

# A Novel Way Of Taking Trauma Radiographs Of A Stretcher Patient In A Field Hospital

DJ Vassallo, PC Rowlands

## Introduction

A common challenge facing resuscitation staff in a field hospital environment is how best to take radiographs of trauma patients lying on field stretchers. The authors describe a simple method using existing stretcher fittings that should greatly simplify radiography in the field.

## Methods

The new general issue field stretcher incorporates three body straps to hold the patient in place during transport. Two of these straps can be unclipped on arrival of the patient in Resus, passed under the stretcher and refastened, thereby forming two slings to support the X-ray cassette. The position of the straps can be easily adjusted by sliding their attachment along the rail in the stretcher poles.

Figure 1 shows a single strap supporting the X-ray cassette in position under the patient's chest, in conjunction with the support provided by the top stretcher bar. The upper clamp on the hospital chassis has to be loosened first to allow the cassette to pass over the bar.

Figure 2 shows two straps supporting the X-ray cassette in position under the patient's pelvis.

If the stretcher is placed on trestles as opposed to a hospital chassis, the trestle at the head end has to be positioned as shown in Figure 3 to allow the X-ray cassette to be placed into the correct position for a chest radiograph.

## Discussion

The normal trauma X-ray series consists of antero-posterior chest and pelvic radiographs, followed by a lateral cervical spine radiograph.

Hitherto, patients lying on field stretchers have had to be bodily manhandled in order to fit the X-ray cassette under the patient's chest, with care being taken to maintain inline cervical spine immobilisation. The patient has to be lifted again to remove the cassette. These manoeuvres have to be repeated to obtain pelvic views.

In a trauma scenario, this may cause undue pain and distress to the patient, the cervical spine is potentially at risk, and the movement may exacerbate internal haemorrhage. It requires at least two attending staff to bodily lift the patient whilst another member of staff protects the cervical spine and the radiographer inserts the cassette between patient and stretcher. The cassette is at risk of contamination by blood or body fluids. Attending staff have to interrupt all other clinical procedures during this process.

The simple method described, which can also be used for lower limb radiographs, averts all these problems. The patient does not have to be moved at all, the cervical spine remains fully immobilised, attending staff do not have to interrupt other procedures, and the cassette can be placed in position with ease by the radiographer.

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Lt Col DJ Vassallo  
RAMC,  
Consultant General  
Surgeon  
Email: DJVassallo@aol.com

Sgt PC Rowlands  
RAMC  
Combat Medical  
Technician  
34 Field Hospital  
Troop, OP FINGAL,  
BFPO 758.



Fig 1. cassette strapped in place for chest radiograph.



Fig 2. pelvic x-ray cassette in place.



Fig 3. treble position for chest radiograph.