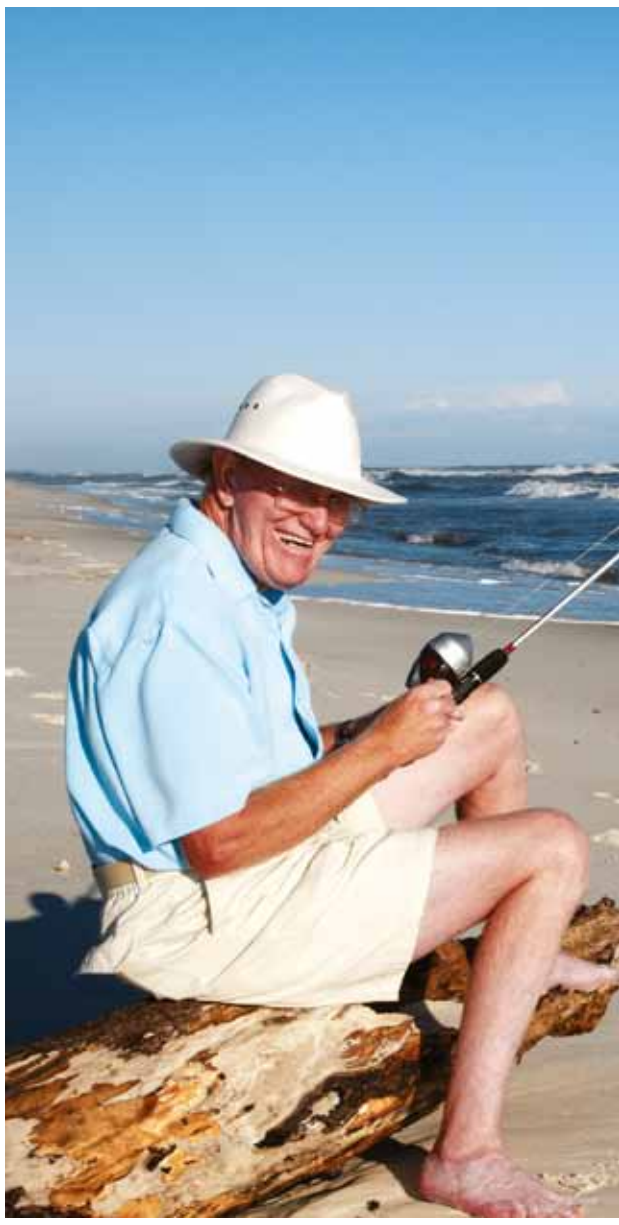
Stratification of patients with perineural invasion into low- and high-risk groups has been suggested to inform treatment decisions.[4,5]

In patients with the incidental form, there is no clear nerve diameter threshold used to determine need for adjuvant radiation therapy.

Pragmatically, we consider nerve twigs of at least 0.1mm in diameter to be significant. However, risk of recurrence should be assessed in the context of a range of clinico-pathological factors (see box).

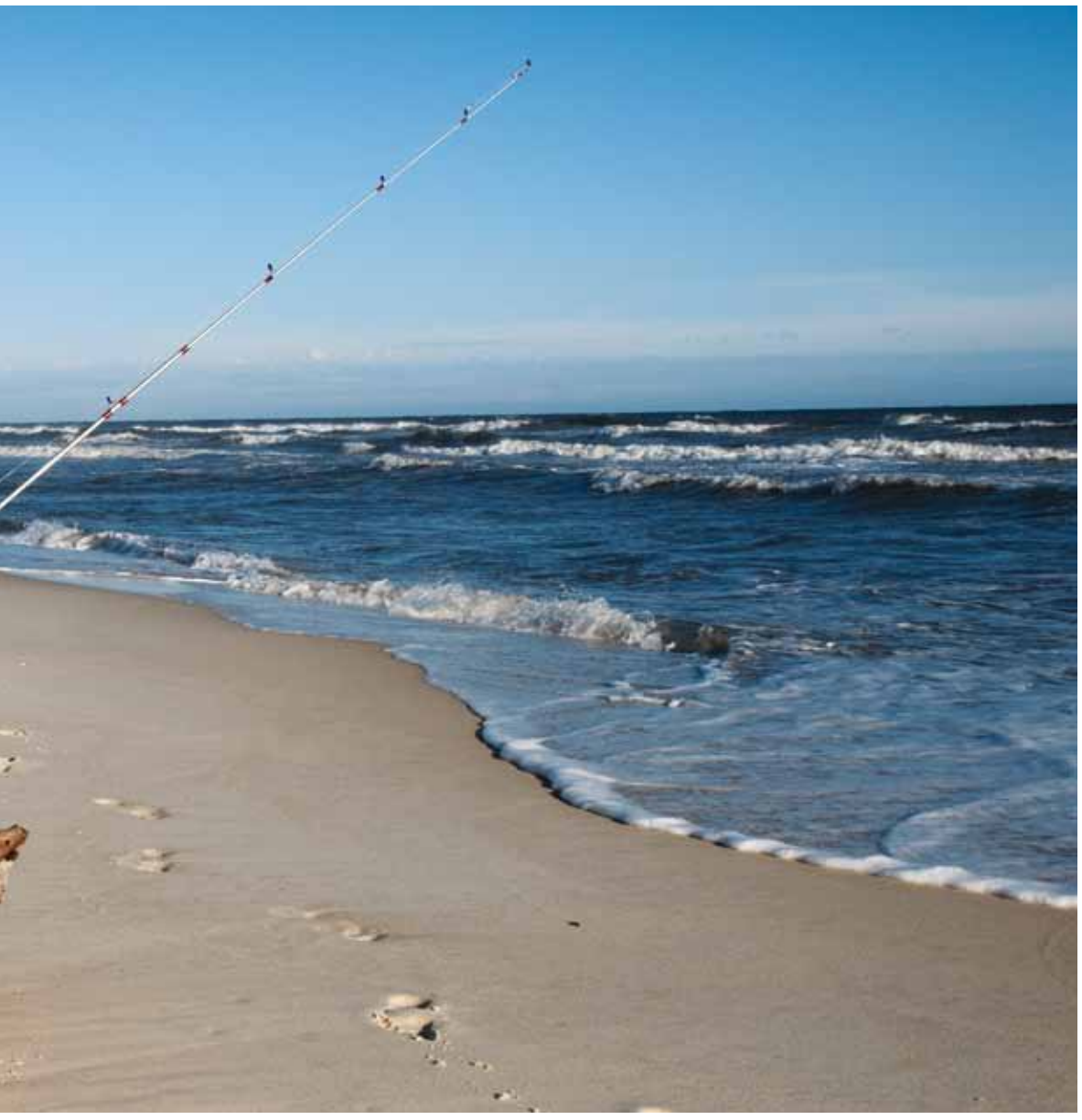
Outcome

The patient is referred to a radiation oncologist and completed a five-week course of adjuvant radiation therapy. He tolerated radiation therapy well, with the expected skin reactions, and recovered after four weeks post-treatment.



BOX: CLINICO-PATHOLOGICAL FACTORS A RISK OF RECURRENCE IN PATIENTS WITH P

- Tumour size ≥2 cm
- Histological type (squamous cell carcinoma vs basal cell carcinoma)
- Invasion beyond dermis into subcutis or muscle
- Poor differentiation
- Diffuse intra-tumoural or extra-tumoural perineural invasion
- Involvement of larger calibre nerves



SSOCIATED WITH INCREASED PERINEURAL INVASION

- Excision margins involved or close
- Recurrent tumour following adequate treatment initially
- Immunosuppression
- Perineural invasion detected in recurrent tumour

At follow-up one year later, he had a good cosmetic result with no signs or symptoms suggestive of recurrence. He continues to be followed up. ●

References

1. *Australasian Journal of Dermatology* 2014; 55:107-10.
2. *American Society for Dermatologic Surgery* 2009; 35:1859-66.
3. *Journal of the American Academy of Dermatology* 2011; 64:1051-59.
4. *Australasian Journal of Dermatology* 2015; online.
5. *Journal of Clinical Oncology* 2015; online.

Migraine Buddy

App of the Week

THIS headache diary has been designed by neurologists to help migraine patients and their doctors identify headache triggers and trial different treatments.

Each time the user experiences a migraine, they can record information about their symptoms, duration, pain intensity and location, possible triggers, menstruation status, where they were and how it affected their daily activities.

In the report section, the app provides a summary of the most common triggers, times and symptoms associated with the migraines, as well as the effectiveness of relief methods.

Users can also use the sleep diary to determine any correlations between sleep and migraines and browse their headache history on the migraine calendar.

This is a great practical app.

Alice Klein

Specifications

COST: $0-$3.79.
COMPATIBLE WITH: iPhone, iPad, iPod touch and Android.
REQUIRES: iOS 8.0 or later, Android 4.0 and up.

Sports Medicine

Dr Louise Tofts

Too flexible?

SARAH is a 10-year-old girl, described by her parents and teachers as "very flexible". She complains of sore knees and ankles during and after exercise, and a feeling they are unstable. She has limited out-of-school activities.

Her GP suspects joint hypermobility syndrome, supported by the Beighton score result of 6 out of 9 (four or more is abnormal).

Sarah is referred to a physiotherapist.

Her GP explains to her mother: "Sarah appears to have joint hypermobility, which is relatively common.

She will benefit from physiotherapy to help her understand the condition, and regain confidence in her everyday activities. She is at increased risk of sports injury and may have musculoskeletal pain. General symptoms such as fatigue may also occur.

Sometimes people with this condition are severely affected, requiring multidisciplinary treatment for successful and sustained improvement.

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This article is co-authored by Joshua Pate is a physiotherapist at The Children's Hospital, Westmead, and St George Hospital. He is undertaking his masters at Macquarie University, NSW.

TRUE OR FALSE

Q. Pain is the most common symptom for children with hypermobility.
A. True. Other symptoms include fatigue, soft tissue injuries, stress incontinence, syncope and gastro-oesophageal reflux.

Q. ALL of the following family/personal history items are triggers for referral to a genetic service:

- Early vascular aneurysm and/or rupture (before 65)
- Cardiac valve disease/ congenital heart disease
- Sudden unexplained death
- Osteoporosis or low trauma fractures
- Cleft palate
- Intellectual disability
- Lens dislocation
- Blue sclera
- Soft fragile skin, with poor wound healing and bruising
- Tall or short stature

A. True. Genetic joint hypermobility syndrome can be very serious, for example Ehlers-Danlos syndrome.

Q. Hypermobile children are not at increased risk of sports injury.