Enhanced Treatment: Examining the clinical and cost implication of combined home care and day-case ankle fracture fixation.
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Introduction/Purpose: Ankle fracture fixation has commonly been undertaken with an inpatient process due to swelling and surgery may not always be conducted on the next available operating list. In the UK there has been a move over the last 5 years to manage many trauma cases semi-electively and within the day case departments, to give patients more choice in their treatment.
We conducted a study looking at the impact of a home therapy ankle pathway combined with day case- surgery on the length of stay and safety of patients with ankle fractures requiring surgical fixation conducted by group consultant trauma surgeons and their teams.

Methods: Patients were assessed in two periods from Jan 2015 to Dec 2016; all patients were placed in a plaster of paris back slab in casualty with the ankle reduced, limb care advice given – elevation, cooling and DVT thromboprophylaxis.
A group of patients were assessed for home therapy and day case surgery and were then discharged home on crutches after a slot was determined on a rapid access trauma list typically six days later. Patients who were not suitable for home therapy were excluded from review.
We compared two cohorts of patients with weber B fractures whom choose surgical fixation, which would have been suitable for both day case and in-patient care over a 12-month period. We performed a prospective audit of the cases undertaken and analysis of the number of cases, complications and the cost benefits

Results: 143-patients identified; 21 patients identified for home-therapy & day-case, and 32 patients for inpatient management. Within home-care & day case group: 1-tri-malleolar-fracture, 11-bi-malleolar fractures and 9-uni-malleolar and within inpatient group there were a similar mixture of fracture patterns.
Time-to-surgery for inpatient management was 2.38 (1-16d) days; length of stay was 4.94 days (2-31d). Home-care & day-case time to surgery was 5.8 days (2-7). No patient admitted following surgery.
All patients followed to pre-morbid ambulation levels. One DVT confirmed in the inpatient group no-wound-complications or failures of fixation reported.
A mean 1.5hrs operating time was required (59.3min tourniquet time); day-case-surgery is £228 per patient cheaper than in-patient surgery. Cost efficiency based on 4.94 bed-day-improvement is 158 bed-days a cost-saving of £1,235 per patient.

Conclusion: We believe home-care and day-case ankle fracture surgery is both valid and cost effective in optimizing the management of the appropriate ankle fractures without any significant rise in co-morbidity.
For the patient there is little difference in waiting times and a pre planned surgical episode can give them flexibility to plan their treatment. The total potential saving per patient to the health care provider could be approx. £1,486 per patient.
Furthermore, in our healthcare system it reduces demand for inpatient beds, provides significant cost savings for the provider and improves patient satisfaction due to choice and reduction wasted bed days

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