Orthopaedic Casualty Evacuation to the Royal Hospital Haslar November 1995 to April 1996

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SUMMARY: A survey of the orthopaedic casualties evacuated (casevacs) to the Royal Hospital Haslar between November 1995 and April 1996 was performed. A total of 464 service persons and civilians were casevaced. Orthopaedic cases amounted to 55% of all evacuations. Of these, 54% were British Army personnel. Conditions necessitating casevac were classified as either acute, (occurring during the deployment), or chronic (where the condition was present prior to deployment). Of the acute cases, there was an even mix between bony and soft tissue injuries (STIs). Sporting activities were the commonest cause of injury. The condition had been present prior to deployment in 16% of cases. Half of these were considered to have been unfit for deployment. Strategies for prevention of unnecessary casevacs are discussed.

Introduction

The Royal Hospital Haslar is now the primary UK reception hospital for evacuated casualties of all three Armed Services. Haslar began taking Army casualties during the latter months of 1995 prior to its reversion to the Royal Hospital Haslar from the Royal Naval Hospital Haslar.

The purpose of this survey and audit project was to assess the workload to the hospital, to determine the injury patterns and causes and finally to audit those cases with pre-existing morbidity prior to deployment. It is in the identification of these 'chronic' cases and the reasons why they were deployed, that the potential for reducing further unnecessary casevacs exists. In this way, the audit loop can be closed.

Methods

The notification signals of all casevacs were retrospectively examined between November 1995 and April 1996. The hospital records for the orthopaedic cases were then examined. Conditions were classified as to either acute, occurring whilst deployed; or chronic, with documented evidence of a preexisting problem. The acute cases were subdivided into either fractures, dislocations, or soft tissue disorders.

Details of the chronic cases were discussed between the authors and a decision was reached, based on the information available, as to whether or not it was reasonable for a particular patient to have been posted overseas.

Results

During the 6 month period 464 patients were casevaced to Haslar. Orthopaedic patients constituted 55% of this total (surgical 28%, medical 17%).

Of the 253 orthopaedic patients identified by signals, only 182 (72%) had retrievable hospital documentation. Analysis of these cases revealed the following:

The breakdown by service was Army 54% (n = 100), Royal Navy 34% (n = 61), Royal Air Force 9% (n = 16) and civilians 3% (n = 6). Of the total, 40% (n = 69) had been evacuated from the Former Republic of Yugoslavia (FRY) (Table 1). Analysis by month show the trend of increasing

Table 1
Origin of Casevacs

Place	Number
Bosnia	69
'Sea'	34
Norway	17
Falklands	7
Cyprus	5
Nairobi	4
Italy	4
Dubai	4
USA	3
Ascension	2
Gibraltar	2
Hong Kong	2
Unknown	6

Table 2
Audit of Chronic Cases

Condition	Number of cases	Fitness to deploy	
		Fit	Unfit
Low back Pain	14	10	4
Unstable ankle	4	2	2
Stress fractures	2		2
Dislocated shoulder (recurrent)	2		2
Sequelae to fractures	4		4
Knee Pain	2	1	1
Neck Pain	1	1

Fig 1. Service Casemix by Month

Fig 2. Injury Patterns

Army numbers as Haslar developed into a tri-service hospital (Fig 1). There were 153 (84%) acute cases and 29 (16%) had chronic pathology. There were 48% fractures/dislocations and 52% soft tissue injuries/disorders (Fig 2).

Causes of injury, where stated, were sports related (14%), skiing accidents in Norway (1%) or road traffic accidents (RTA) (6%).

Miscellaneous, non-documented causes (including non-injuries) constitute the remainder (Fig 3).

Twenty seven cases (15%) required an operative

Fig 3. Causes of Injury

treatment on return to the UK.

Of the 29 chronic cases (28 service, 1 civilian) (Table 2), 50% were deemed not to have been fit to deploy in the first instance. None had been downgraded. Twenty (71%) were Army, 3 (11%) RN and 5 (18%) RAF. Although all had symptoms prior to deployment, the majority (n.26) had not been referred for specialist opinion. Two cases had had hospital appointments arranged but had not been seen prior to deploying. One soldier had had his planned operation cancelled by his unit! Five of these cases required surgery on return to the UK.

Discussion

The orthopaedic workload from casevac at Haslar has increased since its emergence as the core tri-service hospital. This transition was accompanied by the major deployment of the NATO peace implementation force to the FRY. These two factors account for the preponderance of arm casualties from this region.

Certain acute orthopaedic conditions, such as ligament sprains are usually self limiting but can render the serviceman unfit to remain in an operational environment thus necessitating evacuation.

Sporting activity was the commonest stated cause of morbidity, but this takes no account of its undoubted benefits in terms of maintaining levels of fitness and morale. A figure of 36 sports related injuries (although this excludes those retained and treated locally in theatre) requiring evacuation in a six month period is small when compared to the total number of Service persons deployed within the six month period in question.

RTAs are often the result of driving in difficult conditions. Frequent reiteration of safe driving practices is essential to minimise these injuries.

Chronic low back pain was the commonest reason for evacuation in the group of patients with chronic diseases.

(50%). However, the majority of these (70%) were recurrences of normally quiescent mechanical back pain. The patient had been able to cope with his back pain prior to deployment. Such recurrences are probably both unpredictable and unavoidable. The majority of chronic cases were not under the care of hospital specialists but it is the senior author's view that 50% should not have been deployed. In the remaining 50%, there were either inadequate clinical details to assess pre-deployment fitness status, or else the serviceman had a relapse of a chronic condition after deployment. Whilst accepting that subjective opinions on retrospective analysis are involved, a reluctance to downgrade in the face of obvious bars to overseas service was apparent in most cases. The preponderance of Army personnel in the chronic group (71%) may reflect a reluctance on behalf of Army's MOs to downgrade patients as this appears to have a more deleterious effect on a soldier's career than it does so in the RN. It is also more labour intensive, requiring the raising of the appropriate documentation, for primary care MOs to downgrade Army personnel using F Med 19s, whereas in the RN a simple notification signal is all that is required. Simplifying the Army Medical Board proceedings should be considered as a possible solution. Temporary downgrading, following

consultations between MOs and specialists, may also help to redress this problem.

It would seem that either poor communication to, or a lack of appreciation by secondary care facilities of impending deployment was the cause of at least two preventable casevac. However, overall no single unit or hospital was repeatedly implicated as a factor in the inappropriate deployment of these cases.

Hospitals should however prioritise the treatment of Service persons known to be imminently deploying. This situation is not easily achievable due to the current shortage of Orthopaedic Consultants in the Defence Secondary Care Agency. It therefore behoves Unit Medical Officers to constantly monitor the fitness of the troops under their care, and to temporarily downgrade patients prior to any potential deployment. Overall, this level of potentially preventable evacuations may be acceptable. From a purely financial consideration, it may prove more expensive to employ more MOs to ascertain the predeployment fitness of soldiers than to casevac 14 patients every six months. This, however, does not take into account the unquantifiable cost to a unit or ship of losing an individual. Furthermore, with the current manpower shortages, the number of preventable evacuations is perhaps surprisingly low.