Local Spread Of Dental Infection & Its Management
A Review

Dental surgeons deal with odontogenic infections in their daily work. These odontogenic infections originate mainly from either the pulpal tissue or the supporting periodontal structure. We as dentist try to arrest caries and periodontal disease, which in fact is actually the infection of the tooth structure and its supporting tissue. Fortunately, most odontogenic infection we see daily are rather localised but occasionally they spread to the surrounding and/or distant tissue. Dental infections can present as abscesses, sinus tracts or severe cellulitis involving the superficial spaces, masticator spaces, floor of the mouth spaces or deep neck spaces. This write up reviews the local spread of dental infection namely, periradicular abscess and sinus tract formations. The spread of infection to the maxillary sinus is briefly discussed.

Periapical abscess
The spread of caries in a tooth, if not arrested, will result in infection of the pulpal tissue and eventual pulpal necrosis. This necrosed tissue may collect at the periradicular region of the tooth. Inflammatory process will occur as the body responds to this collection. The accumulation of acute inflammatory cells at the apex of a nonvital tooth is termed a periradicular abscess (Figure 1). Periapical abscess may arise as the initial periradical pathosis or from an acute exacerbation of a chronic periradical inflammatory lesion (phoenix abscess). It has to be reminded that the infection can happen in any part of the root e.g. at the inter-radicular area in deciduous molars and not confined to the apex, hence the term peri-radicular abscess has been suggested. (note: the term “peri-radicular” is now more preferred by the endodontist than “periapex” (Personal communication: Prof. RT Walker). In this write-up the term “periapex” denotes both radicular and apical areas.)

Figure 1: Periapical Abscess.

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