Broken bones and fractures – an audit of patients' perceptions

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ABSTRACT

INTRODUCTION 'Have I got a fracture or a break doctor?' remains a commonly posed question in fracture clinics, suggesting that patients frequently feel a 'fracture' and a 'break' are two separate entities. This apparent misconception amongst fracture clinic patients may result in confusion and occasionally anger that doctors appear to have inconsistent views on the severity of their injury. Compliance and outcome of patient care can also be affected by poor communication.

PATIENTS AND METHODS Our questionnaire-based study was conducted in two stages. The initial objective was to establish whether this misconception surrounding the words 'fracture' and 'break' is commonly held amongst our out-patient trauma patients. The second stage of the audit was to determine whether a patient information leaflet on fractures/broken bones could help reduce this misconception.

RESULTS The preliminary audit involving 50 new patients attending our fracture clinic showed that 84% thought there was a difference between a 'fracture' and a 'break', with 68% believing a 'break' to be worse than a 'fracture'. Following the introduction of an information leaflet, a re-audit of 61 new patients took place. This time 67% felt there was a difference between a 'fracture' and a 'break', with 65% believing a 'break' to be worse than a 'fracture'. Only 21% had read the supplied information leaflet, and 69% of those still believed there was a difference between a 'fracture' and a 'break'.

CONCLUSIONS The majority of patients believed that there was a difference between a 'fracture' and a 'break'. Access to information leaflets did not appear to alter this misconception. Verbal communication and explanation may be more beneficial and practical than visual aids and leaflets in overcoming this problem.

KEYWORDS

Audit – Fracture – Break – Leaflet – Communication

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Good communication between doctors and patients is a key aspect of medical practice, improving, amongst other things, patient compliance and overall satisfaction.¹ The most common factor in an adversarial doctor–patient relationship is poor communication, which can arise from injudicious use of medical jargon and inconsistencies in the terminology used by medical practitioners.

In the UK, fracture clinics are among the busiest clinics in the hospital. Short consultations, by overstretched medical practitioners, with patients who are often worried and in pain, can result in poor communication. A commonly encountered situation in the fracture clinic is that patients appear to believe there is a difference between a 'fracture' and a 'break'. Medical practitioners frequently use these two terms interchangeably and are all too often unaware of

the impact this may have on their patients. We have encountered confusion, anxiety, frustration and even anger that the attending medical practitioners do not appear to be able to make up their minds as to the diagnosis and severity of their injury. Peckham² highlighted this misconception about 'fractures' and 'breaks' in fracture clinics over 10 years ago. We have conducted a patient questionnaire survey to determine whether this misconception is still widely held, and if so, whether the introduction of a simple leaflet, readily available in the clinic, would help rectify this matter.

Patients and Methods

Our study was questionnaire-based and conducted in two stages. In the preliminary audit, 50 consecutive new

patients (31 male, 19 female) attending our fracture clinic were asked to complete a simple questionnaire (Appendix 1) before they saw a doctor. Following the results of our initial audit, we produced a simple leaflet entitled *Broken Bones and Fractures* (Appendix 2) which was readily available and on display both at the reception desk and in the waiting area. We then evaluated a further 61 consecutive new patients (26 female, 35 male) attending the clinic, asking them to complete a modified version of the original questionnaire. The following questions were added: (i) Did you read the *Broken Bones and Fractures* leaflet?; (ii) Did you find this leaflet helpful?; (iii) Do you have access to the internet?

Results

Preliminary audit

Overall, 84% of patients (100% < 20 years of age, 90% 20–34 years of age, 71% 35–49 years of age, 90% 50–64 years of age, 78% > 64 years of age) thought there was a difference between a fracture and a break (16% no difference, 0% 'don't know'), and 68% that a 'break' was worse than a 'fracture'. A breakdown of patients' perceptions is shown in Table 1.

People with previous fractures were only slightly better informed with 82% (versus 86% of those with no previous fracture) believing there to be a difference.

Follow-up audit

After the introduction of the information leaflet, 67% of the respondents (58% < 20 years of age, 68% 20–34 years of age, 79% 35–49 years of age, 60% 50–64 years of age, 50% > 64 years of age) still thought there was a difference between a 'fracture' and a 'break' (20% no difference, 15% 'don't know'). Overall, 65% thought a 'break' was worse than a 'fracture'.

Only 21% of patients had read the leaflet: of these, 69% continued to think there was a difference, 23% thought there was no difference and 8% did not know.

Incidentally, internet access did not appear to correlate with better awareness regarding this misconception – 80% of those with internet access and 82% of those without were either unsure or thought there was a difference between a 'fracture' and a 'break'.

Discussion

We are currently living in what has been called the 'communication age'. The UK Department of Health has in recent times issued numerous guidelines, including the white paper *Patient and Public Involvement in the New NHS* (1999), emphasising patients' needs and rights to information. Leaflets are appearing in our clinics, wards and surgery units with

Table 1 Patients' perceptions on the definition of 'break' and 'fracture' (expressed in percentages)

	Break	Fracture
A crack all the way through the bone, with the pieces of bone still in place	52	7
A crack all the way through the bone, where the two pieces have separated	21	7
A crack not all the way through the bone – bent like a green stick	14	86
Bone cracked into many pieces	8	0
Combination of the above	5	0

ever-increasing frequency. At medical school, increased emphasis is being placed on doctors' communication skills. Additionally, the internet is not only readily available to most people, but also has a plethora of information both on medical and non-medical topics. In general, we are faced, ever more, with well-informed patients attending our clinics and wards.

'Oh, so I've fractured my arm, well at least it isn't broken!', 'Oh, it's a fracture! That's better than a break, right?', 'Have I broken or fractured it doctor?' however, are just a few examples of the frequently posed questions in our fracture clinic. The dictionary definition of a 'fracture' is 'breakage of a bone, either complete or incomplete'.⁵ Typing the words 'fracture', 'break' or 'broken bone' into a web search engine, such as Google, brings up a multitude of sites, all stating essentially that a fracture is a broken bone and a broken bone is a fracture. Yet, in fracture clinics, it appears that a majority of patients still believe that a 'fracture' and a 'break' are separate pathologies.

In our study, we found that 84% of patients asked thought that there was a difference between a 'break' and a 'fracture', with 68% believing that a 'break' is worse than a 'fracture'. This misconception was widely held throughout all the age groups. Internet access failed to improve this misconception.

Peckham,² who similarly found 81% of patients in his cohort held this misconception, suggested that one way to bridge this communications gap in the fracture clinic was to use visual aids in the form of a drawing of the fracture, tracing out the bony fragments on the radiograph onto photocopier paper. Visual aids are known to contribute to the understanding process and can be used to complement verbal communication.⁴ However, this may not necessarily be a feasible option within the time constraints of a busy fracture clinic setting. For many years, a large poster defining and explaining fractures has been hanging in our fracture clinic reception area, but this

clearly has not addressed the misconception as evidenced by our pilot study. We thus tried to overcome this dilemma by introducing a simple, readily available, information leaflet to explain fractures. Unfortunately, this did not satisfactorily address the issue, with 65% of patients still believing there to be a difference.

Significantly, only a fifth (21%) of the sampled patients had read the leaflet; of these, very few appeared to retain the information or carry it through to the questionnaire, with 69% still believing that there is a difference between a fracture and a break.

Whether this is due to a lack of understanding or interest, or due to the style/presentation of the leaflet, is not clear. Leaflets, including ours, displayed in hospitals generally have their content checked and approved for appropriateness/suitability by Patient Information Services (or a similar department), and are published to a prescribed style and format. Although, our leaflet was readily available (with regards to access and quantity) and deemed suitable for lay people, a different presentational style and format may have increased uptake and understanding.

What is apparent is the seemingly unshakeable misinterpretation of the two words. Clinicians must be aware of these misconceptions. As time constraints may limit the use of visual aids in a busy clinic setting and leaflets, in our experience, have a

poor uptake, reviewing our (orthopaedic surgeons and referral source, *e.g.* accident and emergency doctors and nurses, general practitioners) choice of words needs to be the next step in breaching this communication gap and improving our medical standards in the fracture clinic.

Acknowledgements

We would like to thank Hazel Hardyman, Patient Information Manager, Bristol Royal Infirmary, for printing the leaflets, and Angela Abbott, Fracture Clinic Receptionist, BRI, for overseeing the distribution of questionnaires.

References

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APPENDIX 1 FRACTURES AND BREAKS

Thank you for completing this questionnaire. We are looking at people's thoughts about injuries to their bones. Hopefully this simple study will help us improve our communication skills with patients. Please place completed questionnaire in box at reception. Thanks.

1. Are you male _____ or female _____ ?

2. How old are you? _____

3. Have you ever fractured or broken any bones before? Yes No

4. Do you think there is a difference between a fracture and a break?

Yes

No

(Please go to question 7)

Don't know

5. Which do you think is worse? A fracture A break

6. What do you think a fracture and a break are? (Please circle answer)

*A crack not all the way through the bone
– 'bent like a green stick'*

Fracture

Break

Neither

*A crack all the way through the bone, with
the pieces of bone still in place*

Fracture

Break

Neither

*A crack all the way through the bone, where
the two pieces have separated*

Fracture

Break

Neither

Bone cracked into many pieces

Fracture

Break

Neither

7. Did you read the *Broken Bones and Fractures* leaflet? Yes No

8. Did you find the leaflet helpful? Yes No

9. Do you have access to the internet? Yes No

APPENDIX 2

BROKEN BONES AND FRACTURES

Patient information leaflet

WHAT IS A FRACTURE?

A fracture and a 'break' or 'broken bone' means the same thing!
A fracture means a breakage of bone.

WHAT TYPES OF FRACTURE ARE THERE?

Many types:

Simple fracture – a break in the bone, with no visible damage to the surrounding tissues or skin

Compound/open fracture – a break in the bone, with an open communication between the broken bone and the skin, usually the bone pierces the skin

Greenstick fracture – where the bone has bent like a greenstick, this break is common in children.

Additionally, the bone may have broken into only 2 pieces or several pieces. These pieces of broken bone may be close together or separated.

HOW ARE FRACTURES TREATED?

Depending on the type of fracture there are several ways we can treat fractures – your doctor will discuss these with you. Some fractures are easy to treat, others are more difficult.

In *plaster* – many fractures we see are treated this way. If the bone ends are in a 'satisfactory' position and we think they are likely to heal well in this position

In a *sling/brace* – certain fractures can be treated in a variety of slings or braces; these serve to rest the fracture and thereby allow it to heal

With an *operation* – certain fractures may be better served by an operation which aims to (better) align the broken ends of bone and hold them in this position whilst the fracture heals. This may involve using wires, plates and screws or other devices to hold/fix the bone. After the operation, we would probably rest the fracture in a plaster. If this treatment is appropriate for your doctor will discuss these issues and possible risks with you.

Some fractures are treated by a combination of the above. Over the course of your treatment you may need to have several X-rays – this allows us to see how your fracture is healing and whether it is healing in a good position.

HOW LONG DOES IT TAKE FOR A FRACTURE TO HEAL?

There is no set answer to this – it depends on the type of fracture, where it is, bone quality, how it is treated and various other factors. In general, fractures take weeks or sometimes even months to 'unite' (heal) – in children it takes less time than in adults.