Girdlestone excision arthroplasty and a fatal complication

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Abstract
A patient suffered a laceration to the external iliac artery following the Girdlestone Excision Arthroplasty and subsequently died.
Introduction
Girdlestone excision arthroplasty is commonly performed for irreversible failed total hip replacement due to loosening or infection of the prosthesis. A search of the literature elicited only one previously reported complication, that of a uretero-acetabular fistula [1], which was not fatal. In this case, a 90 year old patient underwent Girdlestone excision arthroplasty for chronic infection of her hip prosthesis and suffered a laceration to the external iliac artery due to a bony fragment from the remnants of the acetabular wall.

Case-Report
A 90 year old lady was admitted from a nursing home with bilateral infected total hip replacements, with a chronic discharging sinus on the left side and pressure sore over the right side. She had been immobile for some months prior to admission. The original McKee prostheses had been in place since the early 1970s. Both hip wound swabs grew gut flora. X-rays of the pelvis showed the left-sided prosthesis protruding through the wall of the acetabulum into the pelvic cavity. The patient underwent left Girdlestone excision arthroplasty 5 days after admission and at operation it was noted that both the femoral and acetabular components were loose with pus deep to the acetabulum and with no medial acetabular wall present. Her condition deteriorated over the following weeks and finally, after being turned in bed, she suffered a large blood loss from the left hip wound and died later that night. Post Mortem examination revealed a 5mm defect in the lateral wall of the left external iliac artery where it lay against a sharp bone fragment - a remnant of the supero-medial wall of the acetabulum. There was evidence of organizing blood clot in relation to the artery, indicating that the original damage had occurred at least a few days before death, and a small amount of recent blood clot in the remnants of the acetabular fossa. Whilst the main cause of death was attributed by the Pathologist to septicaemia secondary to osteomyelitis caused by the infected hip prosthesis, blood loss from the wound site in the hours before death had undoubtedly contributed to the demise of an already critically ill patient.

Discussion
No fatal complications of Girdlestone excision arthroplasty have previously been reported in the literature. In this case, following removal of an infected prosthesis, a bony fragment of the acetabular wall remnants had lacerated the external iliac artery. Whilst blood loss from the damaged vessel was not sited as the main cause of death, it was certainly an important contributory factor in an already critically ill patient.
References