Lpsilateral Fracture of the Femoral Neck, Trochanter And Shaft: A Unique Case

Corresponding Author:
Dr. Nasir Muzaffar,
Registrar, Bone & Joint Surgery Hospital, 190005 - India

Submitting Author:
Dr. Nasir Muzaffar,
Registrar, Bone and Joint Surgery Hospital, 190005 - India

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Author(s): Muzaffar N, Bashir N, Ahmad A, Ahmad N, Hafeez A

Abstract

Fractures of the femoral neck with ipsilateral femoral shaft fractures are relatively common. Ipsilateral fractures of the femoral neck and trochanter are rarely reported with just over a dozen cases reported so far. However, there is no report in literature which encompasses the ipsilateral fractures of the neck, trochanter and shaft in a patient. We report such a case for the rarity of the plethora of fractures in a single bone.

Introduction

Fractures of the femoral neck with ipsilateral shaft or trochanter are usually the result of low energy falls in the elderly and high velocity trauma in the young adults. The two injuries are concomitantly rare and till date only about a dozen cases of ipsilateral fractures of the femoral neck and trochanter have been documented in literature. However, there is no reported case of ipsilateral fracture of the femoral neck, trochanter and shaft. We report such a case for the rarity of the pathology.

Case Report(s)

A middle aged woman was hit by a speeding truck while she was crossing the street. The impact of the trauma flung her across the road and she landed sideways on her hip and then hit a brick wall by the roadside. The woman was knocked out by the sheer magnitude of the trauma and was transported to the local hospital by some bystanders after which she was referred to our institution after about an interval of an hour. On arrival, the patient had regained consciousness but was in hemodynamic shock. She was revived with intravenous colloids and whole blood transfusion and a preliminary examination revealed swelling, ecchymoses and deformity in the right leg with swelling of the thigh and crepitus, pain in the hip, thigh and lower abdomen. She was taken for radiographs which revealed fractures in the right femoral neck, trochanter and shaft extending to the supracondylar area (Fig 1-4). Due to her precariously worsening hemodynamic situation, a surgical and ultrasonological consultation was sought, which revealed a retroperitoneal hematoma which was rapidly enlarging. She was taken for a laparotomy which was confirmatory of the provisional diagnosis and also revealed tears in the ileum. The patient’s condition worsened and she died soon after coming out of the operating room due to decompensated hemodynamic shock.

Discussion

The commonest association of femoral neck fractures is with the femoral shaft. A combination of femoral neck and trochanteric fractures is less common. There is no documentation of any case carrying the plethora of all these fractures in a single femur. This is the first reported case of this kind. We believe that the initial trauma caused the trochanteric fracture and this fragment wedged into the neck causing it to break. The subsequent hit with the wall caused the shaft fracture and also the intraabdominal bleeding, both of which contributed to the irreversible hemodynamic shock from which she could not recover. Our initial plan when we saw her radiographs was fixation of the hip fractures with a combination of dynamic hip screw and a derotation screw, a similar effort already having yielded good results at our institution and a distal femur locking plate for the shaft fracture. However, fate meant otherwise. The only record of any fracture resembling our case was given by Henry Banks who while studying factors influencing the results in fractures of the femoral neck in 301 patients reported one case of femoral neck fracture associated with ipsilateral intertrochanteric and sub trochanteric fracture of the same hip. He, however, did not report on the follow up of this case. We believe that this case is the first of its kind and we could have saved the patient if she had reached us within the "golden hour".

References and Legends

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Fig 1: AP radiograph of the right hip with femur showing the trochanteric fracture and outline of the neck fracture.
Fig 2: Close up of the AP radiograph clearly showing the two fractures.
Fig 3: AP radiograph of the ipsilateral femur showing femoral shaft fracture extending to the supracondylar region.
Fig 4: Lateral radiograph of the ipsilateral femur showing femoral shaft fracture extending to the supracondylar region.
Illustrations

Illustration 1

Fig 1: AP radiograph of the right hip with femur showing the trochanteric fracture and outline of the neck fracture.

Illustration 2

Fig 2: Close up of the AP radiograph clearly showing the two fractures.
Illustration 3

Fig 3: AP radiograph of the ipsilateral femur showing femoral shaft fracture extending to the supracondylar region.

Illustration 4

Fig 4: Lateral radiograph of the ipsilateral femur showing femoral shaft fracture extending to the supracondylar region.
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