DENTISTS ON FILM

The Italian Job

H. S. Brand of the Academic Centre for Dentistry Amsterdam, and movie buff, continues his new series of columns on films featuring dentists with *The Italian Job*, the British version of the film directed by Peter Collinson (1969).

Charlie Croker plans to steal a gold transport of the Fiat car company. He needs backup from the head of the British underworld, Mr Bridger, who is in prison. To discuss the plans of the robbery, Mr Bridger arranges a visit to a dental practice in Harley Street, London. While two policemen are waiting outside the dental practice, Mr Bridger sits in the dental chair discussing details of the planned robbery with his assistant. Meanwhile, the dental nurse standing next to him paints her nails and three dentists are sitting at his feet, playing cards and

smoking cigars. When Mr Bridger says that he has a problem because he needs an expert in computers for the robbery, one of the dentists gives advice: 'The top man in the country is Professor Peach. I saw him on television'. Mr Bridger orders his assistant to find the professor. With his help, they rob the gold transport successfully.

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BOOK REVIEW

GLASS-IONOMERS IN DENTISTRY

Sharanbir K. Sidhu
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Alan Wilson¹ has described in detail the frustrations and successes over a decade of developing glass-ionomer cement, culminating in a clinical product in the early 1970s. It is therefore timely to review a recent book on the glass-ionomer cements (GICs), as they have now come to be an important material in restorative dentistry.

Chapter 1, by John Nicholson, describes the history and background to the GICs, which were a natural development from existing dental silicate and polycarboxylate cements. This chapter gives a detailed account of the composition and setting reaction of these cements, and the way in which the powder and liquid, respectively, has to be modified in order to produce a clinically acceptable GIC with appropriate working and setting times and translucency.

Chapter 2, by Michael Burrow, focuses on the classification and properties of the current range of GICs (conventional, resin-modified, 'high viscosity'). Substantial consideration is given to two of the most useful properties of GICs: adhesion and fluoride release. The author summarises the clinical performance of the GICs in non-carious cervical lesions, in the atraumatic restorative treatment (ART) technique and as fissure sealants.

Chapter 3, by Geoff Knight, expands on the clinical use of GICs by listing their benefits and limitations. Clinical techniques are described for a variety of clinical situations, using both conventional and resin-modified GICs. This is a useful chapter in that some of the less-used techniques are included, such as 'co-curing' and 'tunnel' restorations.

Chapter 4, written by Avi Banerjee, discusses the use of GICs in minimum intervention (MI) caries management. The basis of MI

is the selective removal of affected/infected dentine adjacent to the pulp, followed by sealing the cavity in order to isolate cariogenic bacteria. Banerjee provides evidence that the properties of GIC are entirely suited to an MI approach: its potential to remineralise affected dentine, its sealing properties by effective adhesion and its potential to inhibit caries by release of fluoride.

Chapter 5, written by Josette Camilleri, considers the use of GICs in endodontics, and cites both non-surgical and surgical applications. The former includes temporisation between appointments, intra-orifice barriers, root canal sealers and non-surgical perforation repair, while the latter includes root-end fillings and surgical perforation repairs. However, the author cautions that GICs in endodontics may be outperformed by other materials.

In Chapter 5, David Manton and Katie Bach review GICs in paediatric dentistry. The authors consider GIC as fissure sealants, its effect on caries experience of teeth adjacent to fissure sealed teeth, GICs in the ART technique and in deciduous endodontics. A useful concluding section is on parental concerns regarding components of various restorative materials.

Chapter 6, by Josh Cheetham, discusses the future of GICs from the perspective of a manufacturer. Currently, the main disadvantage of GICs is their fracture toughness, and work is ongoing to improve the physical properties by researching new glass fillers, different glass filler shapes, glass fibre reinforcement and nanoparticle inclusion. There is also the potential to use GICs for local controlled release of agents such as antimicrobials and antibiotics.

Overall, this is an excellent overview of the current status and future potential of glass-ionomer cements. There is inevitably some repetition of information, which often occurs with an edited book on a specific subject, but this does not detract from its usefulness. It is highly recommended for students, practitioners and researchers who want to know more about this important clinical material.

Martin Tyas

1. Wilson A D. A hard decade's work: Steps in the invention of the glass-ionomer cement. *J Dent Res* 1996; **75**: 1723–1727.