

Regarding a dermatoscopic pattern for infiltrating basal cell carcinoma

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Editorial

In this edition Pyne et al have described a dermatoscopic pattern as a clue to infiltrative basal cell carcinoma (BCC), defined as: a geometric star-shaped pattern, extending outwards from the circumferential peripheral edge of the tumor, and identified by white lines, vessels or uneven skin surface morphology. They found this clue present in 34/107 infiltrating BCCs and in 37/634 non-infiltrating BCCs giving it a sensitivity of 31.7% and a specificity of 94.1% in their test series [1]. Is this a useful clue for the entity “infiltrative BCC” and will it influence patient management in any significant way?

Infiltrative BCC is arguably the most elusive subtype and as such is the most likely subtype to invade widely and deeply before it is discovered and treated [2]. This explains why it is over-represented in BCCs that are more likely to recur after treatment and more likely to cause significant functional and cosmetic morbidity [2]. In assessing the impact of this clue the important question to consider is whether the presence of a stellate pattern will make infiltrative BCC more likely to be discovered, just as much as whether it will facilitate distinction from other BCC subtypes. The former has arguably the more important impact, as it could lead to earlier cure, whereas distinction from other BCC subtypes is more relevant to method of treatment than to outcome.

Dermatoscopic features can be divided into patterns and clues [3]. Patterns apply to the global appearance on the

lesion and can lead to a differential diagnosis whereas clues are finer details that assist in reaching a provisional diagnosis [3]. Some dermatoscopic methods employ metaphoric terminology to describe patterns and colors [4-6] whereas others prefer geometric terminology [7].

The proponents of geometric terminology argue that in all other fields of medicine, description clearly precedes diagnosis, except in that science of dermatoscopy, which employs metaphoric terminology. A potential problem with using a metaphor to describe this pattern in infiltrative BCC is the risk of applying a metaphor-based preconceived diagnostic implication at the time of lesion description.

The feature which Pyne et al describe is a pattern constructed by one of, or a combination of, three different dermatoscopic features: white radial lines, vessels in a radial pattern or 3-dimensional skin-folds in a radiating pattern. Although only one of the three features was needed for the pattern to be rated, the pattern was only significant with respect to differentiating infiltrative BCC from other subtypes if two or three of the features were present [1, table 4].

The authors discuss possible causes of this dermatoscopic sign. The images they display all show central ulceration, a known cause of a radial arrangement of vessels in BCC [8]. They found that both 50% of infiltrative BCC and 45% of nodular BCC, with stellate pattern, had central ulceration. Taking into account that ulceration in BCC can heal and therefore not be apparent dermatoscopically, ulceration, pres-

ent or past, would be a plausible explanation for stellate pattern. The authors acknowledge the need for further studies, with dermatopathological correlation, to investigate this [1].

What we know from this study is that in a test series of known BCCs, the presence of a stellate dermatoscopy pattern will be present in approximately one third of the BCCs that have an infiltrative component, and in only approximately 6% of BCCs that do not [1]. Simply because of the prevalence of BCC, any flat, non-pigmented *malignant* lesion is most likely to be a BCC. Therefore it could appear reasonable to proceed to primary excision of any such lesion, without prior biopsy, if a stellate pattern is present, selecting excision margins appropriate for an aggressive BCC subtype. On the other hand, because it is not known what proportion of stellate-pattern lesions are benign, presumable scars, such a recommendation to proceed to excision without biopsy, currently lacks a compelling evidence base.

More importantly, if recognition of this stellate dermatoscopic pattern can be shown to improve the diagnostic sensitivity of infiltrative BCC in the clinical setting, so that lesions are detected that otherwise would have been missed, the recognition of this dermatoscopic pattern will have a significant practical benefit.

Further studies to clarify these issues are appropriate.

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