Dental notes

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Antibiotics for surgical prophylaxis (page 38)

The principles set out in the article can readily be applied to oral surgery. Most oral surgery is approached intra-orally although some, for instance open reduction of certain mandibular fractures, is approached externally. In general dental practice, the most common oral surgical procedure requiring an incision would be the removal of unerupted mandibular or maxillary third molars. Removal of these molars often requires removal of bone.

Many unerupted or partly erupted third molars develop a communication with the mouth, and the adjacent tissues are susceptible to infection, often with an anaerobic organism. Anaerobic streptococci and bacteroides are commonly associated with these infections.

Even if the infection associated with erupting or partly erupting third molars has been treated with an antibiotic it is likely that, even in the absence of major symptoms of infection, bacterial contamination will persist. In these circumstances the surgical procedure of third molar removal may be classified 'contaminated' using the criteria of Table 1 of the article.

Appropriate antibiotics for dental surgical prophylaxis include oral or intravenous amoxycillin or intravenous ampicillin or, if there is a history of penicillin allergy, oral cephalexin (if penicillin allergy is mild), oral or intravenous clindamycin or intravenous lincomycin. If oral antibiotics are used, they must be given at least one hour before the procedure to ensure adequate tissue concentrations at the time of the procedure. Intravenous prophylaxis is effective as soon as antibiotic administration is complete. Intravenous administration of some antibiotics, such as lincomycin or clindamycin, should be by slow infusion.[1] Whether the antibiotic should be continued following third molar surgery where there has been a history of infection, is a matter of clinical judgement.

Although less frequent, surgery for removal of chronic granulomatous infections in maxillary or mandibular bone is also common. These infections which usually involve bone loss and sometimes development of a cyst are usually associated with infected or non-vital pulp tissue. The surgical procedure would be classified 'contaminated'. The organisms associated with an infection of this sort are not likely to be anaerobic unless they are associated with necrotic tissue, for instance a non-vital dental pulp. The antibiotics recommended for infected third molar surgery would be appropriate where an anaerobic infection is suspected. When there has been no necrotic tissue associated with the development of infection, amoxycillin, or in the penicillin-allergic patient, cephalexin (if penicillin allergy is mild), or clindamycin would be appropriate antibiotics.[1]

Reference

1. Therapeutic Guidelines: Antibiotic. Version 12. Melbourne: Therapeutic Guidelines Limited; 2003.

Book review

Australian Medicines Handbook Drug Choice Companion: Emergency and primary care

Adelaide: Australian Medicines Handbook Pty Ltd; 2004.

181 pages. Price $50, students $45, including GST

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This handy little book consists of protocols which can be applied to a range of problems commonly encountered in acute care medicine. For each condition, the format features explicit instructions regarding drug choices and doses and their indications and contraindications. Where relevant, it also contains advice about non-pharmacological and supportive treatments. Most conditions also include brief but sensible practice points and for many conditions there is an evidence-based rationale for the protocol. There are, in addition, appendices regarding choice of endotracheal tube size, interpretation of arterial blood gases and respiratory function tests and prescribing paediatric fluids.

The information contained in the handbook is practical, concise, up-to-date and accurate. However, different sections vary in their clinical utility. Perhaps the most interesting and useful section of the handbook is the section regarding treatment of poisoning. In contrast, I wonder at the inclusion of the section on infectious diseases, and suspect that this handbook is not about to replace Antibiotic Guidelines in this area.

My major criticism of the book is that it is, at least at first, a little difficult to navigate. There are no clear divisions between sub-sections of the book and I imagine this might make it difficult to find what you want in an emergency. However, once this has been overcome, the instructions are succinct and easy to read. Overall, it is an interesting and informative read, but most of the handbook consists of information which is already the regular practice of doctors in emergency departments. I therefore suspect it will be of most use to medical practitioners who do not frequently encounter the conditions discussed. As such, I would highly recommend it for use by practitioners working in rural and remote areas.