Curious case of a concave cap

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DESCRIPTION

We present a striking image of an elderly woman's knee radiograph (figure 1), in particular, the size and shape of the patella. This particular patient was diagnosed with left knee osteoarthritis, primarily

Figure 1 Lateral knee radiograph showing a flat (or convex) trochlea with a concave patella.

Figure 2 Anteroposterior knee radiograph showing lateral compartment osteoarthritis with slight valgus deformity.

affecting the lateral compartment (figure 2); the patient had elected to undergo total knee replacement. However, the size and morphology of the patella were noted to be unusual. Intraoperatively, the depth of the patella measured only 10 mm. This meant that the patella resurfacing was not undertaken as the patella lacked sufficient depth to allow resection of the joint surface and leave sufficient bone to accept the pegs of the resurfacing implant.

The patient's trochlea was dysplastic, and that has led to the patella conforming to the equivalent shape and becoming concave. Classification of trochlear morphology is well analysed and described in relation to patella instability by Lippacher *et al* (trochlea and patella).¹ However, the corresponding patella morphology, or the effect of differing trochlea shapes on the patella, is not as well explored. Interestingly, this patient had never experienced any patella instability.

This case highlights the variation in anatomy relating to the trochlea and the patella, its relevance in relation to thorough assessment and planning prior to any surgical procedure, and how imperative it is to know the limitations of the equipment and prostheses that we use in medical practice.

Learning points

- ▶ There is considerable variation in anatomy relating to the trochlea and the patella.
- ▶ The importance of thorough assessment and planning prior to any surgical procedure is highlighted.
- ▶ It is imperative to know the limitations of the equipment and prostheses that we use in medical practice.

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