Stable intertrochanteric fractures, including 2-part fractures with an intact posteromedial buttress, have been successfully treated with a sliding hip screw or blade. However, unstable intertrochanteric fractures tend to collapse even after adequate reduction and fixation with plating, and thus intramedullary nailing is recommended. Unstable intertrochanteric fractures include fractures with posteromedial comminution, a reverse oblique configuration, subtrochanteric extension, lateral wall fractures, or a split in the coronal plane.

The ‘lateral wall’ is important in the stability of intertrochanteric fractures. Intertrochanteric fractures with an intact lateral wall are stable enough to prevent excessive collapse and medialisation of the shaft. However, the presence of a lateral wall fracture converts a simple fracture to a reverse oblique fracture. Lateral wall thickness is defined as the distance from a reference point 3 cm below the vastus ridge or innominate tubercle of the greater trochanter angled at 135° upwards to the fracture line on anteroposterior radiographs. It is a reliable predictor for the risk of lateral wall fracture. If the lateral wall thickness is >20.5 mm, a sliding hip screw can be used, with minimal risk of lateral wall fracture.

In this issue, Tan et al. described a variant of unstable intertrochanteric fracture that has not been well-described in the existing classification systems. The fractures were characterised by greater trochanter comminution and a coronal split into the greater trochanter resulting in the loss of superolateral support and subsequent fixation failure. Extramedullary fixation using reversed Less Invasive Stabilization System or proximal femoral locking plate resulted in a high rate of failure. The authors recommended the use of an intramedullary device for this unstable fracture.

Plain radiographs in both anteroposterior and lateral views are needed to determine the complexity of an intertrochanteric fracture. A coronal split fracture sometimes can be diagnosed using lateral radiographs. Computed tomography with 3D reconstruction is important in determining the complexity of an intertrochanteric fracture. When instability is detected intra-operatively, the surgeon has to be prepared to change management from sliding hip screw fixation to intramedullary nailing, or even arthroplasty.

REFERENCES