LEADING ARTICLE

TRAUMATIC POSTERIOR DISLOCATION OF THE HIP

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Posterior traumatic dislocation of the hip was once considered an infrequent occurrence. Thompson and Epstein in 1950 managed to survey 204 traumatic hip dislocations covering a period of 21 years from July 1928 to July 1949, averaging 10 a year.

With the advent of expressways and high speed vehicles, however, traumatic posterior hip dislocations are a common experience of the orthopaedic surgeon. Drs Kum Cheng Kiong and Tan Ser Kiat reviewed 30 patients who sustained traumatic dislocation of the hip in the two Departments of Orthopaedic Surgery in the Singapore General Hospital over a seven-year period from January 1980 to May 1987. This figure, I suspect is a little on the low side now. A quick 3-month survey of the Tan Tock Seng Hospital from 13 April 1989 to 13 July 1989 yielded 10 traumatic dislocations of the hip!

The authors noted that the majority of these injuries were due to road traffic accidents. They made an interesting observation that contrary to the experience of Epstein, motorcyclists sustained these injuries most frequently. The typical "dash-board" dislocation of the hip in motorcars, therefore, is relatively rare in this part of the world. This may be due to the mandatory wearing of seat belts.

In the dash-board injury, with rapid deceleration of the car, the knee strikes against the dash-board. The great thrust on the flexed knee is then transmitted along the slightly adducted hip forcing the latter out posteriorly.

Traumatic dislocation or fracture dislocation of the hip is an orthopaedic emergency. It must be reduced at once or at the earliest opportunity. The longer it is left untreated, the higher is the incidence of avascular necrosis of the femoral head and of post-traumatic arthritis. It should take precedence over other musculoskeletal injuries and maybe over abdominal injuries.

There are often associated injuries like rupture of the posterior cruciate ligament of the ipsilateral knee, fractures of the bones of the upper and lower limbs, head injuries and faciomaxillary fractures. In fact the presence of these very obvious injuries often distract the unwary doctor and cause him to miss the not so apparent but serious posterior dislocation of the hip. Always suspect a posteriorly dislocated hip if the lower limb is shortened, adducted and internally rotated. X-rays of the pelvis including the hips in the multiply injured help us to exclude the dislocation.

The authors used the familiar Thompson and Epstein classification. The Stewart and Milford classification is also just as useful.

Avascular necrosis of the femoral head is a dreaded complication. It may take up to 2 years before it becomes apparent. Brav reported the results of 264 hip dislocations in 1962. Avascular necrosis occurred in 21.8% of posterior dislocations without fractures and in 25.3% of posterior dislocations with posterior rim fractures. It is time-related as there is strangulation of the cervical neck by the tight hip capsule through which the head has buttonholed. It brooks no delay in diagnosis or treatment. Manipulation under general anaesthesia and a short acting muscle relaxant is often successful. Open reduction with or without internal fixation may be necessary when closed methods fail. This is followed by light traction till the soft tissues heal when range-of-motion exercises may be started. Weight bearing may be allowed after 6 weeks.

Sciatic nerve palsy is another well-known complication. It should be looked for and documented before the start of any treatment.

Secondary osteoarthritis of the hip may be due to articular cartilage damage at the time of injury or it is due to retained joint "gravel" after reduction. The latter can be minimised by a post-reduction CT scan diagnosis and appropriate surgery and joint debridement soon after injury.

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REFERENCES

1. Thompson VP, Epstein HC: Traumatic dislocation of the Hip: A survey of 204 cases covering a period of 21 years. J Bone Joint Surg (Am) 1951;33:746-78.
2. Epstein HC: Traumatic Dislocation of the Hip. Baltimore. Williams & Wilkins. 1980.
3. Brav EA: Traumatic Dislocation of the Hip: Army experience and results over a twelve-year period. J Bone Joint Surg 1962;44:1115-34.
4. Stewart MJ, Milford LW: Fracture-Dislocation of the Hip. An end-result study. J Bone Joint Surg 1954;36-A:315- 42.