Adequacy of consent in patients with distal radius fractures

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Abstract Health professionals have a legal and ethical obligation to obtain a valid consent before any procedure. The aim of this study was to assess the adequacy of consent for treatment of distal radius fractures. It also outlines potential improvements that could be made. A study of patients undergoing treatment for distal radius fracture was undertaken. We analysed the risks and complications recorded on the consent form. The common recorded risks were infection (95.6%), vascular injuries (77.8%), nerve injuries (66.7%) and stiffness (42.2%); 31.1% of the consent forms had abbreviations. Junior doctors who consented the patients performed 6.7% of the procedures. The poor documentation of risks or complications indicates that patients are not given appropriate information to ensure that the consent is valid. Proper documentation and refining of consent forms is mandatory to ensure that all major risks are understood by patients. This could go a long way in preventing litigation.

Introduction

Consent is an essential requirement before the start of an investigation or treatment of a patient. General Medical Council guidelines published in 1998 stress the need to obtain consent as otherwise there is a risk of litigation [8]. The consent forms require a health professional to record

all serious and frequent risks of an operation or a procedure. These risks need to be discussed with the patient so that they understand the risks and benefits of the procedure. Furthermore, it is the responsibility of the doctor providing the treatment (or deputy if this is not practicable) to discuss it with the patient and then obtain a consent as he will have a comprehensive knowledge of the procedure including the risks attached to it.

Patients with fractured distal radius are exposed to a variety of risks. The complications encountered include infection, nerve injury, vascular injury, tendon rupture, malunion, delayed union, non-union, failure of surgery, displacement, broken metal work, refracture, stiffness, chronic regional pain syndrome and carpal tunnel syndrome [1–4, 9, 10, 13]. These significant complications necessitate the need for adequate consenting to prevent litigation against health professionals and the health bodies that they represent.

The aim of this study was to judge the adequacy of consenting for treatment of distal radius fractures. We assessed the risks that these patients were informed about and also the grade of the surgeon who consented the patients.

Material and methods

We did a retrospective study on patients admitted to our department for treatment of distal radius fractures between June 2004 and July 2007.

A total of 228 patients attended the emergency department with a new radius fracture during this period: 165 patients had their fractures manipulated in the emergency department whereas 63 patients had only application of a cast. Of these 165 patients, 108 patients subsequently had an operative intervention for the fracture. We reviewed case notes of these 108 patients. In eight case notes there were

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no consent forms and these were excluded from the study. Ten case notes had consent forms which were specifically for patients unable to consent (Consent Form 4); these were also excluded from the study. We had 90 patients left in the study.

We analysed the type of procedure performed and the grade of surgeon. The grade of the consenting surgeon was also analysed. We studied the risks of surgery listed on the consent forms and analysed the results (Table 1).

Results

There were 42 men and 48 women with a mean age of 47.8 and 53.2 years, respectively; 54 patients had an open reduction and internal fixation (ORIF), 34 patients underwent manipulation under anaesthesia with K wiring, and two patients underwent manipulation under anaesthesia (MUA).

Of these patients, 78 were consented by junior doctors (senior house officers), ten were consented by registrars and two had their consent taken by consultants. Of the procedures, 84 were performed by the registrars and consultants whereas senior house officers performed the remaining six procedures.

Table 1 Risks and complications recorded on consent forms and their relevant frequency

Risks recorded	Frequency	Percentage
Infection	86	95.6%
Vascular injury	70	77.8%
Nerve injury	60	66.7%
Stiffness	38	42.2%
Failure of surgery	28	31.1%
Malunion	28	31.1%
Non-union	28	31.1%
Need for further surgery	24	26.7%
Clots disease	22	24.4%
Arthritis	20	22.2%
Anaesthetic risk	16	17.8%
Delayed union	14	15.6%
Pain	14	15.6%
Scar	12	13.3%
Reflex sympathetic dystrophy	12	13.3%
Displacement	6	6.7%
Refracture	6	6.7%
Tendon rupture	6	6.7%
Death	6	6.7%
Broken metal work	4	4.4%
Pneumonia	4	4.4%
Inflammation	4	4.4%
Swelling	2	2.2%
Carpal tunnel syndrome	2	2.2%

Of the consent forms signed by patients, 100% had risks recorded. The number of risks recorded ranged from two to ten risks with an average of 5.82. Infection was the most commonly recorded risk in 86 (95.6%) patients. Other risks recorded were, vascular injuries in 70 (77.8%) patients, nerves injuries in 60 (66.7%) patients and stiffness in 38 (42.2%) patients. Failure of surgery, malunion and non-union were recorded in 28 (31.1%) patients, need for further surgery in 24 (26.7%) patients and pulmonary embolus/deep vein thrombosis in 22 (24.4%) patients. Fifteen more risks and complications were recorded, all of which were documented in 20 (22.2%) patients.

Four consent forms stated the words “pneumonia”, and also the word “infection”, which implies they were made aware about different types of infections.

A total of 28 (31.1%) patients had abbreviations or phrases that may mean nothing to the patient, like “complication of GA” instead of “general anaesthetic complications”, “MI” instead of “myocardial infarction” and “DVT/PE” instead of “deep vein thrombosis” and “pulmonary embolism”.

None of the 12 patients consented by the consultants and registrars had DVT/PE recorded in their consent forms and there were no abbreviations in these consent forms. Overall they were better than the consent forms done by the junior doctors.

Discussion

All of the consent forms studied had documentation of risks, though the number was variable. About 11% of the patients had just two to three risks recorded on their consent forms; this has legal implications for the health authority. There is a risk that the patient will develop one of the complications which he was not aware of. He may have been informed of a risk, but it was not documented on the consent form. This may create difficulties if a patient pursues litigation.

This study demonstrates that the most frequently recorded risk on the consent forms for a distal radius fracture procedure is infection. In most of the cases, it was not recorded whether the infection was related to the wound or the pin track. Chapman et al. noted that pin-related complications constituted one third of complications [4, 10]. These included pin track infection, loss of reduced position, falling of pins, tendon tethering, neural and vascular damage. Chapman et al. describe that the frequency of need for re-operation is 16% [4]. Our study surprisingly showed that only 24 (26.7%) patients were informed about this risk. Frykman in his study of 430 patients with distal radius fractures found that 24% patients had reduced grip strength and the incidence was higher in the age group of 46–65 years; 77% patients in his study had stiffness, 1.4% had early median nerve injury and 2.1% patients had chronic regional

pain syndrome [7]. In our study none of the patients was informed about reduction in grip strength, 60 (66.7%) patients were told about nerve injury and only 38 (42.2%) patients were informed about stiffness.

The realistic fracture-related and treatment-related complications have been described as malunion, nerve compression or injury, complex regional pain syndrome, tendon rupture and post-traumatic arthritis [5]. Infection is relatively common after surgical treatment, but the majority are superficial pin tract infections [5]. Distal radioulnar joint pain is relatively common after distal radial fracture but usually resolves spontaneously in the absence of malunion [5]. Studies on long-term outcome of non-surgically treated distal radius fractures have shown that a number of patients experience some hand/wrist impairment a decade after the trauma and recovery of grip strength is slower than that of range of motion [6].

It is very important to understand that a variety of different procedures are used to treat a fracture. Each procedure has different risks and different frequencies of these risks. The patient should be informed about these procedure-specific risks in addition to the general ones to get an informed valid consent. Patients should be aware of possible complications which may not be directly as a result of the procedure and hence they need to be informed about these whilst being consented.

The use of abbreviations on our consent forms was noted. These acronyms such as “risks of GA” or “DVT/PE” or “MI” may not be understood by the patients at the time of signing the consent form. Even with their explanation, if used, there will be no evidence that this was done. It is vital to have an accurate record of these risks on the consent forms, and this can be achieved by recording these terms in their entirety.

Our results also demonstrate a great discrepancy between the grade of medical staff taking consent and the one performing the procedure. We noticed that junior doctors (senior house officers) had filled up 78.8% of the consent forms and performed 6.7% of the procedures. Junior doctors usually have a variable experience in orthopaedics and thus are not expected to be aware of all the risks and complications of this procedure. It follows that they will not be able to adequately consent and explain the potential risks of the procedure to patients.

Conclusion

The consent process was flawed, and the key to overcome the above problem is organising training sessions dedicated to the importance of consenting patients. Further, the use of consent forms with pre-printed risks that are explained in an easy to understand vocabulary could be used. The other option is the use of sticky labels with pre-printed risks, as there would be written evidence of having informed the

patient of risks associated with the procedure. In addition, these pre-printed materials will reduce the great variability of lack of experience and knowledge of the consenting doctor. Probert et al. also indicated the possibility of using consent forms with pre-printed general risks in easy vocabulary to be understood by patients [12].

Provision of written information about the condition and the proposed procedure has been found to be beneficial and increases patients' knowledge and understanding of the procedure [11, 12].

There is definitely scope for improvement and health professionals have to add more skills to adequately consent patients for operative procedures.

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