

EDITORIAL

Trauma in Papua New Guinea — an epidemic out of control

Trauma is an increasing health problem of epidemic proportions in Papua New Guinea (PNG). There is abundant evidence from both the Health Department and hospital-based studies that injury is now the commonest cause of death in the 15-44 year old age group — the country's most productive and economically important population sector. Trauma is now the leading cause of surgical death in Port Moresby General Hospital (1,2) whereas it came second to malignancy 15 years ago (3). The commonest cause of death is head injury, as reported by Liko et al. in this issue (4), and most deaths are unavoidable because of the severity of injury. Two-thirds of all trauma deaths occur before the patient reaches hospital. In Mendi Hospital trauma accounts for 11.5% of all hospital admissions, the third commonest condition after obstetric cases and pneumonia (5). Up to 50% of the surgical beds in PNG's hospitals are filled — often for many weeks — with trauma patients whose injuries are the direct result of violence, many of which are associated with alcohol intoxication. As a result of late presentation, insufficient numbers of trained personnel and inadequate facilities, the results of treatment are often suboptimal, with long-term permanent disability ensuing. The inpatient stay is prolonged and in Port Moresby trauma accounts for over 8000 days in hospital per year (2).

There are few data on the primary care of trauma but an unpublished study by Tim Dyke in Port Moresby has shown that only 11% of trauma victims are admitted to hospital, the rest being assessed and treated by the primary care doctor or health worker. Extrapolating from the number of trauma admissions, it seems that there is an enormous trauma load which must first be assessed and treated by the primary health care workers. There is no budget and virtually no resources for these cases. Trauma is often forgotten by those planning primary health services, perhaps because those planning do not themselves have the skills to manage trauma victims.

The main causes of trauma in PNG are violence and accidents. Violence includes

criminal assault and domestic assault. Men are most likely to be assaulted outside the home or, in the highlands, in a tribal fight (25% of trauma admissions in Mendi). Women are most likely to be assaulted in the home by their husband, wantoks or another woman. Papua New Guinea has an unenviable record of trauma affecting women as a result of domestic violence. Wife-beating is still considered acceptable practice by 65% of rural men and 46% of urban men in PNG (6). A radical change in social attitudes through education and legislation is clearly essential to reduce this source of injury, which results in such a heavy drain on hospital resources.

Road accidents are an important cause of trauma admission: 30% in Port Moresby but only 14% in Mendi (7). In a survey of 209 motor vehicle accident (MVA) casualties attending Port Moresby General Hospital over a seven-month period in 1982-1983, one-third were in cars and one-quarter in the back of utilities (8). In a related study, only 11.4% of front-seat occupants on the road wore seat belts (9). It was estimated that the human and economic cost of road traffic accident (RTA) casualties between 1982 and 2000 would be 5000 dead, 50 000 injured and K250 million (9). The current annual road toll of 5000 accidents with 250-300 deaths appears to bear out this gloomy prediction, despite the introduction of seat belt legislation since these studies. The only good news is that the number of deaths has remained stable in the last decade after a rapid rise in the 1970s (7,10). Accidents involving the occupants of the back of open utility trucks remain a major source of death and injury (11). There is now an urgent need to introduce legislation requiring the fitting of steel cages to such vehicles where passengers are conveyed.

Modern trauma management, in addition to reducing morbidity, mortality and long-term disability, results in a much shorter length of hospital stay. The management of fractured femur (12), hand injuries (13) and vascular complications (14) are discussed in this issue. The provision of such treatment is, however,

often perceived as expensive. The inpatient cost per day in PNG in 1996 has been estimated as approximately K50-70 (P. Temu, personal communication). There are some 4400 hospital beds and a further 8500 health centre beds in the country, and up to 15% of these beds are occupied by trauma patients. Even using very conservative estimations, if half of all hospital trauma admissions received adequate orthopaedic treatment, including aggressive resuscitation and stabilization of fractures, the overall length of hospitalization might be cut by half. This would represent a saving, nationally, of K16 000 per day, or some K5.5 million annually, to the Health Department. The perception that modern trauma management — provided it can be undertaken skilfully with a low complication rate — is an expensive option is false.

In the meantime, PNG must look long and hard at its priorities in relation to the trauma epidemic. Little has improved in the past decade in the area of prevention of avoidable injury on the road. There are avoidable deaths due to burns sepsis because of lack of skilled burns nursing in a designated unit (3,15). Urgent attention must be paid to the reduction in injuries to the occupants of utility trucks, to the causes of domestic violence, and to the control of tribal fighting. All three causes of injury are compounded by alcohol abuse, which also needs serious consideration. Since two-thirds of trauma deaths occur before reaching hospital more lives will be saved by prevention and first aid during transport to hospital than by hospital care. Improving the quality of trauma care in hospital — particularly with regard to fractures — will reduce disability. There are few facts on the extent of late disability and its cost in human and economic terms but it is undoubtedly high. Although this is being addressed by the joint University of Papua New Guinea and Australian Orthopaedic Association Training Programme, it will be many years before the majority of PNG's population can expect specialist treatment for these injuries. By the year 2000 we hope to have a general surgeon with two years of orthopaedic training working in each base hospital. There is already a university post for orthopaedic surgery filled by a Papua New Guinean in Port Moresby.

Trauma is an expensive epidemic. Much needs to be done, and the need is urgent. Let us not miss the opportunity.

D.A.K. Watters

Department of Clinical Sciences,
Faculty of Medicine,
University of Papua New Guinea,
PO Box 5623, Boroko, NCD 111,
Papua New Guinea

J.A. Lourie

Department of Orthopaedic Surgery,
Standing Way, Eaglestone,
Milton Keynes MK6 5LD,
United Kingdom

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