

The High Cost of Hip Dislocation After Joint Replacement

There are high costs associated with a hip dislocation after a *total hip replacement* (THR). And they are not all financial. The psychologic distress of a hip dislocation and fear of recurring dislocations can be very traumatic.

From a financial point-of-view, it is estimated that treating a hip dislocation costs as much as 20 per cent of the original surgery. This is true even when the operation can be done as a *closed* (without an open incision) procedure. An open operation with revision of the hip costs nearly 150 per cent of the *primary* (first) procedure.

Prevention of hip dislocation is essential to reduce both the financial and emotional costs. But how and when should this be done? Are hip dislocations more likely to occur in the first six weeks after the primary surgery? Six months? Six years? Where is the dividing line?

In this study, one surgeon reviewed hip replacements done over a period of 26 years. He found that one-quarter (25 per cent) of the dislocations happened two years or more after the THR. Looking back at other studies, there appears to be a general trend for increasing risk of dislocation with time. The risk increases by one per cent every five years. After 25 years, the risk increases by seven percent each year.

How can this be prevented? Some studies show that using a larger femoral head helps decrease the risk of dislocation. But dislocation after hip replacement is usually a multifactorial problem. The patient may not follow the surgeon's precautions about avoiding certain movements and limiting activity level. The implant may not be in the best position. Malpositioning combined with imbalances in tension of the soft tissues around the implant can contribute to dislocations.

Other patient-related risk factors include female gender, younger age, neurologic problems (including cognitive decline), and trauma. Muscle weakness and alcohol abuse are two other risk factors the surgeon must screen for when planning treatment.

Implant-related risk factors include small femoral head, and wear and tear on the polyethylene liner. The liner is placed inside the shell that forms the hip socket. And there are intraoperative factors such as proper patient position during surgery and surgical technique. Choosing the right implant components such as the type of liner or size of femoral head is essential.

Once the implant is in place, the surgeon must check for impingement (pinching) of the bone or soft tissues. Postoperative care is also important. If the patient is noncompliant with the instructions to *slow down*, then it may be necessary to use a brace or cast until healing has occurred.

Early dislocations are less common but can occur in the first three to 12 months. Most of the time, this is a one-time occurrence. It doesn't happen again. So unless there is a major problem with the implant type, location, or position, revision surgery to remove and replace the implant isn't needed. The hip is relocated and the patient is sent to rehab.

After dislocation and before deciding the best plan of care, the surgeon must screen for alcohol abuse, dementia, and/or patient noncompliance. At the same time, soft tissue structures must be examined for competency. Weakness, laxity, or degenerated tissues around the hip may lead the surgeon to use a special type of implant called *constrained bipolar* or *constrained big head* femoral component.

All-in-all, a late dislocation has a worse prognosis. There is a 50 per cent increased risk of a second dislocation when the first one occurs two years or more after the implant was done. The authors suggest some specific ways to treat the older patient with a late dislocation. As mentioned, a larger femoral head can be used. And the liner inside the shell that forms the hip socket can be cemented in place.

There is a 90 per cent (or better) success rate with this approach when used with older, inactive patient, especially those who have lax soft tissues.

John J. Callaghan, MD, and Steve S. Liu, MD. The Chronic Dislocator: Early and Late. In *Orthopedics*. September 2008. Vol. 31. No. 9. Pp. 903-904.