

38.5 Economic evaluation of cochlear implantation

BYK Wong, Y Hui, D Au, W Wei

Department of Surgery, University of Hong Kong, Hong Kong, China

Cochlear Implantation is a relatively new health technology. The efficacy of cochlear implantation is now well established: In this presentation we report our economic evaluation of cochlear implantation. Cost utility analysis in terms of cost per Quality Adjusted Life Year (QALY) was used. Cochlear Implantation was found to be in the mid-range of Cost / QALY league tables thus representing relatively good value for money.

38.6 In vitro assessment of a resin-modified glass-ionomer cement as a pit and fissure sealant

RJ Smales, FT Ho, W Gao

Prince Philip Dental Hospital, University of Hong Kong, Hong Kong, China

The purpose of the study was to investigate the ability of a new resin-modified glass-ionomer cement (Fuji III LC; GC Int. Tokyo, Japan) to penetrate and seal occlusal pits and fissures effectively in permanent teeth. These requirements are essential if the material is to prevent pit and fissure caries.

The occlusal surfaces of six randomly-selected molars were etched for 20S with 10% polyacrylic acid solution worked into the fissures with a dental explorer, rinsed with water spray for 20S and then dried lightly. Fuji III LC was then hand-mixed for 25-30S (P:L ratio of 1.4:1.0) before being worked into the fissures and light cured for 40S. For the control group, six similar molars were etched for 60S with 37% phosphoric acid gel which was also worked into the fissures, then rinsed and dried thoroughly. A resin-based sealant (Delton Opaque; Johnson & Johnson, New Brunswick, USA) was dispensed directly and worked into the fissures as before, then light cured for 20S. The teeth were thermocycled 300 times between 5°C and 55°C water baths using a dwell time of 40S. Then, the crowns were immersed in aqueous 1% methylene blue dye for 2 hr at 25°C. After sectioning each tooth four times, the resulting 58 sections were assessed for microleakage, surface dye penetration, inclusion voids, and completeness of fissure penetration, using ordinal rating scores.

The results showed significantly less microleakage, but more surface dye penetration, for Fuji III LC than for Delton Opaque ($P < 0.001$). Although not statistically significant, there were more small voids, but better completeness of fissure penetration, for Fuji III LC than for Delton Opaque ($P > 0.01$).

In conclusion, Fuji III LC showed good in vitro enamel adaptation and sealing, and good fissure penetration.