

front of each issue. A cumulative volume is published annually. *Index Medicus* has now been computerised as *Medline*, which is "on-line" at main libraries, and through which the reader may communicate direct with the computer. A typical search is based on a Medical Subject Heading (known as MESH) taken from the list in *Index Medicus*. Normally, the search would then be qualified by the inclusion of subheadings—for example, "aetiology" or "therapy"—so that the final print-out of references is reduced to manageable proportions. *Medline* is an incredibly fast and efficient way of obtaining a list of articles published on a given topic. A basic search on *Medline* normally covers publications from 1976, but can be extended back to 1966.

Doctors will want to use large libraries to read textbooks that are too expensive or too peripheral to their main interest to justify purchase. Another category of books of interest to medical readers are the various reference books. *Who's Who*, *The Medical Register*, and *The Medical Directory* are well known, but doctors may not be aware of the excellent *The Hospitals and Health Services Year Book* published by the Institute of Health Service Administrators. This book contains a wealth of information about hospitals in Britain including details of beds, administration, committees, and even a directory of hospital suppliers.

A key factor in using a large library successfully and efficiently is getting to know the staff. Most libraries are proud of their good staff, and professional help and advice from librarians can expedite difficult or urgent requests.

How not to use a library

Unfortunately, no article of this sort can ignore the negative side of library use. Librarians are well aware that otherwise honest and upright citizens occasionally show no apparent

qualms of conscience about "removing" books. Unbound periodicals are particularly vulnerable, and this form of abuse causes an inordinate amount of trouble and delay when the time for binding arrives. Even more heinous, is the habit of tearing out a favourite or key article. The increasing availability of photocopying services might have been expected to diminish these deplorable habits but has not apparently done so.

A word of caution about photocopying should also be mentioned. Next to the speed limit, the copyright law is probably the law most often broken. Many readers may not realise that only one copy may be made of an article, and that one reader may copy only a single article from an issue of a periodical.

Conclusion

Of necessity, this article has presented my own personal way of using a library and I have certainly omitted mention of many other useful library services and facilities. Libraries have adapted to and have themselves adopted modern technological methods and offer a more rapid and comprehensive service than ever before. Now that communication is becoming increasingly important in clinical and research work, doctors can only gain from learning to make the best use of their local libraries.

I thank Mr R O McKenna, librarian, and Miss Sheila E Best, assistant librarian, of Glasgow University Library, for helpful advice and discussion.

Suggested further reading

Use of Medical Literature, ed L T Morton, 2nd edn. London, Butterworths, 1977.

Eventually this series will be collected into a book and hence no reprints will be available from the authors.

Aspects of Australian Medicine

The Queensland Melanoma Project—an exercise in health education

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Among the malignant tumours melanoma has an especially sinister reputation: its insidious onset, often in someone in early adult life, is combined with a predilection for metastasis. In most reported series the mortality rate has been depressingly high, with five-year survival rates of 40% or worse.¹⁻³ Melanoma seems to be most common in white-skinned persons regularly exposed to strong sunshine, so not surprisingly the highest incidence in the world is in Queensland, Australia's "sunshine state." What is surprising to a European visitor is that the

mortality from melanoma in Queensland is remarkably low. The age-adjusted cumulative five-year survival rate for women is 88%, and for men it is 74%. These impressive results are not due to any local variation in the malignancy of the disease: they are attributable to a sustained programme of health education that has made Queenslanders more melanoma-conscious than any comparable population in the world.

Incidence of melanoma

The data on melanoma in Queensland are probably unique; for a research study⁴ that was started there in 1963 has kept track of all patients in the state—public, private, city, and country—found to have primary melanoma. All patients treated anywhere in Queensland between 1963 and 1969 have been followed up; since 1970 the detailed follow-up has been con-

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fined to patients treated at the Princess Alexandra Hospital in Brisbane.

When the study began in the 1960s the annual incidence of melanoma was found to be 16 per 100 000 of the population. At that time no other community had recorded such a high rate of melanoma—and it has continued to rise. The latest figures suggest an annual incidence of 34 per 100 000. Both the medical experts and the health authorities in Queensland have no doubt that this high frequency of melanoma is associated with prolonged exposure to intensive sunlight. While only circumstantial, the evidence is persuasive.

Sunlight and melanoma

Mortality from melanoma (which until recently has paralleled the incidence of the tumour) is known to be highest in countries close to the Equator, and within Australia there is a gradient in mortality from Victoria to Queensland. The populations of Queensland (the state nearest to the Equator) and of Tasmania (furthest from the Equator) both have their origins in migrants from Britain, yet melanoma is five times as frequent in Queensland as in Tasmania, suggesting that the explanation is environmental rather than genetic. Within Queensland the incidence of melanoma is higher in the coastal regions (where sunbathing is commonplace) than in the interior, where the farming population tends to keep out of the sun. There is further evidence that melanoma is more frequent in individuals whose occupations or recreations keep them out of doors.

The rise in the incidence of melanoma in the last 15 years supports this theory of its pathogenesis, since in that time trends in fashion and in social behaviour have led young people to spend more time in the sun with less protective clothing. One-third of all melanomas in men are found on their backs; in women the most common site is the lower leg. Nevertheless, melanomas do occur on parts of the body not exposed to the sun, so that there may be a systemic as well as a direct effect from sunlight.

Health education

Queenslanders are not only at risk from melanoma; they also have a high incidence of the less malignant squamous and basal cell carcinomas of the skin. Indeed, one out of every three inhabitants of the state may expect to develop some form of skin cancer during his or her lifetime. Against that background there has been a sustained campaign by the Queensland Department of Health and by the Anticancer Council of Queensland to teach the public the early warning signs of skin cancer and its relation to exposure to sunshine. Children are taught about skin cancer at school, and the message is reinforced in clinics, doctors' waiting rooms, libraries (see figure), and other public places with simple leaflets. Both broadcasting services and the press give regular coverage to the campaign. Dr Neville Davis, the co-ordinator of the Queensland Melanoma Project, has made himself always available for interview by journalists—and takes the opportunity on every occasion to repeat the warning signs.

**DANGER
SIGNS
IN A
MOLE**

- 1** Consult your doctor if a mole undergoes any UNUSUAL CHANGE.
- 2** Beware of a mole that:
 - increases in size
 - becomes raised up
 - changes in colour
 - becomes scaly
 - itches
 - weeps or bleeds
- 3** These signs do not necessarily mean that it has become malignant, but justify your seeking medical advice.
- 4** EARLY TREATMENT offers an excellent chance of cure for malignant moles.
- 5** If you have any doubt about a mole, consult your doctor NOW.

Published by
THE ANTI-CANCER COUNCIL OF
QUEENSLAND

Bookmark published by the Anticancer Council of Queensland.

The same regular process of education has made general practitioners in Queensland probably better informed about melanoma than any other comparable group of doctors elsewhere. Even so, doctors without clinical experience in the diagnosis of pigmented skin tumours are advised to seek a specialist opinion before any interference with the lesion. In particular, Queensland surgeons discourage partial, incisional, or shave biopsy of suspicious lesions, and they are equally adamant that neither electrocautery nor curettage has any place in the treatment of these lesions.

Early referral

The combination of public and professional education has brought returns in Queensland in the high proportion of melanomas seen at an early stage. Of the 1187 patients in the original survey, 125 (9%) presented for treatment with melanoma in situ—tumour cells limited to the epidermis (stage 1); there were no deaths in this group in a five-year follow-up. A further 292 (20%) were seen with melanomas in stage 2, with tumour cells invading the papillary zone of the dermis; the five-year survival rate was 93%. There were 757 patients (53%) in stage 3, with tumour cells invading the reticular dermis; the five-year survival rate was 81%. Finally, the 82 (6%) patients with tumour cells invading the subcutaneous fat (stage 4) had a five-year survival rate of only 38%. Only 79 patients (6.7%) had confirmed metastases either at first attendance or within one month of clinical presentation. In contrast, the incidence of patients with metastases when first seen in other reported series¹⁻³ has been between 20% and 49%. Quite clearly, the superiority of the survival statistics reported from Queensland is attributable to the low proportion of metastatic disease.

Conclusion

Dr Neville Davis and his colleagues concerned with the Queensland Melanoma Project believe that the reason that their patients do so much better than those treated for the same disease in other countries is the tradition in the State of public and professional education about skin cancer. Virtually every member of the public is aware of the potential danger of a change in a mole; general practitioners are alert to the possibility of melanoma and refer patients for treatment quickly and without interference. The wider implications are surely clear for all other diseases in which early diagnosis is crucial if treatment is to be effective: sustained public and professional education need to go hand in hand.

This article is based on a visit to Australia I made last year on behalf of the *BMJ*. Everywhere I went I was met with kindness, busy doctors giving up their time to talk to me and show me round. I am extremely grateful to all of my generous hosts.

References

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- ² Olsen, G, *The Malignant Melanoma of the Skin*. Copenhagen, Finsen Institute and Radium Centre, 1966.
- ³ Knutson, C O, Hori, J M, and Spratt, J S, jun, in *Current Problems in Surgery*. Chicago, Year Book Medical Publishers, 1971.
- ⁴ Davis, Neville C, *Current Problems in Surgery*, 1976, **13**, No 5.

WORDS TRIBADISM Anyone not knowing better might be excused for thinking that tri-bad-ism means "three bad girls," whereas in fact it means "two bad girls." The root of the trouble is *G tribo*, to rub, and tribadism means (as if you didn't know) the lesbian practice of rubbing the external genitals against those of the partner. By the same token TRIBOLOGY is not the study of tribes; it is the study of friction in relation to biological surfaces, notably those of joints.