

Injuries of the lower extremities caused by the explosion of antipersonnel mines

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The purpose of this study was to evaluate the treatment of the injuries of the lower extremities caused by land mines.

Patients We report 37 injuries caused by antipersonnel mines to 28 soldiers wounded in theatres of operation where the French Army has been engaged from 1989 to 1993. The average follow up is 5 years.

Results The patients presented: 24 foot injuries and 13 leg or ankle fractures. 50% of wounded have multiple injuries: multipenetrating fragments (11), abdominal chest (5) and vascular injuries (2) which threaten

the vital prognosis in 13%. Visceral and vascular injuries have been treated as priority. On battlefield lower limb conservation measures have been taken: debridment and wounds left open (100%), immobilisation by cast (40%) or external fixator (60%) and antibiotic therapy (100%). Treatment at the rear prevent infection by repeated debridment (85%), external fixation revision (100%), skin graft or flap coverage (44%). Besides leg amputations (16%) two aspects are characteristic:

- Compound fractures of the leg or the ankle (24%) whose treatment is a typical case of limb salvage and where the success of skeletal reconstruction by bone graft (30%) and external fixator is greatly improved by previously myocutaneous flaps coverage.

- Traumatic partial foot amputations (60%) which are the most common injuries: the level of amputation dictates the progress and are badly tolerated if the forepart of the foot has disappeared, they need examination to choose a best level of amputation.

Discussion Classically "mine foot" designated an entity which associated bone and neurovascular damage but with skin integrity. We outline the most frequent direct mechanism involves extensive skin injuries, the increasing wounding power of explosive devices causes frequent bilateral and delimited injuries in a context of distant multipenetrating wounds far from the foot and associated with high rate of lethality. Our study highlight the necessity of emergency treatment of this soldiers near the battlefield to improve the result of conservative treatment.