Pre-Existing Disease in British Army Patients Aeromedically Evacuated from the Former Republic of Yugoslavia

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SUMMARY: A questionnaire study was carried out on 74 British Army patients who were awaiting aeromedical evacuation from the Former Republic of Yugoslavia. The study confirmed previous unpublished reports that 41% of patients were being repatriated for exacerbation of pre-existing disease. Of these, 78% had disease known to their medical officer, were considered to be outside limits for full fitness, according to accepted military standards, but had not been downgraded. Only 34% of these patients had been reviewed prior to deployment to assess their fitness. Assessment of fitness to deploy was in some cases based on inaccurate information about in theatre living and working conditions, and the medical support available. In conclusion it would appear that medical officers should be more diligent in downgrading unfit personnel to prevent their deployment on operations thereby reducing the burden on the medical evacuation chain. Medical officers need up-to-date information on operational areas in order to make appropriate decisions on fitness of personnel to deploy.

Introduction

Unpublished reports from operational deployments to the Former Republic of Yugoslavia (FRY) in 1995 expressed concern about the number of servicemen arriving in theatre with pre-existing disease. It was noted in particular that in the region of 30% of those being aeromedically evacuated from theatre to UK and Germany were suffering from exacerbation of pre-existing disease, not all of whom had appropriate medical categories. These personnel place a considerable burden on the medical support and evacuation chain.

In December 1996 approximately 13,000 British troops were committed to deploy to FRY as part of an international peace implementation force (IFOR). British Army medical officers (MOs) were directed that only soldiers with the medical category FE should be allowed to deploy. However, personnel downgraded LE could be deployed at the discretion of Commanding Officers, but only when cleared on by their MO, who was directed to review each patient and confirm that their proposed duties were commensurate with their medical category.

It was therefore decided to undertake a study of soldiers who were being aeromedically evacuated from FRY to check specifically for medical category, pre-existing disease and pre-deployment screening. The appropriateness of medical categories for those with known pre-existing disease was also studied. Interest was particularly directed at those who were being aeromedically evacuated due to exacerbation of their pre-existing disease.

Method

A questionnaire survey was carried out on 74 consecutive British Army patients who were listed for aeromedical evacuation. The sample size was determined by EPI Info set at 95% confidence level (1). For the

calculation it was estimated that there would be a total of 750 aeromedical evacuations during the 12 months of IFOR deployment. This latter figure was estimated from the average evacuation rate of 1.0 per 1000 troops per week during the previous 12 month period.

The survey was carried out between weeks 5 and 9 post deployment during which both force population and evacuation rates had stabilised (Fig 1). All patients were questioned directly by the author. The questionnaire was designed to ask about medical category, any pre-existing disease, whether this disease was known to the MO prior to deployment, and whether they had been reviewed by their MO prior to deployment. Whether their MO was military or civilian was noted. Length of stay in theatre prior to evacuation was recorded as total weeks completed. The medical categories of those with known pre-existing disease was confirmed with their home unit. The appropriateness of these medical categories was then assessed with reference to the standard publications (2,3).

Fig 1. Weekly Aeromed Rate and Force Strength

A literature search was performed but provided little information of use to this study.

Results

The breakdown of medical categories is shown in Fig 2. The category 'FE' (n=43) included all cases who fell within FE standard as laid down in the appropriate documents. Of these, 2 cases had pre-existing disease which had no effect on their performance in theatre and was not relevant to the decision to repatriate them. The category 'LE & FE within limits' (n=5) included downgraded personnel (n=3) and those with known disease inside FE limits (n=2), where exacerbation of their illness necessitated repatriation. The category 'FE with Disease unknown to MO' (n=8) is self explanatory and included 2 cases who were downgraded LE for other reasons not relevant to their evacuation. The category 'FE with known Disease outside limits' (n=18) included all those with disease, known to their MO, which rendered them unfit FE but who had not been downgraded.

Of those downgraded LE (n=5), only 3, whose MOs were military, were reviewed prior to deployment in accordance with policy. The remaining LE patients had civilian MOs. Fig 3 shows that of those with known pre-existing disease (n=23) only 9 patients were reviewed prior to deployment to assess their fitness to do so. Fig 4 shows the proportion of those with known pre-existing disease prior to deployment according to whether their MO was service (n=13) or civilian (n=10).

The average length of time served in theatre prior to repatriation varied according to medical category. For LE it was 3.2 weeks, for pre-existing disease it was 7.7 weeks, and for the remaining FE group it was 9.2 weeks. The length of time served in theatre is displayed graphically in Fig 5. It should be noted that 50% of the sample population had been in theatre for only 9 weeks.

Table 1 shows the breakdown of the categories of disease of those FE personnel with known pre-existing disease outside FE limits. The high proportion of orthopaedic cases matches the general pattern for medical evacuations from this theatre of operations noted in previous unpublished reports.

Twenty five percent of those aeromedically evacuated in this study were female. At the time only 6% of the force were female.

Discussion

When discussing these results it must be remembered that the study period was early in the IFOR deployment and, inevitably, those with active pre-existing disease will be more likely to present for treatment shortly after arrival. It must also be noted that IFOR medical policy stated that if a patient was unlikely to be fit within 7 days of initial presentation, they should be aeromedically evacuated out of theatre. These factors probably introduced bias which might partly explain the high percentage of pre-existing disease detected, and also the disproportionate number of female evacuees.

Fig 2. Medical Categorization of Aeromed Patients

Fig 3. Percentage of Known Pre-existing Disease reviewed before Deployment

Fig 4. Pre-Deployment Review of Pre-existing Disease

Fig 5. Time in Theatre Prior to Aeromedical Evacuation

The results confirm the findings in previous unpublished reports that a considerable proportion of patients have to be evacuated for exacerbation of pre-existing disease (41%). When this figure is broken down further it is apparent that of those with known disease only 13% (n=3) of this group had been downgraded. It was unclear what proportion these few cases represented.

Table 1.
Disease Categories of FE Patients with Known Disease

Speciality	Number of Cases
Orthopaedics	13
General surgery	2
Psychiatry	1
Neurology	1
Urology	1

of the total number of downgraded personnel in theatre because that information was not available, and so it is not possible to make any judgements about the validity of the grading system.

There will always be personnel who fail to report illness or disease through ignorance or fear of the diagnosis, or of the career implications. It is much more difficult to hide such disease on an operational deployment which explains why 10.7% (n=8) of patients evacuated were in this category. In most cases the problems had been present for at least 12 months and included such problems as; panic attacks, polyarthropathy, low back pain and depression.

The most significant finding of this study was the high proportion of those with known pre-existing disease who had not been downgraded (78%), over 60% of whom had a service MO. There are inevitably many reasons why an MO might have decided not to downgrade an individual, not least because of the effect it will have on the career of the patient. It is also true that unit MOs look for guidance from specialists before deciding to alter medical categories. Waiting lists for out patient appointments at service hospitals have increased, especially in areas such as orthopaedics, and this might explain the high proportion of orthopaedic cases in this group. Approximately 45% (n=8) of the patients were under regular specialist care. It is beyond the scope of this paper to give detailed case histories, and without access to the patients' notes it is not possible to fully understand the decision making process which led to the decision not to downgrade. However, it is worth noting that the cases covered a broad spectrum of problems including; non union of fractures, postoperative patients awaiting rehabilitation, PTSD, Raynaud's disease, and patients awaiting herniorrhaphy.

The consequences of not downgrading patients even on a temporary basis is that they become liable for operational detachments such as IFOR. They are also less likely to be reviewed by an MO prior to deployment. This is compounded by the short notice of a deployment such as IFOR where many of the troops had less than 7 days warning. In these situations an MO may not even know that an individual is to be deployed until after that individual has gone, and it is likely that he will only have time to review those already downgraded. Fig 3 shows clearly how few of these patients were personally reviewed by their MOs. It is possible that their notes were

perused but the information on this is outside the scope of this paper. However, as Fig 4 demonstrates, service MOs reviewed more of their patients with pre-existing disease than their civilian counterparts. It is probable that a non-service MO, particularly one who only provides part-time care, will be less likely to be fully informed about deployment policy, plans and nominal rolls, and therefore will be less likely to review the downgraded patients, or those with pre-existing disease.

The decision to allow a patient with pre-existing disease, whether downgraded or not, to deploy to a particular theatre of operations has to be based on a thorough appreciation of such factors as climate, living and working conditions, proposed duties, and medical support available. It would appear from this study that in a number of cases these decisions were based on inadequate and inaccurate information and without sufficient regard for the occupational aspects of an operational theatre. This may reflect difficulties in gaining appropriate information. It is also true that there is considerable pressure on MOs to allow individuals to deploy, both from the patients themselves and from their commanders. Cases were also noted where individuals were ordered to deploy despite being in possession of certificates placing them on sedentary duties only.

The inappropriate deployment of personnel has a number of effects. It increases the burden on in-theatre medical assets, the aeromedical evacuation system and on the receiving hospitals. It also results in replacement personnel having to be found at very short notice. Figure 5 shows the length of time served prior to evacuation. Both groups show a similar pattern with approximately 50% serving less than 10 weeks. It must be remembered that 50% of the sample population had been in theatre for less than 10 weeks. The high rate of evacuation for FE personnel in the early weeks probably reflects the very high work load and injury rate during the initial phase of the deployment. It could be argued by commanders that at the busiest time of the deployment some useful work was done by those with pre-existing disease prior to their repatriation. However, this is a dangerous argument which takes no account of the potential for making a patient's condition worse, with the inevitable risk of litigation to follow.

In conclusion it would appear from this study that the system for medical downgrading must be used more diligently, especially by unit MOs, in order to reduce the number of personnel deployed on operations who are unfit for their duties. Short notice deployments are a fact of modern military life and there is often insufficient time to screen out unfit personnel unless they have already been appropriately graded. Accurate information regarding the nature of a deployment must be made available to an MO in order for him to make a decision on medical fitness to deploy. MOs must be encouraged to err on the side of caution. Deployment of downgraded personnel should be the exception rather than the norm.

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