Management of primary superficial basal cell carcinoma

Beverly Raasch
MBBS, PhD, FRACGP, FACTM, is a general practitioner, and Associate Professor, North Queensland Centre for Cancer Research, James Cook University, Queensland.
beverly.raasch@jcu.edu.au

Torres Woolley
MPHTM, is Research Officer, School of Medicine, North Queensland Centre for Cancer Research, James Cook University, Queensland.

BACKGROUND
Superficial basal cell carcinoma (SBCC) is a skin cancer commonly treated by general practitioners. Little is known about how GPs choose from the available treatment options.

METHOD
A cross sectional survey was conducted by self administered questionnaire.

RESULTS
Of 257 GPs surveyed, 107 responded (adjusted response rate 59%). Sixty-three percent reported treating more than two SBCC per month, managing 90% themselves, mostly by surgery (57%), and imiquimod 5% cream (19%). Forty percent of SBCC patients were referred to a plastic surgeon, and 26% (IQR 0–50%) to a general surgeon. Contraindications to surgery included lesion site (14%), and size (12%). Sixty-two percent of GPs reported never using curettage and cautery, and 23% never cryotherapy. If the cost of imiquimod 5% cream were to be subsidised through the Pharmaceutical Benefits Scheme, GPs predicted its use for SBCC would increase from 34 to 58% ($p<0.001$).

DISCUSSION
General practitioners manage most lesions themselves and refer appropriately. Areas of educational need were identified with respect to management of inadequately treated or recurrent lesions.

There is a very high prevalence of basal cell carcinoma (BCC) in north Queensland,[1] and general practitioners play an important role in BCC management.[2] Each of the BCC histological subtypes, body sites, and growth patterns have different risks.[3]

General practitioners can use a range of treatments appropriate for the histological variant.[4] Surgical excision is an appropriate treatment for all BCC, but not the only appropriate treatment.[5–7] Double freeze thaw cryotherapy and shave curettage/cautery are also effective for some superficial BCC (SBCC),[8] as are topical imiquimod 5% cream (an immune response modifier[5]), and photodynamic therapy (PDT) (topical photosensitising agent plus red spectrum light activation[8,9]). However, there is little data on how GPs select from these options.[10]

Method

The study's design was a cross sectional survey. A self administered questionnaire (with introductory letter and return addressed envelope) was sent to 107 of 257 GPs identified from databases of one rural and one provincial division in north Queensland (of whom 76 were either no longer present or no longer a GP) between May and July 2005. Participants could reply by the return addressed envelope supplied, or by fax. Nonrespondents were sent a reminder after 4 weeks.

Questionnaire

The questionnaire was seven pages long with 28 items, including demographic questions modelled on the Bettering the Evaluation and Care of Health (BEACH) report.[11] Only demographic data were collected from GPs who self reported they typically treated less than two SBCC per month. Those who treated two or more per month were asked about their current management. Each SBCC could be counted for as many treatment options as the GP recorded. The questionnaire also asked about alternatives to surgery when this was less appropriate for reasons of age, co-existing medical conditions, medication, or patient preference, or when the GP's level of surgical skill or confidence was low.[5] Finally,

the questionnaire asked how management would change if some topical applications were subsidised through the Pharmaceutical Benefits Scheme (PBS).

Statistical analysis

Statistical analysis dichotomised the number of primary SBCC lesions treated in a month and report numerical variables as medians and interquartile ranges (IQR)). The bivariate relationships between the dependent variable and the GPs' demographic data were assessed by means of chi-square tests and nonparametric Wilcoxon and Kruskal Wallis tests, as appropriate. Significance was set at <0.05.

Ethical approval for this study was obtained from a human ethics committee at James Cook University.

Results

Demographics

The total response was 107 (59%) (56% of urban GPs, and 66% of rural). Nearly half (49%) of respondents were women. Most respondents:

- were aged 35–54 years (70%)
- graduated in Australia (67%)
- had postgraduate general practice qualifications (74%)
- had been in practice >10 years (65%)
- were currently working full time (62%), and
- considered themselves a 'regular' GP (ie. not working in a hospital or skin cancer clinic) (70%), although 43% reported not working in a private general practice.

Compared with BEACH data, respondents were significantly more likely to:

- be younger (p=<0.001)
- be women (p=<0.001)
- have been in practice longer (p=<0.012)
- have Fellowship of The Royal Australian College of General Practitioners (FRACGP) (p=<0.001), and
- work in group practices (p=<0.022).[11]

Current management of SBCC

Sixty-six (62%) GPs treated two or more SBCC each month. The most common self reported method of treatment for newly diagnosed primary SBCC in the past 12 months was surgery (56%) followed by imiquimod 5% cream (19%) (*Figure 1*). Most GPs (80%) would only treat 1–2 SBCC at one time per patient, although some (8%) said they would do so for four or more. If monitoring, the median time GPs would wait between treatments was 4 weeks (IQR 0–8 weeks).

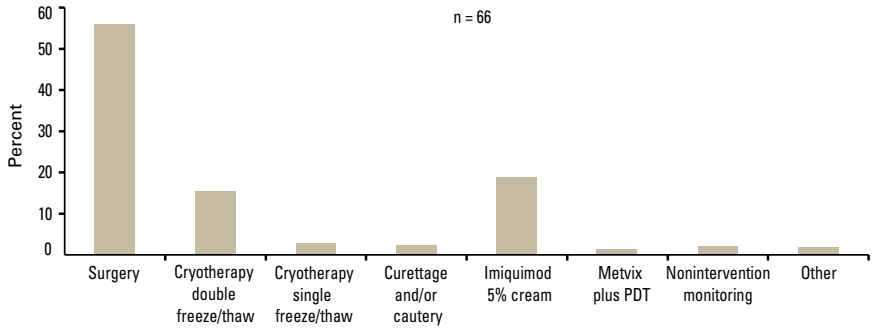

Figure 1. Self reported management of SBCC in the past year

Table 1. Contraindications to treatments for SBCC

	%				
	Surgical excision n=65	Cryotherapy n=63	Curettage and/or cautery n=64	Imiquimod 5% cream n=65	PDT n=65
Nil	48	32	34	20	28
Don't know	5	5	14	14	43
Patient factors*	19	15	9	43	20
Doctor factors (eg. inexperience, lack of skill, uncertainty of diagnosis)	2	13	11	8	2
Lesion factors (eg. site, size, infection, scarring)	28	41.	32	16	9

* Contraindications, nominated by GPs, included:

- general (preference, frailty, medication, litigious, history of melanoma), and
- specific to imiquimod 5% cream (previous adverse reaction, allergy, scarring, immune suppression, pregnancy, unable to follow instructions)

Reasons for referral

General practitioners treated a median of 90% (IQR 90–99%) SBCC themselves. Referrals were most likely to be to plastic surgeons (40%; IQR 10–50%), other surgeons (10%; IQR 0–50%), or dermatologists (5%; IQR 0–40%). Very few referrals were to hospitals or skin cancer clinics. Main reasons for referral were:

- problematic body sites (60%; IQR 50–83%)
- large lesions (15%; IQR 0–30%), and
- patient request (10%, IQR 0–10%).

Less common reasons cited included lacking equipment, or skills (*Table 1*).

Use and adequacy of different treatment modalities

Recurrence rates and inadequate primary excision after surgery were estimated as 5% of lesions by 52% of GPs, 6–10% by 34%, and 11–20% by 14%. Some (77%) reported using cryotherapy, and 62% never

used curettage or cautery. Estimates of further treatment required after cryotherapy were 0–10% of lesions by 45% of GPs, 11–20% by 32%, and >20% by 23%of GPs. Of the 27 GPs who used curettage and cautery, 30% estimated 10% or more lesions required further treatment. Liquid nitrogen was used for most cryotherapy. Self reported management of SBCC where primary treatment failed is outlined in *Table 2*.

General practitioners considered surgery would not be their first line treatment in 40% (IQR 10–70%) of SBCC. Most (90%) (IQR 80–100%) reported they would initiate treatment with imiquimod themselves. Half (50%) (IQR 0–100%) would refer to a dermatologist for photodynamic therapy (PDT). Few (6%) reported they never biopsied, 38% sometimes, 27% mostly, and 29% always.

Many reported their management would change if topical imiquimod were subsidised (*Table 3*).

Table 2. Treatments for recurring SBCC treated previously with surgery, cryotherapy, curettage and cautery, or topical applications

Management options for recurrent SBCC	% treated previously by: Surgery (n=65)	Cryotherapy (n=53)	Curettage and/or cautery (n=25)	Topical applications (n=63)
Surgery	59	66	56	67
Cryotherapy	–	11	8	2
Curettage and/or cautery	3	4	–	2
Imiquimod 5% cream	12	4	4	6
Refer patient	11	–	–	8
Biopsy plus imiquimod 5% cream	–	–	4	–
Surgery plus curettage/cautery	–	2	12	2
Surgery plus imiquimod 5% cream	8	13	8	6
Cryotherapy plus imiquimod 5% cream	3	–	4	2
Curettage and/or cautery plus imiquimod 5% cream	–	–	4	–
Radiotherapy	2	–	–	2

Table 3. Predicted change in usage of topical applications for treatment of SBCC if subsidised through PBS

Modality of treatment	% Unsubsidised* (n=58)	Subsidised* (n=61)	*p* value
Cryotherapy double freeze	34.3	15.8	<0.001
Cryotherapy single freeze	8.2	4.5	NS
curettage and/or cautery	6.6	4.5	NS
Imiquimod 5% cream	34.4	57.9	<0.001
Photosensitising agent plus PDT	5.9	9.6	NS
Noninterventional monitoring	2.5	1.9	NS
Other	8.8	5.2	NS

* Some data missing

Discussion

The study had limitations. Respondents may not have been representative (data were significantly different from those from the general GP population in the BEACH report,[11] although no different from those from the provincial division of general practice in 1998[12]). Moreover, these data report neither actual practice or clinical diagnostic accuracy – the doctors' behaviour might differ to that reported. Recall bias is one potential reason for this.

It was unexpected that few GPs reported treating more than two SBCC per month in an area of high skin cancer incidence. This uneven delivery of care in general practice for skin cancer has been previously reported.[2]

Self reporting by GPs regarding treatment of one of the most common skin cancers confirms previous data from the same region,[2,13] providing validity to these data. As expected, the most common management for SBCC was surgery.

The National Health and Medical Research Council nonmelanoma skin cancer management guidelines differentiate between management of primary and recurrent BCC, as recurrent lesions recur at least 50% more often than nonrecurrent lesions,[8] and best management of inadequately excised or close to margin tumours remains controversial.[3,8,14] This study's data on reported management options for recurrent SBCC demonstrated a range of approaches, some probably suboptimal, highlighting education needs.[5]

A clearer definition is needed, in the form of evidence and guidelines, of where surgery is less appropriate in management of SBCC, and topical applications (eg. imiquimod 5% cream and PDT) more.

Implications for general practice

What we already know:

- Appropriate GP management of most SBCC is surgical.

What this study shows:

- General practitioners consider surgery inappropriate in 40% of SBCC.
- Topical treatment modalities (eg. imiquimod 5% cream and PDT) would

be used more often by GPs if subsidised through the PBS.

Conflict of interest: Beverly Raasch has acted as a consultant for pharmaceutical company 3M.

Acknowledgment

Thanks to J Woosnam for research assistance, the GPs who completed the survey, and 3M, which funded the study through an unrestricted educational grant.

References

1. Buettner P, Raasch B. Incidence rates of skin cancer in Townsville, Australia. Int J Cancer 1998;78:587–93. Erratum in Int J Cancer 2001;93:302–3.
2. Raasch B. Suspicious skin lesions and their management. Aust Fam Physician 1999;28:466–71.
3. Telfer N, Colver G, Bowers P. Guidelines for the management of basal cell carcinoma. Br J Dermatol 1999;141:415–23.
4. Rosen R. Managing nonmelanoma skin cancer. Modern Medicine Australia 1999;2:74–85.
5. Hamann I. Update: nonmelanoma skin cancer part one. Med Observer 14 November 2003.
6. Martinez J, Otley C. The management of melanoma and nonmelanoma skin cancer: a review for the primary care physician. Mayo Clin Proc 2001;76:1253–65.
7. Smeets N. Little evidence available on treatments for basal cell carcinoma of the skin. Cancer Treat Rev 2005;31:143–6.
8. Australian Cancer Network, National Health and Medical Research Council. Nonmelanoma skin cancer: guidelines for treatment and management in Australia. Nonmelanoma skin cancer working party, Ausinfo. Commonwealth of Australia, 2003.
9. Schumack S. A novel approach to treating basal cell carcinoma and dysplastic skin lesions. Proceedings from meeting of New Zealand Dermatological Society and Australasian College of Dermatologists, Queenstown, New Zealand: Medicom publications, 2002.
10. Bath-Hextall F, Bong J, Perkins W, Williams H. Interventions for basal cell carcinoma of the skin: systematic review. BMJ 2004:329:705–15.
11. Britt H, Miller G, Knox S, et al. General practice activity in Australia 2004–5. AIHW cat. no. GEP18. Canberra: Australian Institute of Health and Welfare (general practice series no. 18).
12. Boulingeuz S, Grison-Tabone C, Lamant L, et al. Histological evolution of recurrent basal cell carcinoma and therapeutic implications for incompletely excised lesions. Br J Dermatol 2004;151:623–26.
13. Divisional BEACH Report. Townsville Division of General Practice, 1998.
14. Giacomel J. Are superficial basal cell carcinomas the most common cancer in the Australian community? The Cancer Council of Australia Cancer Forum 2004;28:34.

afp **CORRESPONDENCE** email: afp@racgp.org.au

Poetry

How to be Old in a Hospital Bed

Your clothes are at least musty, if not positively grubby, if you have any
if you have a relative to bring them in, you have no friends
who are able to come, if they aren't dead they can't drive
or are in a nursing home or hostel or they've lost their Elgins.
If you have sons and daughters who visit, their grandkids'll complain
then run off to play with the wheelchairs and be yelled at by the nurses.
Then you must choose your disease, there's a comprehensive list
but one thing's for sure, at your age you've got pain
arthritis, cracked back bone, whatever, they'll give you Paracetamol
and you're not allowed to smoke or drink
(getting shickered is out of the question, even on Christmas Day)
the only taste you have left is for sweet things
chocolates, jubes and desserts, but if you're diabetic, bad luck
and anyway you might cop a 'Swallowing Deficit' diagnosis
from the speech pathologist so all your meat's mashed up
and your drinks closely resemble custard
you'll sleep sixteen hours a day because you no longer drift deeply
(and therefore you no longer dream) you'll doze in a chair
and they'll say you are lazy or lack motivation
you'll be treated like a child even if you can do a crossword
with your tongue tied in the back of your throat
which it could be, by various things. Parkinson's does a neat job
and trusses your limbs up as well.
So
here you are, waiting for something to happen
but it never does, not quickly, ninety year-old bones
can take six months to heal and sometimes they don't
they won't operate, even a skin cancer's out of the question
you'd be smothered by the anaesthetic
which would suit you just fine, you'll find yourself thinking
after being here less than a day.

John West

We glide through this poem on a prosodic wheelchair, that groans with the weight of our aging bodies, and stops at our bed as we become exhausted. The poet's empathy knows more than shared contentment: it identifies profoundly with all emotions, including the one that closes this neat conversational piece.

Tim Metcalf