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# Stabilization of a dislocating spastic hip with a carbon fiber ligament

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## Case report

A 45-year-old paraplegic lady presented with an "uncomfortable feeling" in the left hip for the past 8 months associated with shortening. She had no pain but reported paroxysms of sweating and flushing whenever she moved the hip. She had a fracture dislocation of Th2 over Th3 in 1974 for which she underwent Luque spinal instrumentation and fusion. There was no recovery of her paraplegia, and she was wheelchair-bound. She had flexor and adductor spasm of the left hip associated with a posterior dislocation confirmed by radiography.

The hip was explored by a Hardinge lateral approach under general anesthesia. The femoral head was dislocated posteriorly and there was some erosion of the articular cartilage. A double-plaited carbon fiber was introduced through the neck and head of the femur (Figure 1). It was then passed into the pelvis at the site of attachment of the ligamentum teres and a knot made on the inside. The hip was then reduced, the carbon fiber tightened and attached to the trochanter after reefing. The hip was stable in all positions. The patient was mobilized after 3 weeks.

At 2 years after surgery, she has a painless, mobile and stable hip.

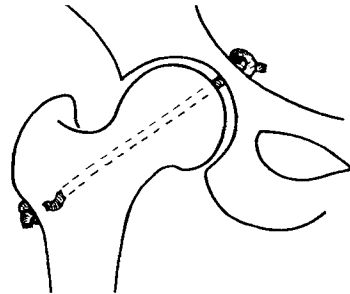


Figure 1. Diagrammatic representation of the location of the carbon fiber ligament.

already had a fused spine. Excision arthroplasty would leave a cosmetically unacceptable shortening. Total hip replacement will not counter further risks of dislocation unless a captive head is used.

Carbon fiber implant (Jenkins and McKibbin 1980) devised for cruciate ligament reconstruction retained the openly reduced hip and allowed mobility at the hip when used as an artificial ligamentum teres.

## Discussion

A chronic unreduced posterior dislocation of the hip in a wheelchair-bound patient poses several therapeutic problems. Arthrodesis was not considered as she

## Reference

Jenkins D H, McKibbin B. The role of flexible carbon fibre implants as tendon and ligament substitutes in clinical practice. A preliminary report. *J Bone Joint Surg (Br)* 1980; 62 B (4): 497-9.