

ANTIBIOTIC PROPHYLAXIS FOR ENDOCARDITIS IN DERMATOLOGICAL SURGERY

A joint statement from the Therapy Guidelines and Audit Sub-Committee (TGASC) of the British Association of Dermatologists and the British Society for Dermatological Surgery (BSDS).

Infective endocarditis has a mortality rate of 20-30% and in the UK there are approximately 200 deaths per year from this disease. Although antibiotic prophylaxis is effective in reducing bacteraemia, there are no prescriptive data to confirm that it prevents endocarditis. In addition, only 50% of patients with endocarditis have a known predisposing lesion (Bayliss R et al, 1983) and the majority of episodes (about 80%) of endocarditis occur without a known specific preceding episode of instrumentation that might have caused bacteraemia (Child JS, 1996). Nevertheless the Endocarditis Working Party of the British Society for Antimicrobial Chemotherapy publish guidelines on the prevention of endocarditis (Simmons NA, 1993) for a number of dental and surgical procedures but give no specific recommendations for dermatological surgery other than to state that antibiotic prophylaxis is indicated whenever surgery is performed on heavily colonised, infected or contaminated tissue.

There have been only four reported cases of endocarditis associated with skin surgery (Griffin MR et al, 1985, Spelman DW et al, 1993). Five studies have examined the incidence of bacteraemia during skin surgery (Sabetta JB 1987, Halpern AC 1988, Zack L 1989, Maurice PDL 1991, Carmichael AJ 1996). Cumulatively these studies have documented an incidence of procedure associated with bacteraemia of 1.7% (5 of 287 cases, ranging from 0.7 to 7% in the different studies) which is comparable to the 2.1% incidence of random bacteraemia detected in normal volunteers (Wilson WR 1975). In the largest series by Carmichael et al (1996) coagulase negative staphylococcus (CNS) was the commonest isolate present on 68.5% of pre-operative surgical sites. CNS was isolated from one patient's postoperative blood culture (0.7%), although the isolate was biochemically distinct from the CNS isolated from the patient's surgical lesion. The only antibiotic to which all CNS was sensitive in a five month review of their hospital's CNS isolates was vancomycin which is expensive and must be infused over an hour to minimise the risk of hypotension and rash.

The committee of the British Society for Dermatological Surgery have recently reviewed the literature summarised above and found no significant evidence to support antibiotic prophylaxis for routine dermatological surgery procedures even in the presence of pre-existing heart lesion. In addition the Therapy Guidelines and Audit Sub-Committee have recently surveyed members of the BAD and no respondees have seen endocarditis as a direct result of dermatological skin surgery. The TGASC and the BSDS, in agreement with the British Society for Antimicrobial Chemotherapy, therefore believe that antibiotic prophylaxis for endocarditis is not required for routine dermatological surgery procedures even in the presence of a pre-existing heart lesion.

Summary Points

- Antibiotic prophylaxis is effective in reducing bacteraemia, but there are no prospective data to confirm that it prevents endocarditis.
- There have been only four reported cases of endocarditis associated with skin surgery.
- The incidence of bacteraemia during skin surgery is comparable to the 2.1% incidence of random bacteraemia detected in normal volunteers.
- The commonest isolate present on pre-operative surgical sites is coagulase negative staphylococcus which would require cover by vancomycin given intravenously.
- The TGASC and the BSDS, in agreement with the British Society for Antimicrobial Chemotherapy, believe that antibiotic prophylaxis for endocarditis is not required for routine dermatological surgery procedures even in the presence of a pre-existing heart lesion.

References

Bayliss R, Clarke C, Oakley CM, Somerville W, Whitfield AGW. The teeth and infective endocarditis. *Br Heart J* 1983; 50:506-12.

Carmichael AJ, Flanagan PG, Holt PJA, Duerden BI. The occurrence of bacteraemia with skin surgery. *Brit J Derm* 1996;134:120-122.

Child J.S. Risks for and prevention of infective endocarditis. *Cardiology Clinics* 14(3):327-343, 1996.

Griffin MR, Wilson WR, Edwards WO et al. Infective endocarditis. Olmstead County, Minnesota, 1950 through 1981. *JAMA* 1985;254:1199-202.

Halpern AC, Leyden JJ, Dzubow LM et al. The incidence of bacteraemia in skin surgery of the head and neck. *J Am Acad Dermatol* 1988;19:112-6.

Maurice PDL, Parker S, Azadian BS et al. Minor skin surgery: Are prophylactic antibiotics ever needed for curettage? *Acta Derm Venereol (Stockh)* 1991;71:267-8.

Sabetta JB, Zitelli JA. The incidence of bacteraemia during skin surgery. *Arch Dermatol* 1987;123:213-5.

Simmons NA. Recommendations for endocarditis prophylaxis. *J Antimicrob Chemother* 1993;31:437-438.

Spelman, D.W., Weinmann, A., and Spicer, W.J. Endocarditis following skin procedures. *Journal of Infection* 26(2):185-189,1993.

Wilson WR, Van Scoy RE, Washington JA. Incidence of bacteraemia in adults without infection. *J Clin Microbiol* 1975;2:94-5.

Zack L, Remlinger K, Thompson K et al. The incidence of bacteraemia after skin surgery. *J Infect Dis* 1989;159:148-50.

Professor Christopher Griffiths
Chairman, Therapy Guidelines
and Audit Sub-Committee

Dr Graham Colver
President, British Society
for Dermatological Surgery