



Total dislodgement of the femoral component following cemented total knee arthroplasty: a case report

Çimentolu total diz artroplastisi sonrasında femoral parçanın tamamen yerinden çıkması

Şükrü ARAÇ, Vasfi KARATOSUN

Department of Orthopaedics and Traumatology, Dokuz Eylül University, School of Medicine, İzmir, 35340, Turkey

Total diz artroplastisinde gevşemenin en ciddi şekli olan parçaların yerinden çıkması bildiğimiz kadarıyla daha önce hiçbir olguda bildirilmemiştir. Çimentolu total diz artroplastisi uygulanmış 84 yaşındaki bir kadın hasta ağrı ve sağ dizinde boşalma hissi yakınmalarıyla başvurdu. Fizik bakıda diz hareketleri sırasında "klunk" alındı; ancak, diz grafileri medial femoral kondilde fragman ayrılması dışında normaldi. İleri inceleme olarak, floroskopik kontrol altında dize varus ve valgus stres testleri uygulandığında femoral parçanın yerinden çıktığı saptandı. Yerinden çıkma yalnızca stres grafilerinde izlenebiliyordu. Hastaya revizyon çimentolu total diz artroplastisi uygulandı. Cerrahi sonrasındaki üç yıllık izlemede hastanın şikayetlerinin kalmadığı gözlemlendi. Bu olgu, gevşemeden şüphelenilen durumlarda, özellikle standart radyografiler normale stres radyografilerinin önemini ortaya koymaktadır.

Anahtar sözcükler: Artroplasti, replasman, diz/radyografi; çimentolama; diz protezi; ameliyat sonrası komplikasyon; protez başarısızlığı/radyografi; yeniden ameliyat.

Total dislodgement of the components, which is the most severe form of loosening, has hitherto been unreported following total knee arthroplasty. An eighty-four-year-old woman presented with complaints of pain and sensation of insecurity of her right knee after cemented total knee arthroplasty. On physical examination, a clunk was elicited during movements of the knee; however, radiographs appeared normal except for a separated fragment of the medial femoral condyle. Further examination with varus and valgus stress tests under fluoroscopic control showed dislodgement of the femoral component, which was only apparent on stress radiographs. She underwent revision cemented total knee arthroplasty and her complaints disappeared completely within a follow-up period of three years. This case illustrates the need for stress radiographs when standard radiographs are normal in the face of a high suspicion of loosening.

Key words: Arthroplasty, replacement, knee/radiography; cementation; knee prosthesis; postoperative complications; prosthesis failure/radiography; reoperation.

Loosening of the either components of total knee arthroplasty is main reason of revision.⁽¹⁾

The more severe form of loosening may be the dislodgement of the components but to our knowledge, no such a case has been reported before. We present such a case that dislodgement was detected when the valgus and varus stress radiographs were taken.

Case report

A 84 year old woman admitted to our clinic for pain and sensation of insecurity of her right knee. She had undergone cemented total knee arthroplasty operation five years ago and it had been revised two years later for late infection. Although she had been asymptomatic for a year, then gradual pain and sensation of insecurity had appeared.

On the examination, “clunk” is felt during the movements of the knee but the radiographs were normal except for a separated fragment of the medial femoral condyle (fig. 1 a). Then examination was repeated under fluoroscopic control and dislodgement of femoral component was observed, when varus and valgus stresses were applied (fig. 1 b), but the component reduced when the stresses were discarded as in Figure 1 a. At the second revision arthroplasty, the femoral component was totally free

from the bone and loosening of tibial component was also observed, and stemmed, cemented components were inserted (fig 1 d).

At the latest follow-up, three years postoperatively, the patient was symptom-free

Discussion

Although, loosening of the components after total knee arthroplasty is not as frequent as seen after total hip arthroplasty (2, 3), but still remains the



Figure 1.(a) Anteroposterior radiograph of the knee shows no signs of dislodgement **b)** Dislodgement of the components are apparent when valgus **c)** and varus stresses were applied. **d)**12 years after revision

main reason of revisions (1). On the other hand, dislodgement of the components, as the most severe form of loosening, has not been reported after total knee arthroplasty, to our knowledge, although dislodgement was reported after total hip arthroplasty. This is probably due to the potential stability of the knee joint that, normal loads bearing on the components tend to reduce them. Present case shows the necessity of stress radiographs when loosening is suspected and especially when the standard radiographs are normal.

References

1. Knutson K, Lewold S, Robertsson O, Lidgren L. The Swedish knee arthroplasty register. A nation-wide study of 30,003 knees 1976-1992. *Acta Orthop Scand* 1994;65:375-86.
2. Laughlin RT, Smith KL, Adair DM. Displacement of an uncemented acetabular component after dislocation of a total hip prosthesis. A case report. *J Arthroplasty* 1992;7:303-7.
3. Norrman PO. Dislodgement of the femoral component of a cemented hip. A case report. *Acta Orthop Scand* 1993;64:598.