Chemical disinfection – an integral part of endodontic treatment

Endodontic treatment aims to resolve periapical and radicular periodontitis as well as intracanal infection caused by microorganisms. This can be considered a three part process involving shaping and cleaning the canal, chemical disinfection and finally root canal obturation followed by coronal restoration of the tooth.

Shaping and cleaning involves enlarging the canal in order to allow for chemical disinfection. This is an important next step for ensuring complete eradication of remaining bacteria, which will facilitate healing and help prevent recontamination.

Chemical disinfection involves the use of irrigants to eliminate any remaining pathogens. It is important to use the correct irrigant sequence and concentration. A lack of awareness of any limitations could still result in endodontic failure and periapical disease.

For example, the golden standard irrigant is sodium hypochlorite, often used in conjunction with EDTA. Recently, new irrigation sequences involving the addition of other solutions have proven to raise predictability rates.

Canals can have complex internal anatomy with various fins and cul-de-sacs so it is also important to use energising techniques. These techniques will help loosen adhesion of biofilm to the dentinal substrate.

It is also important to remember that killing endodontic pathogens present in teeth is more difficult than in laboratory exercises.

A new MSc in Endodontics
The University of Warwick will launch a new MSc in Endodontics in January 2010. The programme will be delivered by leading professionals, academics and researchers in the field of endodontic dentistry, and supported by respected academics from the field of continuing professional development.

As a part-time course, it has been designed to offer a flexible training pathway tailored to individual requirements and circumstances. The programme will allow students to improve and increase the scope of endodontic treatment in their practices through the study of a wide range of topics, such as tooth morphology, mechanical shaping, chemical disinfection and pain management in endodontics.

Learning will take place through traditional seminars and practical work, performed in labs and at regional training centres. Students will gain a thorough understanding of modern technologies, using materials and instruments such as surgical microscopes and cone beam CT.

Applications are being accepted now and further information about the course can be found at www.warwick.ac.uk/go/dentistry.