Patients' experience of surgical accidents

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Abstract

Objective—To examine the psychological impact of surgical accidents and assess the adequacy of explanations given to the patients involved.

Design—Postal questionnaire survey.

Setting—Subjects were selected from files held at Action for Victims of Medical Accidents.

Patients—154 surgical patients who had been injured by their treatment, who considered that their treatment had fallen below acceptable standards.

Main measures—Adequacy of explanations given to patients and responses to standard questionnaires assessing pain, distress, psychiatric morbidity, and psychosocial adjustment (general health questionnaire, impact of events scale, McGill pain questionnaire, and psychosocial adjustment to illness scale).

Results—101 patients completed the questionnaires (69 women, 32 men; mean age 44 (median 41.5) years. Mean scores on the questionnaires indicated that these injured patients were more distressed than people who had suffered serious accidents or bereavements; their levels of pain were comparable, over a year after surgery, to untreated postoperative pain; and their psychosocial adjustment was considerably worse than in patients with serious illnesses. They were extremely unsatisfied with the explanations given about their accident, which they perceived as lacking in information, unclear, inaccurate, and given unsympathetically. Poor explanations were associated with higher levels of disturbing memories and poorer adjustment.

Conclusions—Surgical accidents have a major adverse psychological impact on patients, and poor communication after the accident may increase patients' distress.

Implications—Communication skills in dealing with such patients should be improved to ensure the clear and comprehensive explanations that they need. Many patients will also require psychological treatment to help their recovery.

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Introduction

The Harvard medical practice study found that 3.7% of patients admitted to hospitals in New York state sustained some kind of injury during treatment.¹ Nearly half these adverse events were associated with an operation.

Little is known about the effects on the patients involved,² although there is widespread concern about the litigation that may follow such injuries. In fact, only about 12% of injuries due to negligence lead to litigation in the United States,¹ and in Britain the figure is probably lower.

Research on the effects of accidents of other kinds suggests that the psychological effects of an injury may be sustained and severe.^{3,4} In cases where the victim of an accident is not to blame, such as a medical accident, the psychological trauma may be heightened.⁵ Once an accident has occurred remedial medical treatment will be instituted. However, if the effects of an accident are to be minimised the psychological needs of the patient may need to be addressed. Patients may be very distressed and will probably want to know exactly how their injury occurred. Many studies have shown that patients are generally dissatisfied with the information they receive in the course of ordinary treatment.⁶ In some cases patients seem to have difficulty in obtaining a clear explanation.

Action for Victims of Medical Accidents (AVMA) is an organisation which provides support and advice for patients injured during their treatment and works to improve the care given to them. It also campaigns for more research into the causes of accidents, for an improved system of compensation, and for health service staff to be more accountable to their patients. Its research has suggested that a poor or incomplete explanation after an injury during treatment increases patients' distress and that many patients turn to litigation primarily because they failed to obtain a clear explanation of what happened.⁷

If poor communication after an accidental injury does increase distress the implications for quality of care and clinical practice are considerable. A priority for all patients injured during treatment would be an immediate explanation aimed at reassurance and maintaining trust in the staff caring for them. In this study we wished to discover how distressed injured patients are and whether poor communication contributed to their distress. The main aims of the study were therefore (a) to assess the psychological trauma suffered by patients involved in surgical accidents, (b) to assess the adequacy of explanations given to these patients, and (c) to examine the relation between the adequacy of the explanation and subsequent distress and adjustment.

Methods

We collated summary sheets for all 252 patients who had contacted AVMA during

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1990 with a query or complaint relating to their surgical treatment. The search was limited to those patients who had had surgery in the previous three years and in whom further treatment had not resolved the problem. Gynaecological cases or cases in which the patient had died or become mentally handicapped were not considered.

A brief exploratory questionnaire and two screening questionnaires (impact of events scale and general health questionnaire, see below) were sent initially. Patients were asked to reply if they considered they had been injured by their surgical treatment and were asked whether they would be prepared to complete a more extensive set of questionnaires. One hundred and sixty three responses were received. At review three patients who did not meet the original criteria and six whose operation fell beyond the three year limit were excluded. The full set of questionnaires was sent to the remaining 154 patients; 101 (66%) returned a fully completed set. These 101 respondents had all considered litigation, and many had decided to proceed. The findings from this group are reported below.

QUESTIONNAIRE DESIGNED FOR STUDY

The questionnaire was developed from a version used in an earlier pilot study at AVMA. It asked for (a) basic demographic information; (b) a brief description of the incident that led patients to contact AVMA; (c) the effects the incident had on their life; (d) explanations given preoperatively and post-operatively; (e) whether patients had received an admission of responsibility or apology; (f) whether they felt the incident was preventable and, if so, who they blamed; and (g) whether they had considered litigation and their reasons for proceeding or not proceeding. Ratings for blame and avoidability were made on a 5 point scale. Postoperative explanations were also rated on a 5 point scale for amount of information, accuracy (as far as they could tell), clarity, and sympathy.

STANDARD QUESTIONNAIRES

Standard questionnaires used in the study were the general health questionnaire (GHQ-28), which when used as a screening instrument, indicates the presence or absence of psychiatric disorder,⁸ and the impact of events scale, which assesses the effects of traumatic events, such as accidents and serious life events.⁹ These instruments have been adopted as the standard screening instruments for investigating the effects of accidents and disasters.¹⁰ The intrusion subscale of the impact of events scale measures the extent to which unwanted distressing memories of the traumatic event continue to intrude into a person's mind. The avoidance subscale assesses the extent to which people need to avoid reminders of the original event. Ratings are made of such statements as, "I thought about it when I did not mean to" (intrusion) and "I tried not to talk about it" (avoidance).

The McGill pain questionnaire (short form), in which pain is rated on 15 separate pain descriptions and summed to produce scores for both the intensity of pain and the distress it causes,¹¹ and the psychosocial adjustment to illness scale were also used. This psychosocial scale is a wide ranging measure that assesses several aspects of a person's adjustment to their illness or disability.¹² The categories concern attitudes to health care, effect on studies or work, effect on home life, sexual relationships, family relationships, social life, and psychological distress. The scale was adapted in this study to refer to the effect of the surgical treatment on the patients' life; patients were asked to distinguish this effect from the effects of pre-existing illness.

Results

PATIENT CHARACTERISTICS

The sample included 69 women and 32 men. Their mean age was 44 (median 41.5) years (range 19 to 87 years). Sixty four were married, 19 were single, and the remainder widowed or divorced. About two thirds of the patients therefore had some support at home. Twenty seven patients were still in full time employment, 15 were employed part time, and the remainder were unemployed. Eighty were treated in the NHS, 19 privately, and two did not stipulate their place of treatment. All had considered litigation, and 54 had decided to proceed. The most common reason for not proceeding was cost.

NATURE OF INJURY OR TRAUMA

The medical records of these patients were not available, but each patient provided a brief description of the injury they had sustained; table 1 summarises these injuries, and the box gives anonymised examples.

In many cases the exact nature of the damage was not clear, though the descriptions of pain were usually extremely vivid. These have been classified as "increased pain," without more definite medical information; obviously many of these cases may have involved injuries or perforations. The average time between the injury or incident and the completion of the questionnaires was 16 months.

EFFECT ON PATIENT'S LIFE

In 30 patients the main effect was physical (primarily increased pain or decreased

Table 1 Nature of injury or trauma

	No
Injury to organ	24
Injury to nerve	10
Increased pain after operation	27
Perforations	10
Reduced mobility	5
Paraplegia or paralysis	3
Infections	5
Pneumothorax	2
Awareness or pain during operation	2
Failed operation	2
Burns	2
Bleeding	3
Other	6
Total	101

Extracts from patients' descriptions

Complications from routine pregnancy which resulted in tear in bladder. This necessitated major repair surgery. I was off work for a total of five months

Probe to kidney stone bent during operation – withdrawal caused damage to ureter/bladder. A forecast three day stay became 11 weeks in hospital, 27 weeks off work, and after effects which are still ongoing

Unable to walk unaided since laminectomy operation

Left for 7 months with chronic stomach pain and distension. Then discovered that internal stitching torn away. Two major operations followed . . . still have pain, distension, and bowel problems

Went into hospital for routine cone biopsy during which a blood vessel was severed. Hysterectomy performed to stop bleeding

Abscess formed after operation. Left for over three weeks before doctor did anything. Perforated bowel discovered and ileostomy performed, then developed blood poisoning from TPN line

After an operation to investigate infrequent pain on the right side (kidney) I have been left in continuous pain for which no explanation has ever been given

Underwent unsuccessful operation for severe back pain. Second operation left me in more pain and unable to walk. Since then I've had two operations by a different surgeon

Being told it would be a minor operation to have a "snippet" of cartilage removed and then being told I would never walk again – told 'it was just one of those things'

Following a cartilage operation on left knee I developed a deep vein thrombosis and have been left with chronic pain in my left knee and I have been on crutches ever since

Admitted to hospital for dilatation and curettage. Result: torn uterus, hole in colon, gangrenous appendix

mobility), and in 16 the trauma was primarily psychological. The remainder cited a combination of factors: physical, psychological, social, and financial. Seventy six patients rated the overall effect on their lives as severe or very severe, and 35 rated their financial losses as severe.

CHANGES IN ATTITUDE TO MEDICAL STAFF

Seventy eight patients reported that their attitude to the medical profession had changed as a result of their experiences. Of these patients, 40(51%) said they had less confidence in doctors' competence and 35(45%) expressed their change of attitude in more personal terms, mostly indicating that they had less trust in doctors than previously. Forty two patients also reported that the attitude of staff to them had changed after the incident. Of these, 18(43%) found the staff more attentive and caring but 22(54%) found their attitude changed for the worse. Typical comments were that the staff were more withdrawn and distant and gave less information.

Table 2 Psychological impact of surgical accidents.
Values are mean(SD) scores

Impact of events scale	Surgical accidents	Serious life events	Accidents (mostly road accidents)
Intrusion	21.3(9.2)	21.4	5.48
Avoidance	18.5(10.4)	18.2	9.26
Total	39.8(17.2)	39.5	14.74

MEASURES OF DISTRESS AND ADJUSTMENT

Impact of events scale – Table 2 shows the scores for the intrusion and avoidance subscales and the total scores. Scores for other people with accidental injuries (mostly in road accidents)³ and for people experiencing serious life events (bereavements and assaults)⁹ are also presented to indicate the severity of the trauma experienced by the patients in this study. The three groups are not necessarily comparable in terms of age, sex, and other factors that may affect the level of distress, and the figures for comparison are presented only to make the scores more meaningful to those unfamiliar with these particular measures.

General health questionnaire – Seventy eight patients scored above the cut off point for detecting people with a psychiatric disorder. Of course, this does not mean that they had a pre-existing psychiatric disorder, simply that their current distress is sufficiently high to warrant a psychiatric diagnosis. However, it should be noted that the presence of physical symptoms may elevate scores on this questionnaire and that 77% is therefore an upper estimate of the presence of disorder.

McGill pain questionnaire – Mean score for the intensity of pain was 11.7(SD 7.8) and for the affective dimension 4.5(3.7). In Melzack's original study scores for surgical patients prior to their receiving analgesia in the days after their operation were 11.7 and 3.7 respectively. Some patients experiencing medical accidents therefore still have, after 16 months, levels of pain comparable to those of patients recovering from surgery without analgesia.

Psychosocial adjustment to illness scale – Table 3 shows the scores on the individual subscales of this scale, each subscale reflecting the degree of difficulty experienced in that area of the person's life. Scores for patients with gynaecological cancer¹³ and for patients with coronary heart disease both pre-operatively and 12 months after bypass surgery¹⁴ are also presented for comparison to help in the interpretation of the scores. Psychosocial adjustment in our patients is extremely poor more than a year after the

Table 3 Psychosocial adjustment after surgical accidents.
Values are means(SD) scores

	Surgical accidents	Coronary Heart Disease		Cancer
		Preoperatively	At 1 year	
Health care	12.2(4.4)	11.5	5.1	7.6
Vocational	7.4(4.8)	11.3	2.0	6.8
Domestic	8.3(4.4)	10.9	3.9	5.3
Sexual	6.9(5.0)	7.6	6.0	10.1
Family	2.7(2.8)	1.9	1.6	1.4
Social	9.1(5.1)	8.8	5.8	4.4
Distress	10.6(5.0)	6.4	4.0	6.8
Total	57.2(21.6)	58.5	28.4	42.4

surgery. Their overall adjustment is appreciably worse than patients with various forms of cancer and heart disease, with their particularly showing greater distress and a pronounced deterioration in their social activities, their ability to work, and their attitudes to their illness and to those caring for them.

EXPLANATIONS TO PATIENTS

Preoperative explanation – Seventy seven patients reported that they had not been given a clear explanation of the treatment they were going to have and its attendant risks and side effects. Of these, 49(64%) said that the risks had not been explained, 22(29%) that the extent of recovery had not been made clear, and the remainder did not specify.

Postoperative explanation – In 40 patients an explanation was offered within a week after the incident and in a further 17 within a month. However, 16 patients waited between a month and six months, and 20 waited longer than six months. A consultant or senior registrar gave the explanation in 71 patients and a doctor of unknown grade in a further 17. However, in seven patients it was a nurse who finally explained to the patient what had happened. In only 21 patients was responsibility for the incident accepted by staff, and in only 27 was an apology offered. Other hospital staff were present on 26 occasions when the explanation was given, a friend or relative of the patient on 15 occasions, and both staff and relatives on four occasions. In 34 cases no one else was present, the patient being supported neither by other staff nor by relatives.

Quality of postoperative explanation – Eighty two patients were dissatisfied or very dissatisfied with the amount of information they were given; 67 were dissatisfied with its clarity, 63 with its accuracy (as they perceived it), and 63 thought it was given unsympathetically. Forty four patients given explanations reported that they had no opportunity to ask questions.

RELATION BETWEEN ADEQUACY OF EXPLANATION AND ADJUSTMENT

Significant negative correlations were found between all ratings of the adequacy of postoperative explanation and the intrusion scale, a poor explanation being associated with a higher incidence of disturbing memories over a year later. Significant negative correlations were also found between all ratings of postoperative explanation and three of the

subscales of the psychosocial adjustment to illness scale, those relating to attitudes to illness, ability to work, and social life. Believing that an injury is unexplained seems to be particularly related to a reduced ability to function adequately outside the home. Table 4 shows the principal significant relations.

The relation between explanation and measures of distress and adjustment may simply indicate an overall negative response or bias against doctors. However, there were no significant correlations between any of the distress and adjustment measures and the extent to which patients thought the incident was avoidable, whether they blamed doctors or nurses, and whether they thought the incident could have been prevented, suggesting that the relation between distress and adequacy of explanation is not simply a function of an overall negative attitude to doctors.

The level of pain might also mediate the relation between explanation and distress. Pain obviously increases distress and might affect either the memory of the explanation or the way in which it was perceived. However, stepwise regression analyses with severity of pain as the first independent variable disclosed that it had little effect on the relation between adequacy of explanation and distress.

Discussion

The patients in this study who considered that they had been injured by their surgical treatment were profoundly distressed over a year after treatment. Their levels of distress were considerably higher than those for people who have experienced bereavements or serious accidents, and their psychosocial adjustment was considerably worse than that of patients with serious illnesses.

Explanations given to these patients were perceived by them as extremely unsatisfactory. Over three quarters reported that they had not been given a clear explanation of the treatment they were to have and its attendant risks. In some cases the doctors concerned may have given an explanation, but the patients either did not understand it or did not appreciate the risks. Explanations of the injuries were perceived as lacking in information, unclear, inaccurate, and given unsympathetically. Given the lack of clarity, it is particularly alarming that almost half (44%) the patients who received explanations reported that they

Table 4 Relation between impact of event, psychosocial adjustment, and adequacy of explanation. Values are Pearson correlation coefficients (95% confidence intervals)

	Information	Clarity	Accuracy	Sympathy	Mean score
Intrusion†	-0.29** (-0.09 to 0.47)	-0.27* (-0.07 to -0.45)	-0.22* (-0.01 to -0.41)	-0.27** (-0.07 to -0.45)	-0.32** (-0.16 to -0.49)
Health care orientation‡	-0.30** (-0.14 to -0.47)	-0.36*** (-0.20 to -0.52)	-0.24* (-0.04 to -0.42)	-0.34** (-0.18 to -0.50)	-0.36*** (-0.20 to -0.52)
Vocational‡	-0.31** (-0.15 to -0.48)	-0.28** (-0.08 to -0.46)	-0.20 (0.01 to -0.39)	-0.41*** (-0.25 to -0.57)	-0.35*** (-0.19 to -0.51)
Social‡	-0.24* (-0.10 to -0.43)	-0.29** (-0.14 to -0.47)	-0.15 (-0.05 to -0.35)	-0.39*** (-0.23 to 0.55)	-0.31** (-0.14 to -0.48)
Total score‡	-0.30** (0.10 to -0.48)	-0.33** (-0.17 to -0.50)	-0.19 (0.02 to -0.38)	-0.37*** (-0.21 to -0.53)	-0.35*** (-0.19 to -0.51)

*p<0.05, **p<0.01, ***p<0.001.

† Impact of events scale.

‡ Psychosocial adjustment to illness scale.

had no opportunity to ask questions. Poor explanations after the injury were associated with higher distress over one year later.

It might be argued that patients who are very dissatisfied with their treatment are simply those with neurotic or difficult personalities who complain routinely and arouse antagonism. In some cases this is no doubt true, but we do not believe that it is an adequate explanation of our findings. We know that medical accidents are not rare, and there is no *prima facie* reason to doubt these accounts. Certainly, many of these patients would have had pre-existing illness, and this has undoubtedly contributed to their distress. However, indices of distress and adjustment were still appreciably higher than in patients with severe, even life threatening illness. It could be argued that these patients might be exaggerating their symptoms in the hope of obtaining compensation. However it was made absolutely clear to those taking part that their replies would have no bearing on any case in which they were involved. There was also no difference in the levels of distress between patients who had decided not to proceed with litigation and those who had. We believe that most of these patients have genuine grievances and are very much in need of help.

Assessment of the patients' views of the explanations they received after surgery suggests that the way the trauma was handled afterwards may increase distress. Adequacy of explanation was significantly correlated with the degree of intrusive memories and several indices of poor adjustment, which could not be explained by an overall negative attitude to doctors or by pain levels. The association between distress and adequacy of explanation is important, but care must be taken in its interpretation. Lack of a clear and sympathetic explanation may well increase distress. Alternatively, subsequent distress and anger might bias or impair the patient's recollection of the explanation they were given. The findings show at the very least that a clear explanation is seen as extremely important by injured patients and that they are extremely dissatisfied with the explanations they received. Patients who had decided to proceed with litigation were more dissatisfied than those who were not proceeding, which may indicate that some patients do sue primarily to get a satisfactory explanation. The inadequacy of the clinical complaints procedures may also be relevant. Donaldson and Cavanagh found that most complainants waited over a year for a response and they suggested that the final peer review stage did not show sufficient impartiality.¹⁵ A valuable feature of the legal process, which is seldom commented on, is that the patient receives a truly independent review of their case from an expert instructed by their solicitor. They will also often have an opportunity to discuss what happened to them in detail with that expert.

Patients who sustain injuries of this severity during their treatment are of course rare. Our study is small and many different kinds of

injuries were sustained. Nevertheless, we believe that the results have definite clinical implications both for handling patients who are seriously injured during their treatment and for dealing with lesser injuries, minor grievances, and dissatisfaction. The central point is that when an incident has occurred poor communication, perhaps in an honest attempt to smooth things over, compounds the problem. Poor communication seems to distress the patient still more, may make litigation more likely, and reduces the patient's trust in doctors and other health professionals. This in turn may lead them to avoid having further treatment, which in most cases they very much need.

We suggest that all patients injured during their treatment need a thorough and clear account from a senior doctor of what exactly happened. They need to have time to reflect on what is said and to be able to return and ask further questions. This in itself may reduce their distress considerably. In many cases they will be anxious or depressed and have various psychological and social problems. Some are likely to need formal psychological or psychiatric treatment. In some cases staff involved in a serious accident, who may blame themselves for what has occurred, may also benefit from some supportive counselling. Looking more widely, we suggest that medical staff find it very difficult to continue to be supportive to a patient who has been injured by treatment that was meant to help them. When faced with an angry or grieving person the natural tendency is to withdraw, as many of these patients reported. Training in communication skills both pre-qualification and in post-qualification training needs to incorporate training in helping dissatisfied, angry, and distressed patients. In the case of accidents this may mean better long term outcome, less future demand for health services, and reduced litigation. At an institutional level it would be wise for health authorities to draw up a code of practice for dealing with injured patients, not simply to reduce the costs of any future legal action but to help the patients involved and so reduce the need for legal action. Many of these patients are not primarily interested in compensation. They are seeking an explanation, an acknowledgement that something has gone wrong, help for themselves, and an assurance that some action will be taken to prevent other patients suffering in the future.

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