

Case Report

Hip Replacement in Neglected Acetabular Fractures

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Abstract

Acetabular fractures are often sustained in four wheeler accidents. Most patients are young. The ideal treatment is internal fixation in displaced fractures. In neglected fractures or following improper fixation, avascular necrosis and secondary osteoarthritis result¹. In such cases total hip replacement is required. These case reports illustrate total and short stem hip replacement for neglected acetabular fracture.

Case report

Case 1 - A 30 year old Nigerian male presented with a neglected acetabular fracture of two years duration.



Fig 1- Fracture of the posterior acetabular wall

The head of the femur is lying posteriorly on the ischium (Fig 1). It is a neglected posterior wall fracture with bone deficiency.

He was taken up for a one stage acetabular reconstruction and a total hip replacement.

Technique

Acetabular reconstruction was achieved with a cortico-cancellous bone graft obtained from the resected femoral head. The posterior wall was recreated with bone graft fixed in place by a contoured reconstruction plate.

After achieving a contained acetabulum, it was prepared to receive an uncemented Pinnacle cup (Fig 2). This multi holed cup was fixed with four screws. A Corail uncemented stem was used on the femoral side. The bearings were Ceramic on ceramic (Fig 3). Ceramic on Ceramic hip replacements are a big boon to young patients suffering from hip arthritis.

Case 2

A forty two year old male sustained a transverse fracture of the acetabulum in a four wheeler accident. A retained implant and heterotopic ossification is seen (Fig 4). This was treated by internal fixation one year ago. A recent X-ray showed malunion of the fracture with secondary osteoarthritis. He was treated by a short stem hip replacement with a 36 mm ceramic head (Fig 5).



Fig 2 - Uncemented total hip replacement

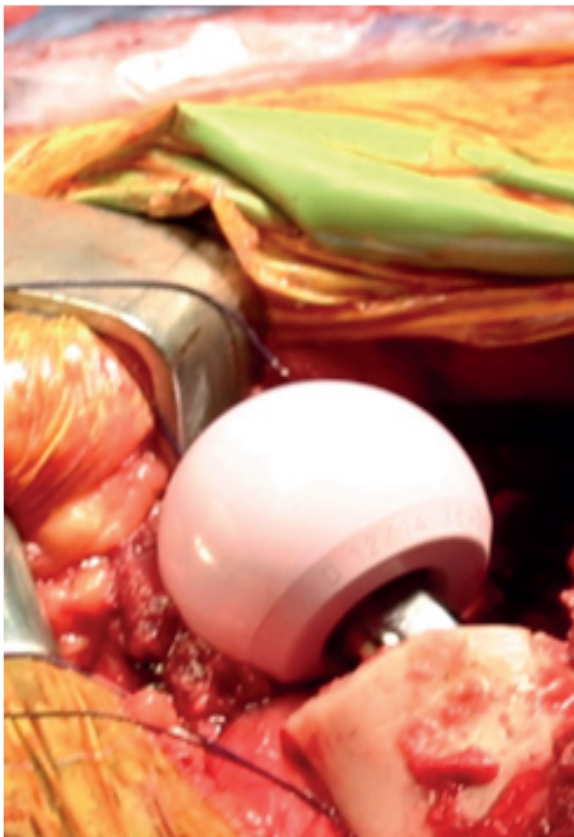


Fig 3 - Ceramic head



Fig 4 - Pre op x ray



Fig 5 - Short stem hip replacement with Proxima hip

Discussion

Acetabular fractures are a leading cause of secondary osteoarthritis requiring total hip replacement. Usually these injuries occur in young people. Ideally, THR will be uncomplicated; however, associated problems may compromise the treatment and result²⁻⁴. Retained implants, bone defects, nonunion, innominate bone deformity, impaired musculature, heterotopic ossification, and infection are important to consider when planning reconstruction and hip replacement.

A posterior approach was chosen to perform the hip replacement in both cases.

Traditionally total hip replacement with an uncemented hip replacement has been successful. One of these two cases received a short stem hip replacement with the Proxima hip⁵. The Proxima hip has the advantages of preserving bone stock and permitting revision to a total hip replacement in future.

Issues with neglected acetabular fractures

- 1) Retained metal work- It is wise to leave the metal work alone since chasing it would lead to

additional soft tissue dissection, resultant blood loss and infection.

- 2) Heterotopic ossification- This is classified by the Brooker classification. If bone is not interfering with dislocation of the head during exposure, then it can be left alone. The role of post op radiotherapy and Indomethacin is not firmly established.
- 3) Sciatic nerve injury- The leg should be flexed to 90 degrees during hip replacement to avoid stretching of the nerve and a secondary insult.
- 4) Bone deficiency – Obvious in the first case. Can be dealt with autologous or bank bone.

References

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Wouldn't it Be Nice – Eating Cake and Losing Weight?

Every self-respecting nutritional expert is likely to tell you that eating high carbohydrate food is not the right thing to do if you are contemplating weight reduction. Will it be any different if you combine high carbohydrate dessert with high protein food for your breakfast? Apparently yes, if one is to accept the conclusions of a new study done in Tel Aviv University's Wolfson Medical Center in Israel comparing two diet regimens — one featuring a low-carbohydrate breakfast, the other a high-protein, high-carb breakfast. After four months, volunteers in both groups lost about 33 pounds each. Over the next four months, however, dieters eating low-carbohydrate breakfasts regained 22 pounds on average. But, those who'd had dessert with breakfast continued to lose weight, averaging another 15-pound weight loss. The researchers speculated that dieters who had sweets with breakfast had lower levels of ghrelin, the hunger hormone, so were less likely to crave the foods they'd eaten earlier in the day. The results are controversial and are disputed by established nutritionists. The findings were presented on 25/06/12 at the Endocrine Society's annual meeting in Houston.

[<http://news.health.com/2012/06/25/dessert-with-breakfast-boosts-weight-loss-study/#more-57146>]

- Dr. K. Ramesh Rao