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Abstracts

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FP7.1. Silver trial – interim results

N. Keong, H. Richards, M. Farrington, P. Hutchinson,
J. Pickard, P. Kirkpatrick
Addenbrooke's Hospital, UK

Background. The use of external ventricular drains (EVDs) is well established in the management of raised intracranial pressure (ICP), both as a monitoring device and a therapeutic measure. EVDs can result in cerebrospinal fluid (CSF) infection with serious consequences in terms of morbidity and mortality. In vitro work has shown that silver-impregnated EVDs are effective against a spectrum of organisms including multi-resistant bacteria.

Aims. The SILVER Trial (Silver Impregnated Line Versus EVD Randomised Trial) was designed to assess the clinical effectiveness of silver-impregnated EVDs against infection. This is a double-blind randomised controlled trial comparing silver-impregnated EVDs to plain EVDs.

Patient and methods. Patients who are admitted to the Department of Neurosurgery in Cambridge for the management of their intracranial pathology are considered for the trial according to established inclusion and exclusion criteria. Patients who require an EVD are randomised to receive either a silver-impregnated EVD or a plain EVD.

Results. Interim results for the first 88 patients were analysed. Forty-four patients were recruited to each arm of the study. The overall infection rate was 12.5% (11/88). Study Arm A had an infection rate of 18.2% (8/44) whilst Study Arm B had an infection rate of 6.8% (3/44). Total length of placement ranged from 2 to 38 days. Infections occurred from day 1 to 38 (median = day 6).

Discussion. Antibacterial-coated EVDs are known to reduce infection. However, there is concern that widespread use may contribute to rising antibiotic resistance. Silver-impregnated EVDs provide an alternative solution. The chosen primary end-point for this trial is cerebrospinal fluid infection as defined by organisms seen on microscopy or culture. Secondary end-points include duration of EVD placement and requirement for ventriculo-peritoneal shunting.

Conclusion. The trial is currently expanding to include other centres. Up-to-date interim data will be presented and the results above amended as appropriate.

Numbers presented in oral presentation:

135 patients total

Group A had infection rate of 20.8%

Group B had infection rate of 7.9%

Mean EVD insertion of 10 days