

Bilateral Femoral Neck Fracture Following Convulsions: Pitfalls In Early Diagnosis And Management

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Citation

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Abstract

Bilateral fractures of neck of femur are very rare. This is a report of a patient who sustained bilateral intracapsular fracture of hip following convulsions and discusses the difficulties encountered in early diagnosis and treatment. Intracapsular femoral neck fractures in young patients need immediate reduction and internal fixation to prevent complications like non-union and avascular necrosis.

CASE PRESENTATION

A 62-year-old lady was found fitting in the house. On the way to the hospital by ambulance she had two more episodes of severe seizures. Convulsions continued intractably in spite of intra venous diazepam and phenotoin. Glasgow Coma Score (GCS) on admission was 3 and blood sugar was normal. The patient was intubated and ventilated without delay. The patient had no previous history of convulsions. The past medical history included insulin-dependent diabetes mellitus, hypertension well controlled by medication, and a cerebrovascular accident one year ago from which she recovered completely. There was no history of steroid intake or any malignancies. CT of the brain ruled out any CVA or tumour and a provisional diagnosis of status epilepticus was reached. The patient remained intubated and ventilated in ITU for next 6 days. On the sixth day of admission, the patient was extubated and complained of bilateral groin pain. An examination of the hips revealed external rotation of both lower limbs. Both hips were tender and movements were painful. Both lower limbs were neurovascularly intact.

Radiological examination of the hips revealed bilateral displaced subcapital fractures of the hips. The fractures were treated by closed reduction and internal fixation with cannulated screws.

DISCUSSION

Simultaneous bilateral femoral neck fractures are rare.[^{1, 4}] Reported causes include severe trauma, primary or secondary bone diseases like osteomalacia, renal osteodystrophy, and myeloma.[^{2, 3, 4}] Convulsions due to

electric shock, eclampsia, hypocalcaemia, have been reported very rarely as a cause of femoral neck fracture.[^{1, 3, 5}] Diagnosis of bilateral hip fracture following ictal episode can be delayed. [⁶] The reason for delayed diagnosis in this case was that the patient was unconscious, remained ventilated and sedated for 6 days and that the intracapsular fractures of the hip caused only minimal rotational deformity of lower limbs due to capsular attachment. Most of the time, patient with intractable seizures are treated by physicians and intensivists because of the need for ventilation. Early recognition is very important to minimise complications associated with delayed treatment of intracapsular hip fractures.[¹] Fractures as a consequence of convulsive seizures without direct trauma occur in 0.3% of the cases.[⁷] Injuries encountered include posterior dislocation of shoulder, fracture dislocation of shoulder, dislocation of hip, and fracture of hip.[¹] Unrecognised associated injuries following convulsion may result in long-term functional disability and legal consequences. [¹]

Physicians treating patients with seizures should be aware of the injuries, which could result from severe and prolonged seizures. Intracapsular femoral neck fracture and posterior dislocation of shoulder are associated with seizures and both these injuries have subtle clinical features. Thorough musculoskeletal examination can reveal injuries that were missed and avoid delayed diagnosis, subsequent morbidity, and possible litigation. This is particularly important in unconscious and ventilated patients. A high index of suspicion is necessary and musculoskeletal pain after prolonged seizure needs adequate clinical and radiological

examination.

CONCLUSION

Bilateral hip fracture can occur as a rare complication of seizures. Musculoskeletal injuries possibly occur secondary to seizure and are some times missed or diagnosed late. Musculoskeletal examination is important in patients who had prolonged and severe seizure, particularly if the patient is unconscious or ventilated. Physicians and intensivists treating such patients should have a high index of suspicion in order to achieve an early diagnosis and reduce morbidity.

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