

Reporting basal cell carcinoma: a survey of the attitudes of histopathologists

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Abstract

Aims—To investigate the histopathological reporting of basal cell carcinoma.

Methods—Methods of classification and attitudes to excision margins were ascertained from histopathologists in 130 centres; 82 replies were obtained (63% response rate).

Results—24% of those replying did not use any classification system for basal cell carcinoma. The remainder (76%) used a wide variety of different classification systems. A small number (9%) of those questioned felt reporting on completeness of excision was not important. The majority of histopathologists considered the excision margin was worth reporting but there were differences in methods of processing and reporting biopsies.

Conclusions—There is considerable variation in histopathological reporting of basal cell carcinoma. There is a need for uniformity of histopathological reporting to allow both improved management decisions and comparative audit of this extremely common skin cancer.

(J Clin Pathol 1999;52:867-869)

Keywords: basal cell carcinoma; histological reporting; classification

Basal cell carcinoma is the commonest skin cancer and its incidence is increasing.¹ Simple excision is usually curative if adequate clearance is obtained.^{2,3} This study was designed to examine the methods of reporting of basal cell carcinoma among histopathologists in the United Kingdom.

Methods

We selected 130 histopathologists at random from the 1997 register of the Royal College of Pathologists. General pathologists and histopathologists with a paediatric caseload were excluded. A postal questionnaire survey was conducted on attitudes to reporting of basal cell carcinoma. Participants were asked to answer four questions by circling the most appropriate response (table 1). Questions included the importance of classification and reporting of clearance margin. Respondents stated their preferred method of classification from a list of seven commonly used options.

Results

IMPORTANCE OF HISTOPATHOLOGICAL CLASSIFICATION

The questionnaire was returned by 82 of the 130 invited participants, a response rate of 63%. Of these respondents, 60% believe that

classification of subtype of basal cell carcinoma is important and should be reported. Some qualified this by stating that classification was only important in identifying certain subtypes, for example multifocal. Thirty three respondents (40%) did not consider that any classification was important in reporting basal cell carcinoma, although 13 of these did in fact classify these tumours when reporting them. Overall only 24% of all respondents attempted no classification whatever because they consider it unimportant. Seventy six per cent of respondents stated a preferred method of classification (fig 1).

METHOD OF CLASSIFICATION

The majority of respondents used a classification based on Sloane (26%).⁴ Nearly as many used that described by Sexton *et al* in 1990 (22%).⁵ Both describe growth pattern. They differ in that Sexton *et al* use the terms "micro-nodular" and "superficial" to distinguish tumours in horizontal and vertical planes, which are combined by Sloane as "multifocal," a term now considered misleading. Only 11% used classifications based on differentiation of the basal cell carcinoma, as originally described by Lever.⁶ No respondent reported using the WHO classification.⁷

IMPORTANCE OF EXCISION MARGIN

Ninety per cent of histopathologists considered margin of excision important. Six histopathologists (7%) did not routinely report on the margin of excision as they felt it would not influence treatment, while a further three respondents (4%) felt that it would not be accurate enough.

SPECIMEN PROCESSING

Specimen processing by pathologists was also variable. Seventy per cent performed multiple slices (bread loafing). Ten per cent performed only a single slice. Six respondents (7%) performed more complex circumferential and deep sectioning.

Discussion

This study shows that there is considerable variation in reporting of basal cell carcinoma by histopathologists in the United Kingdom. Although the majority of pathologists in this survey report margin of excision, many do not consider the histological classification of the type of basal cell carcinoma important. We would suggest that both histological classification (table 2) and an indication of margin of excision are crucial for the optimal management of basal cell carcinoma to ensure that a

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Accepted for publication
30 June 1999

Table 1 The questionnaire used to request information on reporting of basal cell carcinoma (BCC)

1. Do you consider it important to report histological classification for BCC?
 -Yes
 -No

2. What classification system do you mainly use in your hospital?
 -None, ie either it's a BCC or not
 -Macroscopic, eg ulcerated, pigmented, raised, flat
 -World Health Organisation variants (superficial multicentric, morphoea type, fibroepithelial, pigmented, solid, cystic, microcystic, adenoid, squamous, keratinised)
 -Lever, eg undifferentiated (solid) or differentiated (cystic, adenoid, keratotic)
 -Sloane, eg nodular, infiltrative, multifocal
 -Sexton and Jones, eg superficial, nodular, micronodular, infiltrative, morphoeic
 -Other: please specify

3. Do you routinely report margin of excision?
 -Yes
 -No, because it probably wouldn't be accurate
 -No, because it wouldn't change treatment

4. How do you routinely section your BCC samples?
 -No policy
 -Single slice
 -Multiple slices
 -Circumferential, deep transverse and perpendicular slices

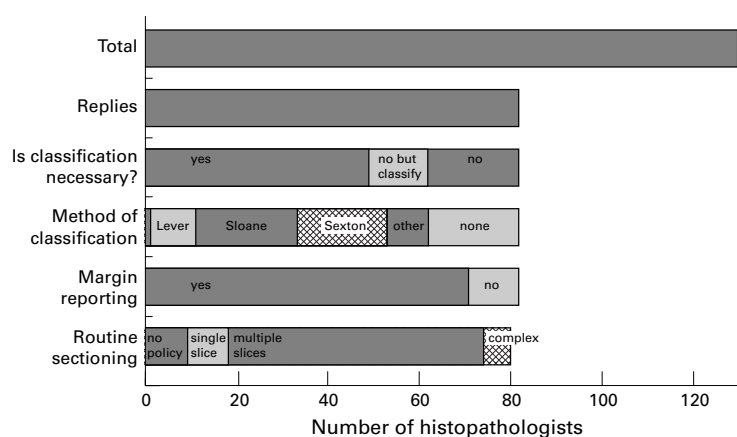


Figure 1 Distribution of replies to the individual components of the questionnaire.

clinically complete excision is matched histologically. The importance of the margin of excision varies with the growth pattern or histological type of basal cell carcinoma. For histologically aggressive basal cell carcinoma subtypes, for example morphoeic or infiltrative, it may be prudent to aim for a greater margin of excision in order to include occult spread. For a nodular lesion, a close or even incomplete margin is of less concern, as occult spread and recurrence are unlikely. In a retrospective study, Dixon *et al* found that histological growth pattern was of prognostic significance in predicting recurrence of basal cell carcinoma.⁸ Dellon *et al* performed one of the few prospective studies of basal cell carcinoma. They showed that tumours with a positive

Table 2 Description of histological features

| Histological growth pattern | Description |
|-----------------------------|---|
| Non-aggressive | |
| Superficial | Directly attached to the epidermis |
| Nodular | Large, rounded groups of cells with peripheral palisading |
| Aggressive | |
| Micronodular | Small islands of tumour with wide intervening bridges of stroma |
| Infiltrating | Spiky tumour edges with poor palisading |
| Morphoeic | Closely packed strands of tumour within fibrous stroma |

margin were more likely to recur if the histological growth pattern showed irregular peripheral palisading such as that seen in infiltrative basal cell carcinoma.⁹ In a study of 2016 basal cell carcinomas, Breuninger and Dietz found that infiltrative or fibrosing (also known as morphoeic) tumours were significantly more likely to have a positive histological margin. Sixteen per cent of small, primary tumours had positive margins if excised with a 3 mm margin, but that figure rose to 34% if the tumour was a fibrosing one.¹⁰ The data show the high incidence of occult spread in these aggressively growing tumours.

Published reports on basal cell carcinoma are difficult to analyse as different classifications of the tumours are used. This again highlights the need for standardisation of reporting in order to improve research and comparative audit.

Rippey recently reviewed basal cell carcinoma classification¹¹ and has proposed a simplified system based on the classifications of Sloane and Sexton. This combines the two most commonly used classifications in our survey. He suggests using four groups based on similar growth pattern: nodular including micronodular, infiltrative including morphoeic, a superficial group, and finally a mixed group. Unfortunately this is only the latest in a long line of alternative classifications. No single classification stands out, as none are ideal in terms of clinical relevance or ease of application. This is because basal cell carcinoma is such a heterogeneous tumour and so little is known of its biology.

The clinical relevance of classification in any tumour lies in predicting the behaviour of the tumour. If tumours can be placed into groups with similar prognosis then treatment can be tailored accordingly. Basal cell carcinoma is most effectively treated at an early stage when the lesion is small and primary. Recurrent tumours require more mutilating treatment and become progressively more difficult to eradicate.¹² We would suggest that a helpful addition to Rippey's classification would be to indicate tumours with growth pattern characteristics that reflect a poor prognosis. Potentially aggressive basal cell carcinomas include those with infiltrative, morphoeic, or micronodular features. These carcinomas have a high probability of occult spread and recurrence. Non-aggressive basal cell carcinomas would include the simple nodular and superficial. Any mixed tumour can be classed as aggressive if there is a significant number of aggressive features, for example an infiltrating tumour edge. The worst types of basal cell carcinomas are characterised by multiple recurrence, large size, destructive nature, and even metastasis. A survey of the histology of horrifying lesions seen at Mount Vernon Hospital reveals that the majority (78%) had aggressive histological features at initial diagnosis. This was in comparison to a group of 81 non-horrifying basal cell carcinomas in which only 34% displayed aggressive histological features.¹³ To manage basal cell carcinomas most effectively, a report on the histological growth pattern or an indica-

tion of aggressive potential, together with completeness of excision, is desirable. This would allow re-excision in very high risk cases and close observation in high risk cases. In addition, very low risk tumours, where there has been complete excision, could be safely and economically discharged. The conclusion of this survey is that, while it may be desirable to have one, there is as yet no consensus on reporting of basal cell carcinoma.

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