EMERGENCY CASEBOOK

Bilateral humeral head fractures following an electric shock

A 47 year old man was brought by ambulance to the accident and emergency department after sustaining an electric shock at home. He was repairing a washing machine which had not been disconnected from the mains supply. As he reached around the drum with both arms he sustained an electric shock, rendering him unable to release his grip on the drum for at least 10 seconds. He did not lose consciousness and presented to the hospital complaining of a burn to his right hand and severe pain in both shoulders. On examination at this time he was found to have a full thickness burn to the dorsum of his right hand and an abrasion to his left hand. He

Figure 1 Bilateral intra-articular humeral head fractures.

was markedly tender over both deltoid muscles and reluctant to move either shoulder because of pain. There was no clinical evidence of a dislocation and his ECG was normal. Radiographs of both his shoulders were performed to exclude avulsion fractures but these revealed bilateral intra-articular humeral head fractures (fig 1). Shoulder dislocations and fractures have previously been described as a result of electrical injury. This type of bilateral displaced intra-articular fracture of the humeral head is, however, very rare. In this case the injuries were more severe than might have been anticipated from a domestic electricity supply. The clue to the severity of his injury was the amount of pain he was suffering. Radiological investigation of such cases is always warranted, as unusual fractures and dislocations following electric shock are well recorded.

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