Short Communication

Assessment of Toe Injuries, Do they Need Follow-Up?

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Abstract

Objectives: Guidelines produced by the British Orthopaedic Association (BOA) state all new fracture clinic patients should be seen within 72 hours [1]. With added pressures and cuts to the NHS budget this target is difficult to meet and hospitals are moving to virtual fracture clinics to reduce load in actual clinics [2]. We aimed to assess outcomes of all referrals for toe injury to one consultant’s fracture clinic over a 4 year period.

Methods: Patients with toe injuries were recorded prospectively from 01/01/07 to 31/12/11 along with outcomes.

Results: A total of 162 patients were identified. 21 patients had purely soft tissue injuries, 4 patients had dislocations all reduced in the emergency department (ED). Of the remaining 137 patients 42 had intra-articular fractures and 95 were extra-articular. Of the 42 intra-articular fractures 1 patient had a displaced fracture of the 1st toe and was offered surgery but declined. All patients referred with toe injury were discharged at the first appointment.

Conclusion/Implications: Simple fractures/dislocations and soft tissue injuries do not need to be referred to the fracture clinic as the treatment can be given in the ED. This would reduce the pressure on fracture clinic services, improve patient experience and reduce costs.

INTRODUCTION

Traditionally all patients with an acute fracture who attended ED would be referred on to a fracture clinic in the following few days. These clinics are often extremely busy and guidelines on how the should be run have been provided by the BOA [1]. One of the main recommendations is that all patients referred should be reviewed by an orthopaedic surgeon within 72 hours [1]. With rising rates of patients attending the ED and musculoskeletal injuries accounting for 50% of these patients, the numbers referred to fracture clinic will only increase. Studies highlighting different approaches to the traditional system have become more apparent over the recent years [2,3]. These studies looked at virtual clinics where the consultant on-call reviewed all the images of orthopaedic injuries from the day previous and ensured the correct management plan had been instituted. These studies have shown that this process is efficient and can save clinic time and resources [2,3]. Our study proposes further that certain injuries could have management plans initiated in the ED which means no routine follow-up is required. This has been shown to work previously in patients with 5th Metatarsal fractures but to our knowledge has not been shown in toe fractures. We aimed to assess if this would be a viable solution and the financial implications this would have on the trust.

METHODS

We prospectively collected data on all new fracture clinic patients for one consultant at our institution between 1st January 2007 to 31st December 2011. The data collected included the route of referral, time from referral to clinic, clinic diagnosis, and grade of doctor reviewing patient, treatment and outcome of the appointment. This data was then retrospectively reviewed and all patients with toe injuries were highlighted for further evaluation.

All radiographs of the injuries were reviewed by two people (GH, RG) to ensure the original diagnosis was accurate and to assess for further radiographs since suggesting additional clinic appointments or complications.

RESULTS

A total of 162 patients were identified with toe injuries in the study period stated above. 21 patients had purely soft tissue injuries with no evidence of fracture on radiographs. 4 patients had simple dislocations which had all been reduced in the emergency department. Out of the remaining 137 patients 42 had intra-articular fractures and 95 were extra-articular. Out of the 42 intra-articular fractures 1 patient had a displaced fracture of the 1st toe and was offered surgery but declined and was therefore
treated conservatively. All 162 patients referred with toe injury were discharged at the 1st clinic appointment and no patient has required further treatment with regards to their toe injury.

DISCUSSION

This study clearly shows that simple fractures and soft tissue injuries can be managed appropriately in the ED. Appropriate treatment can be given to the patient, information about length of time in splintage and contact details if problems develop or rehabilitation does not proceed at the expected rate. It has been shown previously that ED management of certain simple fracture patterns does not increase patient wait in the ED and does not increase re-attendance rates to the department [2]. Currently with severe pressures on the NHS both in terms of patient numbers and efficiency savings being driven by the current global financial climates any productivity measures that can streamline patient treatment and experience should be championed. As the modern NHS also embraces patient centered care this management protocol has also been shown to have very high levels of patient satisfaction and low complication rates [2]. It has also previously been shown that outcomes following injuries discharged straight from the ED are comparable with those found in current literature with regards to both union rates and patient reported outcomes [4,5]. Our study adds to this as we have longer follow-up than those described above and that none of the patients included needed further treatment, at our institution, in this subsequent period of between 4 and 9 yrs.

Further to this fracture clinics are often extremely busy and can run with significant delays. Sunderamoorthy et al., showed that only 28% of patients are seen on time [6], and Levesque et al., showed that satisfaction can be improved by decreasing the amount of time spent in clinic [7]. The British Orthopaedic Association (BOA) has recently suggested that all new patients should be reviewed within 72 hours [1], and many institutions are struggling to meet this target due to patient demand. Highlighting fractures which can be treated in the ED without bringing the patients back to clinic will help departments focus on the more severe injuries which require their expertise.

In our trust there are 16 consultants seeing new fracture patients. In our study we only collected data for one consultant (JLB) however if this was extrapolated to all the other consultants in the department this would equate to 397 unnecessary appointments a year purely for toe injuries. In an era when financial pressures are so significant the cost of waste within the NHS is becoming an ever pressing issue. Financially each fracture clinic appointment cost the NHS £129 [8], and removing these unnecessary appointments would save around £51,213 per annum for the NHS. Although this is a small amount within the NHS budget as a whole we feel this policy could be widely used nationally and could be adapted to other fracture patterns to increase the total cost savings within the NHS. We concede that not all toe injuries can be discharged from the ED and advice caution with regards to crush injuries, open fractures and displaced intra-articular fractures of the 1st toe, suggesting they should still be referred for clinical review.

In conclusion we have shown that these injuries can be managed both effectively and safely within the ED and removing these appointments would help ease pressure on fracture clinic services. This in turn would help improve patient satisfaction, both those attending clinic and those who are managed at home, and increase compliance with BOA guidelines with regards time to clinic appointment. Finally this process has highlighted the significant savings which could be achieved by the NHS by adopting this protocol.

REFERENCES