INTRAOPERATIVE ERROR DURING IMPLANTATION OF THE UNCEMENTED UNIPOLAR AUSTIN MOORE HEMIARTHROPLASTY

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Introduction
For displaced subcapital fractures of the femoral neck, the uncemented Austin Moore is the most frequently used monoblock hemiarthroplasty in Australia. Commonly this procedure is reserved for the elderly or frail low demand patient, who represents a poor candidate for revision should the prosthesis fail. Technical errors in implantation of the uncemented Austin Moore are common, and have been associated with early failure of the prosthesis. This study aims to assess the technical accuracy of implantation of the uncemented Austin Moore prosthesis, with specific reference to Orthopaedic Registrars.

Method
A retrospective review of 147 consecutive uncemented Austin Moore hemiarthroplasties including operative notes and an analysis of pre- and immediate post- operative radiographs was conducted. Radiographic assessment of the technical accuracy of prosthetic implantation was performed using methods previously described by Sherif & Parker. An error in implantation was defined as an intraoperative Periprosthetic fracture, or a technical aspect of insertion known to be associated with early failure of the prosthesis.

Results
48.3% patients had at least 1 error in implantation. Intraoperative fractures were sustained in 14.3%. The most common errors were neck resection leaving inadequate calcar length (26.7%) and inadequate seating of the prosthesis (21.7%). Registrars and Consultants had equivalent error rates.

Discussion
The results of this study imply the uncemented Austin Moore is a technically demanding prosthesis that is difficult to implant well, and greater selectivity should be exercised when considering its use for femoral neck fractures.