Hip fractures: public perceptions

TJ McBride, S Panrucker, JC Clothier

Department of Trauma and Orthopaedics, Sandwell General Hospital, Sandwell and West Birmingham Hospitals NHS Trust, West Bromwich, UK

ABSTRACT

INTRODUCTION Hip fractures are common injuries in elderly patients presenting to the trauma surgeon. Mortality following such injuries approaches 10% at one month, rising to 30% at one year. Of those who survive, most experience a decrease in mobility and independence. The authors believe that the general public are not aware of these facts and in particular do not perceive hip fractures to be injuries of serious consequence.

SUBJECTS AND METHODS This study aims to assess the perception of hip fractures amongst the general public. Subjects were recruited from a population attending a general orthopaedic clinic in a district general hospital during March 2008. All participants were asked to fill out a questionnaire relating to their perception of hip fracture epidemiology, aetiology, presentation, treatment and both physical and social outcomes.

RESULTS A total of 142 people completed a questionnaire. Of those, 27 (19%) had been filled out by either hip fracture patients or their relatives. A significant majority of subjects underestimated both the hospital length of stay and mortality figures; however, most people did know that some form of surgery would be required.

CONCLUSIONS This study underlines the need for detailed counselling of the patient and relatives following a hip fracture in order to create realistic expectations and to allow those involved to prepare for potential outcomes. Written patient information may also be useful to allow patients and relatives the opportunity to digest relevant information and to pose questions relating to what they have read.

KEYWORDS

Hip – Fractures – Public – Perceptions

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CORRESPONDENCE TO

TJ McBride, Department of Trauma and Orthopaedics, Sandwell General Hospital, Sandwell and West Birmingham Hospitals NHS Trust, Lyndon, West Bromwich B71 4HJ, UK
E: tjm607@yahoo.com

In 2008, it was estimated that 70,000 people over 60 years of age would suffer a hip fracture in the UK, with the number rising 2% per year.¹ The average age of patients sustaining a hip fracture is more than 80 years and 80% of patients are female.² Mechanism of injury is usually a simple fall from standing.⁵ Treatment is almost invariably surgical, aiming to restore mobility and prevent complications of bed rest.^{4–6}

Mortality following hip fractures approaches 10% at one month, and rises to 30% at one year;² of those who survive, most experience a decrease in mobility and independence.² Such injuries are considered the most common disabling injury and cause of accidental death in older people.⁴ Increasing age, decreased activity level, male sex and heart disease all increase mortality significantly.⁷

We speculate that the general public are not aware that hip fractures are serious or life-threatening injuries.

BOAST guidelines¹ state that ‘there must be effective communication with the patient and/or family about treatment decisions’. Although we do routinely communicate the benefits of any treatment, we question the degree to which

patients and their families are given the facts regarding prognosis. Care must be taken to explain the implications of such an injury in order that expectations are realistic and decisions well informed. This is especially significant as a large proportion of patients will have impaired cognition.^{5,8} Adequate knowledge and engagement on the part of patients probably has an impact on their rehabilitation outcome.⁹

In this era of increasing litigation, there is pressure to forego sensitivity for a cold run down of the statistics when explaining treatment complications and outcomes, but how do we gauge how best to balance this? This study aims to assess the perception of hip fractures amongst the general public.

Subjects and Methods

The study was conducted at a district general hospital during March 2008. Subjects were recruited from a population attending a general orthopaedic clinic. Subjects in whom a hip fracture had occurred or who had a close relative with

a previous hip fracture were identified and analysed separately. All participants were asked to complete a questionnaire comprising 8 questions relating to their perception of hip fracture epidemiology, aetiology, presentation, treatment, and outcome.

Patients were given multiple choice options for each question, with questions 3 and 5 allowing more than one answer to be chosen. For questions where only one answer could be selected, statistical analysis was performed based upon the proportion of the group who got the answer wrong. A one-sample proportions test with continuity correction¹⁰ was used to determine the 95% confidence intervals, and the probability that that proportion of people did not select that answer by chance.

Table 1 Population demographics

		Overall group	Hip fracture group
Age (years)	16–30	12 (8%)	3 (11%)
	31–59	65 (46%)	12 (44%)
	60+	65 (46%)	12 (44%)
Sex	Male	52 (37%)	7 (26%)
	Female	90 (63%)	20 (74%)
Totals		142	27

Results

A total of 177 people received a questionnaire. Thirty-five forms were incomplete and thus excluded, leaving a total of 142 (80% inclusion) questionnaires. Question 1 identified 27 (19%) people who were either hip fracture patients, or their relatives (the hip fracture group). Demographics of both groups are shown in Table 1.

Question 2 related to perceived demographics of hip fractures. In both the overall and hip fracture groups, the majority of people (85% and 80%, respectively) felt that the most common age group for sustaining a hip fracture was between 60–79 years old, and that the female sex was more at risk (87% and 84%, respectively).

Regarding mechanism of injury (question 3), it is interesting that only 64% of the overall group and 72% of the hip

Figure 1 Question 4 – length of stay (overall group). How long on average do you think a person with a hip fracture is in hospital for?

Table 2 Statistical analysis

Overall group					
Question	Correct answer	No. wrong (out of 142)	Proportion (%)	95% CI	P-value
2. Age?	80+	126	89	82–93	< 0.05
2. Sex?	Female	19	13	8–20	< 0.05
4. Length of stay?	15 days+	121	85	78–90	< 0.05
6. Daily activities?	Less able	71	50	42–58	1
7. Residential care?	Quite + very likely	37	26	19–34	< 0.05
8. Mortality?	< 70% alive at 1 year	137	96	92–99	< 0.05
Hip fracture group					
Question	Correct answer	No. wrong (out of 27)	Proportion (%)	95% CI	P-value
2. Age?	80+	23	85	65–95	< 0.05
2. Sex?	Female	4	15	5–35	< 0.05
4. Length of stay?	15 days+	22	81	61–93	< 0.05
6. Daily activities?	Less able	13	48	29–68	1
7. Residential care?	Quite + very likely	13	48	29–68	1
8. Mortality?	< 70% alive at 1 year	27	100	84–100	< 0.05

Figure 2 Question 8 – mortality (overall group). What percentage of people will still be alive at 1 year following a hip fracture?

fracture group felt that a fall from standing would cause a fracture. Most people perceived the likely cause of injury as a fall down stairs.

When asked in question 4 about the likely length of hospital stay (Fig. 1), the majority of both groups felt that either 3–7 days (37% overall group, 41% hip fracture subgroup) or 1–2 weeks (48% all comers, 41% hip fracture group) was the norm. Only 15% of the overall and 19% of the fracture group thought a hospital stay of more than 2 weeks likely.

Question 5 related to treatment. More than two-thirds of both groups realised that some form of surgery would be required and just over 50% in both groups expected this to be a hip replacement of some sort. Interestingly, approximately one-third of both groups felt that bed rest had some role to play in the treatment of hip fractures.

In terms of morbidity, question 6 asked how likely the patient was to go back to normal activities. Half of both groups thought that most people would be less able to go about their normal daily activities following a hip fracture. Further to this, question 7 asked about the likelihood of the patient requiring residential care. In the overall group, the majority (57%) of the subjects thought it would be quite likely for patients to require residential/nursing home care following a hip fracture. Interestingly, in the hip fracture group, the majority (48%) felt it would be unlikely that they would require care outside of their own home.

Question 8 asked what percentage of people would still be alive 1-year post injury. The majority of both groups felt that more than 80% of people would still be alive at this stage. Only 4% of all subjects were aware that the one year mortality rate was in excess of 30% (Fig. 2).

Statistical analysis was performed on those questions where only one answer was allowed to be selected. These questions were considered to have a 'correct' answer which reflected the literature or clinicians' knowledge. The proportion of people who selected the wrong answer was calculated and a proportion test carried out to ascertain the statistical significance of this. Results are displayed in Table 2.

For questions pertaining to age, length of stay, the possibility of residential care and mortality, a significant proportion of the overall group gave an answer which was considered incorrect. In the hip fracture subgroup, a significant proportion of people answered incorrectly on age, length of stay and mortality questions.

Discussion

This study set out to assess the perceptions of many aspects of hip fractures amongst the general public. First, it is interesting to note that although 19% of our study population had had experience of hip fractures, in all questions but one, the trend of answers appeared similar to the overall group's answers, indicating that personal experience did not necessarily dispel misconceptions.

The majority of people realised that most hip fracture patients were over 60 years of age, but a significant number did not know that the average age of a hip fracture patient is over 80 years.⁴ In terms of mechanism of injury, only two-thirds of people realised that a fall from standing could cause the fracture. The literature quotes an average length of stay following such an injury at 30 days,⁷ whilst the significant majority of our subjects indicated a stay of only half that length.

Prolonged bed rest may permanently impair mobility and independence.⁴ Although many people knew that surgery would play a part in the treatment of hip fractures, about a third of subjects felt that bed rest would also be appropriate. It is difficult to say whether or not the public perceive this to be an active part of treatment or whether they realise that bed rest is enforced by the injury and that the treatment goal is mobilisation.

Questions 6 and 7 refer to perceived morbidity following a hip fracture. Keene *et al.*² showed an increase in the use of walking aids, and up to 30% of people requiring residential care following hip fractures. This reflects the morbidity of such injuries indicating significant loss of a patient's ability to perform activities of daily living and independence. In terms of daily activities, results in both the overall and hip fracture subgroups did not reach statistical significance to say whether or not people knew these facts. Interestingly, in terms of the requirement for residential care, a significant number of people in the overall group answered correctly, but the hip fracture subgroup answered equivocally.

The public perception of mortality following hip fracture is clearly much lower than in reality with a significant proportion of both groups underestimating. The literature quotes anywhere between 26% at 1 year¹¹ and 53% at 6 months;¹² a more recent large prospective study quotes a 1-year mortality of 33%.² This low perception of mortality in the general public is perhaps the most important factor to take into account when dealing with patients and relatives pre-operatively.

Conclusions

This study demonstrates that a significant proportion of the public do not realise the implications for hospital length of stay, and grossly underestimate the mortality associated with hip fractures. We conclude that extra time should be taken to explain the nature of the injury, with specific mention to the aims of surgery and emphasis on early mobility. Sensitivity is required when explaining issues of mortality to patients or relatives, and particular care should be taken to counsel those relatives of the most high-risk patients (*e.g.* nursing home residents).

When counselling patients and relatives, it is important to remember that the overall perceived seriousness of the injury is underestimated by most and that care should be taken on initial consultation and at further visits to give accurate information. Written information is available on a wide variety of medical and surgical conditions and this may be a potential solution to misconceptions (see Appendix 1).

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Appendix 1

Patient information leaflet Hip Fractures in the Elderly: Patient Information

Introduction

- The hip is a ball and socket joint, situated at the top end of the thigh (femur) bone.
- It was estimated that 70,000 people over 60 years of age would suffer a hip fracture (fractured neck of femur) in the UK in 2008.
- Hip fractures commonly occur in elderly people and are most common in women over the age of 80 years.
- Hip fractures usually result from a simple fall from a standing position in such patients

The scope of the problem

- Hip fractures can result in significant medical complications. This is because an untreated hip fracture will lead to prolonged bed rest.
- Many patients are already very frail and have other medical problems. Thus a hip fracture poses a serious upset to the patient as a whole.
- For many patients with other such medical problems, a hip fracture may signal an event which leads to the end of their lives.

Treatment

- The primary goal of treatment is to get the patient back on their feet again as soon as possible and, therefore, avoid the complications of prolonged bed rest.
- Surgery is usually the only way to achieve this. The operation will normally either involve fixing the fracture with a plate and screws or some form of hip joint replacement.
- As with any surgery there are risks to take into account, these include the risk of the anaesthetic, bleeding, infection and blood clots. However, it is clear that in most cases the benefits of surgery far outweigh the risks.
- Prior to surgery it may be necessary to stabilise and optimise a patient.

Rehabilitation

- Many patients will require at least 2 weeks in hospital.
- Many patients may not be as confident or as able as they were on their feet prior to this injury.
- Some patients may require institutional care, *e.g.* a residential home.