

nation and should not be done routinely.

A retrospective analysis for all patients admitted to the Royal Glamorgan Hospital (RGH) with acute abdominal pain was done over a period of 12 months in 2004. All adult patients undergoing chest radiography (CXR) following admission as emergencies via the general surgery department with abdominal signs, were identified retrospectively. The quantity and the quality (value of this investigations) was evaluated.

In this study we showed that of 515 patients presenting with abdominal pain in an acute setting 65% (334) had an erect CXR on admission. Of these 5% were clinically significant showing possible medical causes for the pain and altering management. Only 1% were surgically significant showing free gas under the diaphragm. It is arguable that 314 (94% of 334) had unnecessary CXRs which contributed no new information towards treating the patient. In fact if no old radiology records were available this could have been misleading as 53 (16% of 334) had abnormal findings of which none were new.

When the Royal College of Radiologists (RCR) first published guidelines for requesting radiographs it was predicted the NHS could save £50–60 million pounds per year. Now more than ever this would be vital to sustaining our health system in these trying financial times.

By implementing this simple set of guidelines and relying on our clinical findings and a simple surgical opinion we might very well be able to massively reduce the financial, radiation and time resources currently being wasted.

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Fasciotomy wound closure-clinical audit and review of current practice

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Delay in wound closure after fasciotomy has been a matter of concern. We aimed to audit the number of days to closure, technique of closure, number of theatre visits and any influencing factors that can affect delay in wound closure.

Patients and methods: We have included 30 random patients of leg fasciotomies (prophylactic and therapeutic) within 3-year period (03/05 to 03/08) following acute compartment syndrome. We have excluded patients ($n = 17$) with chronic compartment syndrome, dead compartment and upper limb compartment syndromes. 19 male, 11 female, age 7–85 (average 37). Only one patient was in ITU. There were open ($n = 7$) and closed (21) injuries.

Results: Average time taken to close the wound since fasciotomy was 5.1 days in tibial fractures ($n = 15$), 8.5 days in tibial plateau fractures ($n = 2$), 3.5 days in ankle fractures ($n = 4$), 2.4 days in upper limb fractures ($n = 7$) and 6 days in two cases with no fracture. Patients ($n = 2$) who had RTA needed maximum time till closure of wound. Number of theatre visits ranged from 3 to 7 days. Wounds were closed with or without shoelaces. No correlation with days to wound closure note with age, co-morbidities, mechanism, open injuries, compartment pressures (20–100 mm) and tissue necrosis. All seven patients with shoelace applied at the first visit were closed at the second visit. Average time for wound closure was 3 days with shoelace and 5.6 days without shoelace.

Conclusion: Shoelace technique for fasciotomies is safe for delayed primary closure and effective in avoiding skin graft. It also reduces theatre visits and hospital stay. It is recommended that shoelace is to be applied at the time of fasciotomy and used judi-

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Femoral head lag screw placement: the state of play

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Background: Placement of lag screws in the femoral head zones (FHZ) described by Cleveland et al. has been shown to influence implant failure. More recently, Baumgaertner demonstrated increased failure rates with tip apex distance (TAD) beyond 25 mm. Since this landmark paper little evidence exists to show whether lag screw placement has improved in widespread practice.

Aims: To determine the current accuracy of femoral head lag screw placement and whether implant type/surgeon seniority influence lag screw placement.

Patients and methods: 190 consecutive patients sustained proximal femoral fractures, fixed with lag screws at two university teaching hospitals. Fixation involved 110 dynamic hip screws and 80 intramedullary hip screws. Intra-operative images were used to calculate FHZ and TAD retrospectively. Proportion of TAD <25 mm and optimal FHZ placement were compared with Baumgaertner's series using the Student *t* test and Pearson Chi-square test. Likewise, the effect of implant type and lead surgeon seniority was analysed.

Results: TAD was <25 mm in 87.8%; significantly lower than Baumgaertner's figure of 56.6% ($p < 0.0001$). 82.2% lag screws were placed within optimal FHZ; significantly higher than 48.5% of Baumgaertner's series ($p < 0.0001$). Implant type did not influence TAD. 88.6% DHS screws were in optimal FHZ, compared to 73.7% of IMHS screws ($p = 0.017$). Suboptimal FHZ placement in IMHS screws was more frequently due to inaccuracy in the sagittal plane ($p < 0.001$). Specialist registrars achieved a mean TAD of 15.98 mm; consultants achieved 18.33 mm ($p = 0.0065$). This effect did not extend to proportion of TAD <25 mm or FHZ placement.

Conclusions: Femoral head lag screw placement has improved significantly over the last decade, presumably due to dissemination of the above principles. DHS screws are more frequently placed in optimal FHZ than IMHS screws. Specialist registrars place lag screws with a shorter TAD, but surgeon seniority does not influence proportion of TAD <25 mm or FHZ placement.

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Fixation of ipsilateral femoral neck and shaft fractures treated with dual implant fixation—case studies

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Ipsilateral femoral neck and shaft fractures are a consequence of a high-energy trauma. The optimal method of treatment of these complex injuries remains uncertain. Single implant fixation with an antegrade nail with screw(s) in to the neck and head are standard. However problems with one or both fractures with such an implant have been reported.

Biochemical and retrospective analysis show lag screw fixation of the femoral neck fracture and reamed intramedullary nailing for shaft fracture stabilization were associated with good outcomes and fewest complications. We present three cases successfully treated with dual implant fixation where the femoral neck fracture