Hospital Topics

Inpatients in an accident unit

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Summary

A one-year prospective study was undertaken in the 79-bed accident unit of the Bristol Royal Infirmary to define reasons for continuing inpatient care. This showed that, of a consecutive series of 466 patients staying in hospital for over two weeks, 35% lengthened their stay beyond that needed for acute nursing or continued medical care. A combination of factors usually led to total social dependence, the major problem being the absence of a caring relative. Other factors included pre-existing locomotor disorder or mental infirmity, unmanageable incontinence of urine after catheterisation, and institutional disorientation. If the pattern of management of elderly patients after injury is not changed and beds are to be kept available for the newly injured the unit will need about 50 new long-stay beds each year.

Introduction

In 1971 65.6% of the total NHS budget was spent on hospital care.¹ The proportion had risen each year since 1961. The increased expense of advanced investigation and care has been partially offset by greater use of beds, and in the Bristol clinical area an increase in admissions of 35% during the decade has been accompanied by a fall in the total available beds of about 4%.² As the costs of hospital care soar and standards of inpatient care are compromised by staff shortages there is criticism of unnecessary hospital bed occupancy. For this reason all patients in one year who remained in the accident unit of Bristol Royal Infirmary for more than 14 days were assessed to determine the reasons for their continuing stay.

Methods

During the one-year survey all patients admitted to the accident unit were observed, and any patient remaining in hospital for over 14 days was studied in detail at a weekly case conference attended by the ward sister, occupational therapist, physiotherapist, social worker, and orthopaedic surgeon. Reasons for continuing hospital care were defined as follows: *Medical*—the patient needed special or continuous nursing care, traction, or surgery; *Remobilisation*—the patient could undertake all the activities of daily living with minimal help but was unable to walk, move from bed to chair, or climb stairs unsupervised; *Social*—the patient needed non-nursing supervision with activities of daily life or walking and was unsafe most of the time unless attended.

Results

During the survey 2883 patients were admitted to the unit; 466 (16%) stayed over 14 days and formed the study group. Their ages are shown in table I and the length of their stay in table II. The principal injuries were femoral neck fracture in 166 (36%), Head injury in 60 (13%), knee and ankle fracture in 52 (11%), tibial shaft fracture in 47 (10%), femoral shaft fracture in 38 (8%), pelvic fracture in 36 (8%), spine, abdominal, or chest injury in 27 (6%), arm fracture in 17 (4%), and miscellaneous injuries in 23 (5%). Eighty-four patients, including 44 with head injuries and 21 with both arm and leg injuries, sustained multiple injuries.

TABLE I—Age distribution of patients remaining in accident unit more than 14 days

Age groups (years)	12-50	—60	—70	—80	—90	>90
No of patients	124	41	58	98	122	23

TABLE II—Length of stay of patients remaining in accident unit more than 14 days

Length of stay (weeks)	2-3	—7	—11	—15	—19	>20
No of patients	120	248	58	26	10	4

Of all patients who stayed more than 14 days 376 (81%) finally returned to community care or to their hospital of origin, 56 (12%) needed long-term institutional care, and 34 (7%) died awaiting such accommodation.

REASONS FOR CONTINUING CARE

Medical—The group needing medical care included patients ranging from those needing intensive care and monitoring and those totally dependent on nursing to those restricted in only some activities or receiving supervised remedial treatment. Most patients passed rapidly from being dependent on nursing during their early recovery from surgery or acute infection and soon became more in need of rehabilitation and kitchen and workshop facilities than of an acute hospital bed. Ten to 15 per cent passed through a more prolonged phase of restricted activity. Twenty-one patients (18 with ankle fractures and three with hand injuries) who all lived some distance from the unit became independent within 24 hours of injury and surgery but remained as inpatients to take advantage of the workshop and gym facilities for intensive treatment.

Remobilisation—Patients remaining for remobilisation were to return home eventually but were not yet able to walk independently with any form of walking aid. Two-thirds of these patients were elderly women with femoral neck fractures, and many had been judged by the friends or relatives who chiefly looked after them to have been on the verge of loss of independence before admission. Between 10% and 35% of the patients were remobilising each week, and indeed 25% of the beds were occupied by remobilising patients in 10 out of the 52 weeks studied. The number of weeks of rehabilitation needed by

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patients of each age group is shown in table III. Although those under 60 years had the more severe injuries, they rarely took over one week to remobilise, while those over 60 often took much longer. These patients needed little help with meals and dressing and only minor nursing care. While they needed skilled treatment by occupational therapists and physiotherapists most of their daytime needs could have been provided by intelligent laymen.

TABLE III—Duration of remobilisation period (interval from end of nursing care to time when patient may be discharged safely)

Age (years)	Total in age group	Remobilisation (weeks)		
		1-2	3-4	>5
<60	165	49	2	2
61-70	58	21	5	1
71-80	98	38	14	5
81-90	122	23	15	2
>90	23	8	5	3

Social—Eighty-five patients were finally placed in this group when, in the unanimous opinion of the assessment team, (a) there was no need for continuing nursing or medical care apart from that which could have been provided at home by a supporting relative or friend or (b) it became clear that immobility, incontinence, or mental confusion would prevent a return home and necessitate life-long basic nursing care. Of the 85 patients (18% of the total) who formed this group three-quarters had an upper femoral fracture or had sustained a head injury. They were often totally dependent on relatives or neighbours before admission, were often mentally or physically handicapped, and had usually fallen at home. Forty-four per cent of these patients were eventually discharged home (33 directly and four via the geriatric unit), 31 were transferred to a geriatric bed, 11 went into accommodation provided for those in need of care and attention under part III of the National Assistance Act 1948, and six died. Each week between 25% and 40% of our beds were occupied by patients whose problems were basically social or senile rather than medical.

SIGNIFICANT FACTORS IN CONTINUING SOCIAL NEED

Age—Only one patient in the social care group was under 60 years of age.

Admission injury—The types of injuries among the patients remaining in hospital for social reasons were similar to those of the rest of the patients in the study group aged over 60 years.

Pre-existing problems—Forty-eight of the 85 patients had a pre-existing problem that prolonged dependence and hampered remobilisation: 25 suffered from senile dementia, 13 previously walked only with help, a further four were hemiplegic, and three were partially sighted. Many patients had additional medical problems—for example, cardiac failure, anaemia, and deafness—but these did not appear to hamper progress.

Complications of hospital stay—Of the medical and surgical complications after injury only incontinence of urine prolonged hospital stay in mobile patients otherwise ready for discharge. It was the sole problem in nine patients of previously normal intellect, as well as compounding the difficulties of several patients with senile decay. Postoperative chest or wound infection, venous thrombosis, myocardial infarction, or mechanical failure of devices used for internal fixation all increased mortality and lengthened the duration of dependence on nursing but did not prolong remobilisation or otherwise affect the final outcome of the admission.

Relatives—Twenty-four of the patients prolonging their stay for non-medical reasons had relatives both able and willing to care for them once their nursing problems had been resolved. Eighteen of the 24 returned to their homes while permanent part III or hospital care was necessary for the other six. Of the 61 patients without capable relatives only 19 returned to their own or their carer's home, 36 required long-term institutional or part III care, and six died awaiting such care.

Discussion

Admission to the accident unit was usually for an obvious medical reason, and only 20 of the 2883 patients were admitted

for a social reason alone. Thus continuing bed occupancy in a consecutive group of necessary admissions could be observed, and admission policies did not have to be explored. A patient needs to remain in hospital if, even with full social support in his own home, he is at risk from further injury. It was during the first 14 days that primary deaths occurred, and acute care was usually completed within this time. After this period the long-term medical or nursing problems could be clearly defined, difficulties in remobilisation became apparent, and lack of a suitable person to care for the patient at home became a major factor in the need for continuing bed occupancy.

The major purpose of this study was to explore the extent to which continued hospital stay was due to social rather than medical needs. The main discharge or transfer problems arose, firstly, as a result of delays in accepting that a patient was going to need long-term medical or nursing care; secondly, from the slow remobilisation of the elderly infirm; and, thirdly, from the difficulties presented by the elderly isolated patient, who though able to cope by day, became confused and unsafe at night. Incontinence of urine, however, was the major bar to home care in several patients who were otherwise fit. In every case the patient had been catheterised for postoperative retention of urine and was unable to regain bladder control.

Several elderly patients who could not return home after their hospital stay had sustained head injuries. Many were confused and on the borderline of dependence before injury, and—while their injuries were rarely severe and periods of unconsciousness short—post-traumatic confusion was common and probably resulted as much from the change of circumstance and surroundings after injury as from the injury itself. Admission to hospital and care of these injuries led all too often to mental and physical deterioration, changing a socially independent person into a socially demanding one.

Our experience suggests that patients aged over 60 years, although representing only 15% of our total admissions, constitute 65% of those who stay in hospital for over two weeks and 99% of those who remain for social rather than medical reasons. Predictions based on the 1971-3 national census suggest that the female population aged 65-74 will increase by 6% and the proportion aged over 75 will increase by 9% over the next 10 years.^{3,4} There will thus be an increase in both the population most at risk of home injury and the number of elderly isolated patients who are the slowest to rehabilitate.

The community services—home helps, meals on wheels, district nurses, and health visitors—were invaluable in maintaining contact with patients after discharge and provided a source of information to general practitioners about their patients' progress. These services thus enabled a patient to return home when there was a relative who visited infrequently, or who was out at work all day, and aided return to the community of patients for whom part III accommodation would otherwise have been necessary. As it was at night that patients were most often at risk and requiring supervision, however, a night sitting service would be needed if any attempt is to be made to increase the number of patients returning to the community or to shorten their hospital stay.

Conclusions

Hospital beds will continue to be needed for the acutely injured. Some of these patients will be elderly, some will be on the verge of social breakdown before admission, and others will become socially dependent as a result of the injury or its sequelae. Despite determined attempts at remobilisation, a sizeable group of elderly patients will be unable to return home and will need life-long supervision and care. It is unrealistic to expect the provision of trained staff and facilities for an additional 50 patients each year, and a radical reappraisal of their management therefore seems necessary.

Redeployment of existing buildings and increasing use of nursing auxiliaries and untrained more elderly helpers would

enable us as a community to care for these patients, while leaving well-staffed beds and surgical facilities in acute hospitals for those recently injured.

I thank the ward sisters, social workers, occupational therapists, and physiotherapists for the help given to me and to the patients, without which this study would have been impossible.

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Radiology and endoscopy in acute upper gastrointestinal bleeding

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Summary

Of 112 patients admitted with acute upper gastrointestinal bleeding, the presumed bleeding site was detected in 61.5% of cases by radiology and in 57% of cases on endoscopy. Thirty-one patients who had barium-meal examination were operated on and the surgical and radiological findings agreed in 26 (84%). Twenty-three patients who had endoscopy were operated on and the surgical and endoscopic findings agreed in 15 (65%). In 10 cases radiology detected a lesion not identified on endoscopy and in nine endoscopy detected a lesion not seen at radiology. We suggest that when there are two potential sources of bleeding radiology as well as endoscopy can detect the actively bleeding lesion. The supplementary nature of radiology and endoscopy is emphasised and we conclude that both methods should be used if there is any doubt at the initial radiological or endoscopic examination about the source of the bleeding.

Introduction

Recently many reports have compared favourably the value of fiberoptic panendoscopy in acute upper gastrointestinal bleeding with emergency barium meal.¹⁻³ As we did not think that the results of endoscopy have been so much better than those of barium-meal examination, we have compared fiberoptic endoscopy and emergency barium-meal examination in detecting the bleeding site in patients with either haematemesis or melaena admitted to this hospital in the four years 1971-4.

Patients and methods

Of the 112 patients, admitted (82 with haematemesis and 30 with melaena) 101 patients had barium-meal examination and 72 patients endoscopy. Both barium-meal examination and endoscopy were performed in 61 cases, barium meal alone in 40 cases, and endo-

scopy alone in 11 cases. We recorded those cases in which a potential bleeding lesion was detected by either radiology or endoscopy. Such a lesion was deemed to be present whether or not it was seen by the alternative method of examination, unless it was subsequently disproved at operation. The radiological opinion given at the time of the examination was used in the analysis of the results even if a subsequent review of the films revealed a lesion not initially reported.

An uncomplicated hiatus hernia seen either at endoscopy or barium meal and a deformed duodenal cap without active ulceration seen at barium-meal examination were not regarded as potential sources of bleeding. Similarly, gastritis and duodenitis seen at endoscopy were not considered to be potential bleeding sources unless superficial erosions, frank bleeding, or blood clot were present.

Results

A diagnosis was made in 62 (61.5%) of the 101 patients who had barium-meal examination and in 41 (57%) of the 72 patients who had endoscopy. Employing either or both methods a diagnosis was made in 80 patients out of 112 (71%). Chronic gastric and duodenal ulcers were responsible for most cases of bleeding, accounting for 60 of the 80 cases (75%) in which there was a final diagnosis. No case of erosive gastritis was detected by radiology whereas 6 of the 72 cases (8%) who had endoscopy were found to have gastric erosions.

Of the 112 patients 35 were operated on and we compared the surgical radiological, and endoscopic findings. Of these 31 had a barium-meal examination and in 26 of these (84%) there was radiological and surgical agreement. In four cases a surgically detected lesion had not been seen at barium meal and one patient had a presumed false-positive radiological finding. Twenty-three of the operated patients underwent endoscopy and in 15 (65%) the endoscopic and surgical findings agreed. In six cases a surgically detected lesion had not been seen at endoscopy and two patients had a presumed endoscopic false-positive finding.

In 10 cases the presumed bleeding lesion was detected by radiology but not seen at endoscopy and in half of these the radiological diagnosis was confirmed surgically. In nine cases the probable bleeding lesion was detected by endoscopy but not seen at radiology. There was surgical confirmation of the endoscopic findings in one patient and in another patient with a concomitant duodenal ulcer oesophageal varices were seen to be the bleeding site at endoscopy. The oesophageal varices were not seen at barium meal.

Active bleeding or blood clot in or adjacent to a lesion, thus identifying the bleeding point, was seen at barium-meal examination in 13 cases and at endoscopy in eight. In six cases multiple lesions were seen at barium-meal examination and the lesion responsible for the bleeding was identified by a blood clot in one. Five cases with multiple lesions were seen at endoscopy and the lesion responsible for the bleeding was identified in two.

Discussion

A positive diagnosis was made at endoscopy in this series in

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