Learning from errors

Chronic asymptomatic dislocation of the bearing in an Oxford unicompartmental knee replacement

Timothy Woodacre, Morwena Marshall, Ashraf Awad, David Isaac

Department of Trauma and Orthopaedics, Torbay Hospital, Torquay, Devon, UK

Correspondence to Timothy Woodacre, timwoodacre@yahoo.co.uk

Summary

Unicompartmental knee replacement is a common procedure for the treatment of osteoarthritis confined to one compartment of the knee. Dislocation of the mobile bearing is a recognised complication. We present a patient with a 6-year asymptomatic bearing dislocation, missed on original presentation.

CASE PRESENTATION

We present the case of an 83-year-old man who had undergone an Oxford medial unicompartmental knee replacement 10 years ago. Six years ago, 4 years following his primary procedure, the patient reported a sudden onset of pain following a twisting injury to the knee. Radiographs were obtained in the emergency department, and the

patient was subsequently advised that no abnormality was present. He recovered well and returned to all normal activities with an asymptomatic knee. Six years after his injury his knee developed symptomatic *lateral* pain and the patient represented for an orthopaedic opinion. Radiographs demonstrated both lateral compartment wear and a dislocated medial oxford bearing (figures 1 and 2). Review of the original emergency department radiographs demonstrated bearing dislocation (figures 3 and 4). It

Figure 1 Antero-posterior and lateral radiographs of right knee from 2010 demonstrating lateral component wear and dislocation of a unicompartmental knee replacement bearing.

Figure 2 Antero-posterior and lateral radiographs of right knee from 2010 demonstrating lateral component wear and dislocation of a unicompartmental knee replacement bearing.

Figure 3 Original anterior-posterior and lateral radiographs of right knee from 2004 demonstrating dislocation of a unicompartmental knee replacement bearing.

would seem likely that the bearing had remained dislocated for 6 years.

TREATMENT

The knee was revised to a total knee replacement. At arthrotomy, the bearing was found to be lying by the medial border of the patellar tendon. A shallow area of erosion of the tibial component was evident where it had articulated with the femoral component (figure 5). There was moderate lateral compartment wear.

OUTCOME AND FOLLOW-UP

Postarthroplasty the patient recovered well with a pain-free functioning knee.

DISCUSSION

Unicompartmental knee replacement is a common procedure for the treatment of osteoarthritis confined to one

Figure 4 Original anterior-posterior and lateral radiographs of right knee from 2004 demonstrating dislocation of a unicompartmental knee replacement bearing.

compartment of the knee. The Oxford unicompartmental knee is comprised of two metallic components, separated by a mobile polyethylene bearing. Dislocation of the mobile bearing is a recognised but rare complication of the Oxford unicompartmental knee when used to replace the medial compartment, occurring in less than 0.6% of patients.^{1 2} Risk of dislocation increases to 10% when used to replace the lateral compartment.³ Dislocation commonly occurs through a significant twisting injury, resulting in immediate severe localised pain with or without loss in knee motion. Treatment involves revision

Figure 5 Photograph of the tibial component post-revision surgery demonstrating erosion from direct contact with the femoral component.

of the polyethylene bearing, typically for ongoing pain. This case highlights the possibility of missing a dislocated unicompartmental knee replacement bearing. This event has been reported elsewhere⁴ but to our knowledge the current case represents the longest reported period between presentation and identification of the diagnosis. Unusually, the patient retained good asymptomatic knee function during this period, with progressive lateral wear eventually necessitating revision.

Learning points

- ▶ The bearing of an Oxford unicompartmental knee replacement can dislocate with the appropriate significant stimulus.
- ▶ This is normally a painful complication requiring revision of the bearing.
- ▶ Unless the examining clinician is aware of this potential complication it can be missed on radiograph.

Competing interests None.

Patient consent Obtained.

REFERENCES

1. **Price AJ**, Dodd CA, Svard UG, *et al.* Oxford medial unicompartmental knee arthroplasty in patients younger and older than 60 years of age. *J Bone Joint Surg Br* 2005;**87**:1488–92.
2. **Pandit H**, Jenkins C, Barker K, *et al.* The Oxford medial unicompartmental knee replacement using a minimally-invasive approach. *J Bone Joint Surg* 2006;**88**:54–60.
3. **Robinson BJ**, Rees JL, Price AJ, *et al.* Dislocation of the Bearing of the Oxford Lateral Unicompartmental Arthroplasty. *J Bone Joint Surg Br* 2002;**84-B**:653–7.
4. **Thavarajah D**, Davies A. A dislocated mobile bearing from a unicondylar knee replacement—a complication not to be missed. *Ann R Coll Surg Engl* 2010;**92**:W8–9(2).

Copyright 2012 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Please cite this article as follows (you will need to access the article online to obtain the date of publication).

Woodacre T, Marshall M, Awad A, Isaac D. Chronic asymptomatic dislocation of the bearing in an Oxford unicompartmental knee replacement. *BMJ Case Reports* 2012;10.1136/bcr-01-2012-5542, Published XXX

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow