

and length of history (M Whitaker, personal communication). Some, albeit few, malignant lesions were not clinically recognised in this study and doctors should be wary of discarding skin specimens as malignant and incompletely excised lesions may recur. Referral for histological examination avoids delayed diagnosis and should effect prompt and adequate further treatment if required.

In conclusion, the performance of skin biopsies by general practitioners could be improved. All skin specimens should be sent for histological examination for feedback of both diagnostic skill and quality of excision.

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Skin biopsy in general practice

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Removal of minor skin lesions by general practitioners has several advantages for patients. It reduces waiting times and travelling distances, the familiar environment lessens anxiety, and appointments may be less inconvenient. It is important, however, that general practitioners are adequately trained. We studied the referral of skin specimens to our histology department during 1989-90, around the time when the new general practitioner contract was introduced.

Methods and results

We searched the histopathology database for statistics on the work referred to the department during 1989 and 1990. The department, which serves 60 general practices with 100 general practitioners, received 243 biopsy specimens from general practitioners during 1989, 233 of which were skin specimens. In 1990 general practitioners sent 357 specimens, 338 from skin lesions. Specimens from general practitioners comprised 2.8% of the department's work in 1989 and 4.1% in 1990. All referral letters included a clinical diagnosis.

Six (2.6%) of the skin specimens were from histologically malignant lesions in 1989 compared with 20 (5.9%) in 1990 ($p=0.024$; Fisher's exact test). Malignancy was clinically diagnosed in two of the six cases in 1989.

Three types of malignancy were found (table): basal cell carcinoma (14 specimens), squamous cell carcinoma (eight), and malignant melanoma (four). The four malignant melanomas were excised in 1990 and represented 14.2% of all melanomas received by the laboratory in that year.

Comment

Paver suggested that suitable techniques for family practitioners include cryosurgery, electrocautery, shave biopsy, and simple excision.¹ Brundel uses punch and excision biopsy.² All the skin specimens that we received were from excision biopsies.

From 1989 to 1990 there was a 45% increase in skin biopsy by general practitioners with a threefold increase in the number of malignant lesions removed.

The reasons for this increase are not clear; there was no corresponding decrease in the department's work load over the same period. Either general practitioners removed more lesions or they submitted more for histological examination.

Elderly patients, in particular, benefit from general practitioner surgery, and 15% of our biopsy specimens were from patients aged over 70. It is important, however, for surgeries to have adequate equipment and sterilisation procedures and that resuscitation equipment is available. In addition, lack of training and expertise among general practitioners may result in unnecessary biopsies, such as excision of keloid scars, or an inappropriate technique being used.

Failure to give adequate preoperative information is too common in the NHS generally, and patients must be informed about complications, such as wound infection and keloid formation, and the likely cosmetic outcome. Most patients have an unrealistic notion of the invisibility of scars, and poor appearance because of bad or inappropriate surgery is likely to have increasing medicolegal implications.

Skin malignancies comprise 25% of the cancers seen in our histopathology department. Our results suggest that general practitioners are removing more skin

Sex and age of patients with malignant lesions and site and diagnoses of lesions removed by general practitioners

Sex	Age	Site of lesion	Clinical diagnosis	Pathological diagnosis
F	59	Lip	?Basal cell carcinoma	Basal cell carcinoma
M	56	Back	Benign	Basal cell carcinoma
F	73	Lip	Wart	Squamous cell carcinoma
M	68	Ear	Benign	Squamous cell carcinoma
F	54	Temple	Benign	Squamous cell carcinoma*
F	50	Temple	?Basal cell carcinoma	Basal cell carcinoma
F	81	Temple	?Basal cell carcinoma	Basal cell carcinoma
F	90	Forehead	?Sebaceous cyst	Basal cell carcinoma*
M	82	Hand	Wart	Squamous cell carcinoma*
F	18	Foot	Naevus	Melanoma*
M	68	Arm	?Melanoma	Melanoma
M	47	Chest	?Basal cell carcinoma	Basal cell carcinoma*
M	84	Head	Wart	Squamous cell carcinoma
F	54	Arm	?Melanoma	Melanoma
M	54	Forehead	?Basal cell carcinoma	Squamous cell carcinoma*
M	64	Chest	?Malignant	Basal cell carcinoma
F	92	Thigh	?Malignant	Squamous cell carcinoma*
F	88	Neck	?Malignant	Basal cell carcinoma
F	67	Hand	?Malignant	Squamous cell carcinoma
F	76	Hand	Basal cell carcinoma	Basal cell carcinoma
M	38	Back	Benign	Basal cell carcinoma
F	45	Neck	Naevus	Basal cell carcinoma
F	44	Face	Cyst	Melanoma
M	47	Face	?Basal cell carcinoma	Basal cell carcinoma
F	56	Eyelid	Suspicious	Basal cell carcinoma*
M	56	Back	Basal cell carcinoma	Basal cell carcinoma

*Incomplete excision.

malignancies (six in 1989 and 20 in 1990) and that many of these are not suspected to be malignant before excision. Controversy exists about whether general practitioners should remove malignant lesions. Paver suggests that if the diagnosis is uncertain, there is a facial lesion, or malignant melanoma is suspected the patient should be referred to a consultant.¹ However, if there are long waiting times for consultant appointments there is strong argument for family doctors doing the surgery as early excision of skin malignancy is more likely to cure.

Whether removing malignant lesions or not it is imperative that general practitioners who wish to undertake minor surgery are adequately trained and that all biopsy specimens are submitted for histological examination.

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Effect of general practitioner contract on referral of specimens for histological examination

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Increasing criticism has been voiced in recent years over the time patients spend waiting for minor surgery.^{1,2} To reduce pressure on hospital waiting lists general practitioners are now paid for such surgery as part of their new contract. General practitioner surgery is preferred by patients, and it allows hospital resources to be spent on more urgent needs.³

We reviewed all surgical specimens sent for histological examination over the four years April 1987-91 to assess the impact of the new contract. The specimens received during April 1990-1 were compared with those sent from the hospital's surgical day theatre.

Methods and results

For each specimen we assessed the adequacy of the clinical information, including age and sex of patient, site of lesion, duration of lesion, method of fixation, and completeness of excision.

We received 149 specimens from general practitioners during April 1987-91; 121 (81%) were sent during April 1990-1 (table), with none, 21, and 7 in the

three preceding years. The female to male ratio of the patients was 1:1 and the average age was 51.5 (range 12-90) years. Twenty two general practitioners sent specimens; 72 (59%) specimens were from four practitioners, and 49 (40%) were from one practice.

Of the 121 specimens received during April 1990-1, 19 (16%) were in the wrong fixative. The duration of the lesion was given in only 18 (15%) cases. Excluding this, clinical information was complete in 102 (67%) cases. Twelve (10%) specimens were incompletely excised. During April 1990-1, we received 106 specimens from the surgical day theatre, from 343 excisions (31%) (table). The female to male ratio of the patients was 3:2 and the average age was 50.2 (range 17-93) years. All specimens were in the correct fixative, but the duration of the lesion was given on only 10 (12%) referral forms. Excluding this, clinical details were adequate in 99 (94%) cases. Twelve (11%) lesions were inadequately excised.

Comment

The number of specimens referred to our department from general practitioners has increased considerably since the introduction of the new contract in April 1990. The specimens referred from general practitioners were similar to those received from the surgical day theatre and the groups were matched for age and sex.

At this hospital waiting times for non-urgent surgical appointments range from one to two weeks and minor operations are generally carried out within one week after attending the clinic. In areas with longer waiting lists a greater increase in referrals from general practitioners is likely.

Despite previous concerns⁴ we found little evidence that unnecessary operations were being performed. Furthermore, the rates of misdiagnosis of malignant lesions and incomplete excision were similar among patients treated by general practitioners and those treated in hospital. Nevertheless, with more general practitioners performing minor operations, many of whom are removing only a few lesions a year, the need for histological examination in all cases cannot be overstated.

Comparison of specimens received from general practitioners and surgical day theatre, April 1990-1. Number of malignant lesions not completely excised given in parentheses

	General practitioner	Surgical day theatre
Benign lesions:		
Simple papilloma	37	31
Cyst	21	11
Naevus	15	14
Skin tag	10	4
Dermatofibroma or neurofibroma	10	7
Lipoma	5	3
Vascular	5	4
Inflammatory	4	15
Sweat gland tumour	1	4
Others	8	4
Malignant lesions:		
Actinic keratosis		1 (1)
Bowen's disease	1 (1)	3 (1)
Intraduct carcinoma (male breast)		1 (1)
Basal cell carcinoma	3 (2)	3 (0)
Secondary carcinoma		1 (1)
Melanoma	1 (0)	
Total	121	106

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