

Original Research Paper

Does education improve GPs' skin surgery?

Paul A Corwin BA, MBChB

Paul Corwin is a Christchurch GP and senior lecturer in the department of general practice, Christchurch School of Medicine.

ABSTRACT

Aim: To study the effect of audit and education on the performance of skin surgery in a pilot group of Christchurch GPs.

Method: Following a 1995 audit of skin surgery performance in a group of Christchurch GPs, an educational session on skin lesion diagnosis and excisional techniques was offered to these GPs followed by a further period of audit.

Results: Improvements in skin surgery were noted after the audit and educational session.

INTRODUCTION

In 1995 I performed an audit of skin surgery in a random sample of 28 Christchurch GPs.¹ In the 303 excisional biopsies submitted to the labs by these GPs there were 61 malignant lesions (basal cell carcinomas, squamous cell carcinomas and malignant melanomas (20 per cent of the total). Nineteen (31 per cent) of these 61 lesions were inadequately excised. These figures compared favourably with reports from UK general practice where 4-5 per cent of excised lesions were malignancies and the inadequate excision rate ranged from 33-80 per cent.^{2,3,4} One paper reported much better skin surgery results after "intensive refresher and training sessions" for GPs in one district of England but gave no details of either the education or audit process.⁵ This paper reports on the results of an educational session on the skin surgery performance of the original cohort of GPs.

METHOD

In 1998 I invited all the GPs in the original study group to take part in an educational session and further audit of their skin surgery. All 25 GPs still in practice (three of the original group were no longer in practice) consented to take part in this study and were paid by their Independent Practitioner Association (IPA) for attending the education session. The educational session comprised two parts: the dermatologist concentrated on the diagnosis and appropriate management of skin lesions and the plastic surgeon gave a practical demonstration of correct excisional biopsy techniques using pig skin. This two-hour educational session was

Key Points

- Skin surgery is one area of general practice that can be easily audited
- A 1995 audit in a group of Christchurch GPs indicated that there was room for improvement in skin surgery
- Following audit and an educational session improvements were noted in both diagnosis and skin surgery in this group

offered on two different nights and 20 of the GPs were able to attend one of the two meetings.

RESULTS

I reviewed all the histology reports from the study group for a six-month period and compared these results with their 1995 results. The number of skin lesions excised and sent for histologic analysis fell from 2.5 lesions per GP per month in 1995 to two lesions per GP per month in 1998. The proportion of malignant lesions excised increased from 20 per cent to 26 per cent of the total lesions excised and the proportion of adequately excised lesions increased from 68 per cent to 82 per cent (see table page 56). The three doctors in the original study group no longer practising were omitted from the above analysis. Despite the overall lower rate of excisions in 1998, the number of malignancies (including malignant melanomas) increased. When the analysis was further restricted, the following results were obtained: If only GPs that excised malignant lesions in both study periods were

SUMMARY OF 1995 AND 1998 SKIN SURGERY RESULTS			
	1995 Results		1998 Results
No. of GPs	26		25
Total lesions excised*	290		294
Malignant lesions excised	56		77
Malignant/total lesions excised (per cent)	56/290 = 20 per cent		77/294 = 26 per cent
Per cent of malignant lesions adequately excised	38/56 = 68 per cent		63/77 = 82 per cent
* The study period for the 1995 group was 4 1/2 months, for the 1998 group 6 months.			

analysed there were 27 per cent ($p=0.28$) more malignant lesions excised in 1998 than in 1995. If only GPs that had inadequately excised malignant lesions in 1995 and 1998 were analysed, the percentage of inadequately excised lesions in 1998 was only 63 per cent ($p=0.33$) of the 1995 inadequate excisions. Despite these favourable trends, the small

number of GPs involved in this pilot study has produced results with wide confidence intervals and p values that were not statistically significant

DISCUSSION

Skin cancer is a major problem in New Zealand and the diagnosis and treatment of cutaneous malignancies is an important part of GPs' work. The misdiagnosis or poor treatment of skin cancers, especially melanomas, can have devastating consequences for patients. GPs need to be accurate in their diagnosis and competent in the removal of skin lesions as access to timely plastic surgery and dermatological services is often limited.

Education in the diagnosis and management of skin cancers has been patchy in the past at both the undergraduate (currently Christchurch School of Medicine students receive four hours of teaching in dermatology) and postgraduate levels, and many GPs have never been formally taught how to excise skin lesions. Despite this, a previous study found that New Zealand GPs exhibited a high level of expertise (similar to dermatologists in the study) in the diagnosis of skin lesions and in identifying lesions requiring biopsy.⁶

My previous study of GP skin surgery showed that, although Christchurch GPs performed skin surgery better than colleagues studied in the UK, there was room for improvement. Two measures of skin surgery quality are the proportion of malignant lesions excised and the proportion of inadequately excised malignant lesions. The ratio of malignant to total lesions excised gives a useful guideline in assessing diagnostic competence. The rate of adequate excisions gives a measure of surgical expertise. The table summarises these two measures of clinical competence for the two study periods.

There is no way of determining from this study whether the improvements noted between 1995 and 1999 were due to the educational session provided or due to the audit and feedback on skin surgery results after the 1995 study. A recent review of GPs' continuing education emphasised the importance of audit in continuing education but also noted that education and audit were usually separate activities.⁷ It would seem that the combination of audit and feedback with education would together be an effective tool in GP education. Most GP activities would be hard to quantify in any useful or valid way. Skin surgery is one small area of general practice where it is possible to measure a GP's work in a meaningful way. This pilot study in a small group of GPs would indicate that education can improve GP performance of skin surgery.

References

1. Corwin P, Munn E, Nicholls D. A study of general practitioners' skin surgery in Canterbury. *NZ Med J* 1997; 110:253-5.
2. Cox NH, Wagstaff R, Popple AW. Using clinicopathological analysis of general practitioner skin surgery to determine educational requirements and guidelines. *BMJ* 1992;304: 93-6.
3. McWilliam LJ, Knox F, Wilkinson N, Oogarah P. Performance of skin biopsies by general practitioners. *BMJ* 1991; 303:1177-9.
4. Hillan KJ, Johnson CP, Morton R. Effect of general practitioner contract on referral of specimens for histological examination. *BMJ* 1991; 303: 1180.
5. Slater D. Performance of skin biopsies by general practitioners. *BMJ* 1991;303:1472.
6. McGee R, Elwood M, Sneyd M, Williams S, Tilyard M. The recognition and management of melanoma and other skin lesions by general practitioners in New Zealand. *NZ Med J* 1994; 107:287-290.
7. Smith F, Singleton A, Hilton S. General practitioners' continuing education: a review of policies, strategies and effectiveness, and their implications for the future. *Br J Gen Pract* 1998; 48: 1689-1695.

Acknowledgements

Thanks to Dr Elisabeth Wells, biostatistician, Christchurch School of Medicine, Drs Shona McDowell and David Roche at Medlab South and Southern Community Laboratories and Drs David Nicholls, dermatologist and Sally Langley, plastic surgeon for their teaching, and Pegasus Medical Group for their support of this pilot study.