

Minor Skin Surgery

Are Prophylactic Antibiotics Ever Needed for Curettage?

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Curettage of skin lesions was not followed by bacteraemia in 22 patients. The risk of bacterial endocarditis after curettage and other minor skin surgery is small but should not be overlooked in those with a prosthetic heart valve, a history of other cardiac surgery, a previous episode of infective endocarditis, drug addiction, diabetes, alcoholism, immunosuppression, or renal failure – especially where the skin lesion might be infected. Key word: Bacterial endocarditis.

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Enquiry about other disorders is frequently neglected prior to minor skin surgery. Recently, a patient who was about to have warts removed said that her dentist always gave her 3 g of amoxycillin immediately before any dental treatment because she had an abnormal heart valve. Her warts were large, convoluted, in places macerated and likely to have contained a lush bacterial flora. It was thought wise not to proceed. Instead, advice was sought. Contrary opinions were obtained: a cardiologist said that there was no need for prophylaxis: a specialist in infectious diseases advised it.

Two studies have shown that the incidence of bacteraemia – and presumably the likelihood of infective endocarditis – associated with minor skin surgery is small (1–2). There have been no studies to assess the risk of curettage alone. This procedure, which involves direct manipulation and compression of a lesion whose irregular surface may not be easily cleansed (3), might be expected to carry a greater risk than excision when normal skin on either side of the lesion is incised. We have investigated the incidence of bacteraemia after curettage.

MATERIALS AND METHODS

Adults with a variety of benign cutaneous lesions, mostly viral and seborrheic warts, consented to the study which had been approved by the hospital's medical ethics committee. An arm vein was cleansed with 70% isopropyl alcohol before insertion of a butterfly cannula. The first 2 ml of blood was discarded and the next 6 ml of blood was drawn for anaerobic and aerobic cultures (Bactec System). The lesion was cleansed three times with 0.05% aqueous chlorhexidine and the surrounding skin infiltrated with local anaesthetic. The lesion was curetted and immediately after cauterisation a second blood sample was obtained for culture. The divided lesion was sent for culture and histology. Twenty-nine lesions were removed in this way from 26 patients.

RESULTS

Organisms were obtained from 22 lesions (Table I), from one blood culture before and from none after curettage (95% confidence limits for 0/26 = 0 to 3.5).

DISCUSSION

It is accepted that antibiotic prophylaxis should be given to patients with certain cardiac lesions before dental, upper respiratory, colonic or genito-urinary procedures and recommendations were published by a working party of the British Society for Antimicrobial Chemotherapy in 1982 (4). Amongst its conclusions, this report stated that antibiotic prophylaxis may be indicated whenever surgery is performed on heavily colonised, infected, or contaminated tissues. Practitioners were advised to exercise their clinical judgement and it was pointed out that the recommendations may need to be varied in the light of individual circumstances. Similar recommendations and lists of cardiac conditions that did and did not require prophylaxis were published in the USA in 1984 (5). In the USA it is regarded as prudent to give prophylaxis if the surgical procedure involves an infected area (6).

Should prophylactic antibiotics ever be used for minor skin surgery? From animal models of bacterial endocarditis it is known that the development of the

Table 1. *Organisms isolated on culture of the skin lesions*

Organisms	No. of patients
Coagulase-negative Staphylococci only	15
Coagulase-negative Staphylococci & diphtheroids	5
<i>Staphylococcus aureus</i>	1
<i>St. aureus</i> & β -haemolytic streptococcus group G	1
No growth	7
Total	29

disease is related to the number of organisms introduced, the duration of bacteraemia and the type of organism (7). Even after standard pre-operative cleansing, substantial numbers of organisms remain in the skin and we isolated organisms from 76% of the curetted lesions. However, excision of skin lesions and from our results, curettage too, is not associated with a high incidence of bacteraemia, which implies that the risk of infective endocarditis is small.

Nevertheless, it should not be overlooked that some patients are especially prone to infective endocarditis, of which each year in Britain there are 1300 cases resulting in some 250 deaths. In one series of 541 patients with infective endocarditis, those at greatest risk had a prosthetic heart valve, a history of other cardiac surgery, or a previous episode of infective endocarditis. Also at great risk were drug addicts, patients with diabetes, alcoholism, immunosuppression, or renal failure. 32% of the patients appear to have had a normal heart prior to the disease and another 11% had previously unrecognized cardiac lesions (8).

The skin is a portal of entry of infection in bacterial endocarditis (8), and no more than a blood-sampling finger prick may suffice to give rise to a prosthetic valve endocarditis due to an organism

normally found on the skin (9). In Britain more than 5000 artificial heart valves are implanted each year (10).

Routine antibiotic prophylaxis is unnecessary for most patients but for those in the high-risk group neither the cost of amoxycillin nor the slight risk of a reaction is sufficient reason to deny insurance against a disease which is infrequent but whose consequences may be devastating.

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