for the intrathoracic mass could have been diagnosed on the basis of several radiological features: it was sharply delineated, there were no associated rib or scapular fractures, the costophrenic angles were clear of blood, and there was no shift or distortion of the mediastinum. A differential diagnosis of traumatic and non-traumatic lesions comparable with that on the chest radiograph can be found in the table. In practice, in a stable victim of trauma where there is such a mass lesion on the chest radiograph, a combination of computed tomography (CT), transthoracic ultrasonography, and angiography can be employed separately or in combination to exclude great vessel damage or intrathoracic haemorrhage. In the case described, such imaging was precluded by haemodynamic instability following induction of general anaesthesia. Although intraoperative angiography or ultrasonography could have excluded overt haemorrhage, surgical exploration was felt to be the most expedient option. Once subclavian and great vessel injury had been excluded and the mass excised, reduction and nailing of the humerus were relatively simple procedures, resulting in early functional recovery.

This case shows that unusual appearances on the chest radiograph following violent upper limb injury should prompt systematic radiological exclusion of significant contiguous vascular injury.


Road humps: accident prevention or hazard?

David Bowrey, Rhys Thomas, Rupert Evans, Peter Richmond

Abstract

Two cases of injury to passengers seated on public transport buses occurred after the vehicles had traversed road humps. While the potential dangers to seated bus passengers have been acknowledged in the Department of Transport literature, specific mention in medical reports is lacking. Should the United Kingdom follow the example set by the United States, where the placement of road humps on bus routes is avoided? (J Accid Emerg Med 1996;13:288-289)

Key terms: bus; injury; road hump

Road humps, or sleeping policemen, are devices placed in the path of travelling vehicles intended to be driven over at a comfortable predetermined speed, while causing increasingly more discomfort at higher speeds. Their main benefit lies in reducing vehicle speed, and thus improving traffic safety to residents and pedestrians in the neighbouring area. We report two cases of injury to passengers seated on public transport buses, the injuries occurring after the vehicles had crossed road humps. To the best of our knowledge these are the first reported cases of injury by this mechanism.

Case 1

A 49 year old female travelling on a double decker public transport bus was jolted upwards as the vehicle traversed a road hump and on landing back in her seat she experienced acute low back pain. Radiographs confirmed a crush fracture of her third lumbar vertebra (L3). Treatment comprised bed rest, analgesia, and a plaster jacket. One year after the injury she presented with further low back pain and paraesthesiae in both lower limbs. Magnetic resonance imaging (MRI) showed a posterior and right sided disc herniation at the level L2/3 causing root compression (figure). She underwent laminectomy and discectomy without undue complication.

Two years after the injury she continues to suffer from low back pain, and has been unable to return to her former employment.
Case 2
A 34 year old female sitting on the back seat of the lower tier of a double decker public transport bus sustained a flexion/extension injury to her neck, and a soft tissue injury to her right shoulder after the vehicle traversed a road hump. She was thrown forwards striking the back of the seat in front of her. She had no prior history of either shoulder or neck problems. Treatment comprised a soft cervical collar and analgesia. Fifteen months after the injury she continues to suffer from intermittent neck pain.

Discussion
In the United Kingdom the height of road humps ranges from 50 to 100 mm, with the speed reducing effect directly proportional to the height of the hump. Humps are permitted along single and dual carriageway roads providing there is a maximum 30 mph speed limit in operation and the road is not a trunk, special, or principal road. Unless the road is within a 20 mph zone there must be an adequate lighting source in the surrounding area. Road humps must be located so that they are always preceded by a speed reducing feature (another road hump, road markings). In addition, traffic signs are required to warn of the presence of a road hump or series of road humps.1 2

Road humps are intended for use in areas where the traffic consists mostly of cars. Owing to their different dynamic responses and larger and wider wheelbase, larger sized vehicles, in particular buses, are affected to a greater extent.3 The potential dangers to passengers arise from their ability to move about the bus while it is in motion.3 In the two cases cited there is evidence that the buses were travelling at speeds greater than recommended for crossing the road humps.

Zaidel et al3 propose two approaches to the situation. They cite the view taken in the United States, Australia, and New Zealand, where the placement of road humps on bus routes is avoided. They contrast this with the view held in the United Kingdom, Sweden, Israel, Norway, and The Netherlands, where it is felt that buses should be subjected to, rather than exempt from, speed restrictions. These two cases show that there are real dangers to passengers travelling on buses that use roads with road humps.

Spontaneous splenic rupture: an unusual cause of hypovolaemia

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Abstract
Splenic rupture in infectious mononucleosis is an extremely rare but often fatal complication. A case presented to the accident and emergency department in ventricular fibrillation seconds after losing signs of any cardiac output. The underlying cause of cardiorespiratory arrest always be sought irrespective of the presenting rhythm. (J Accid Emerg Med 1996;13:289-291)

Key terms: hypovolaemia; infectious mononucleosis; ruptured spleen; ventricular fibrillation