

Using a Positioner System for the Surgery of Both-Column Fracture of the Acetabulum

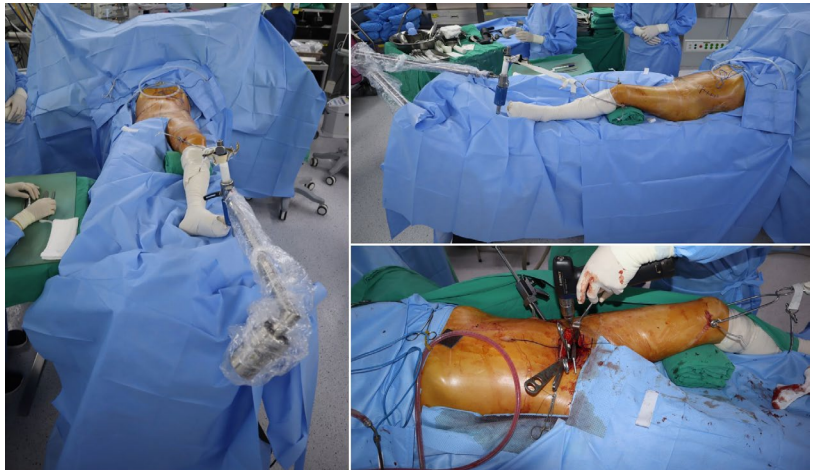
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Purpose: Manual traction of the affected leg is often required for fracture reduction while operating acetabular fractures. Especially in the fractures that accompany central femoral head dislocation, continuous traction is very helpful in reducing fractures and is often necessary as a result. However, there is a limitation to maintain the constant traction manually throughout the operation time. Accordingly, we surgically treated such injury while maintaining traction using a Limb Positioner System and investigated the result.

Methods: The study included 13 patients with both-column fractures of the acetabulum. There were 8 men and 5 women, with a mean age of 47 years. The cause of the injury was traffic accidents in 9 and fall from a height in 4. Nine of 13 (69.2%) had a central femoral head dislocation. Surgery was performed after patient condition stabilized, mean 10.4 days after injury. After transfixing the Steinmann pin on the distal femur and attaching the bow, this was connected to the Limb Positioner System, and traction was performed. While maintaining traction with it, fracture reduction and fixation were carried out through an anterior approach. Three cases required posterior fixation through an additional posterior approach. The bony union and reduction status were assessed at the final follow-up, and functional was appraised using Merle d'Aubigne score. The average follow-up period was 22.9 months.

Results: Primary bony union was obtained in all cases at an average of 17.4 weeks. The quality of reduction assessed by Matta's criteria was excellent in 7 and good in 6. The average Merle d'Aubigne score at the final follow-up was 16.4. As a complication, invasion of the screw into the joint occurred in 1 case.

Conclusion: Surgical treatment of both-column fractures of the acetabulum using the Limb Positioner System is thought to be a useful and convenient method because it allows continuous traction with constant force throughout surgery, helps to reduce fracture, reduces operating room personnel, and yields excellent radiologic and functional outcome.



The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device he or she wishes to use in clinical practice.