Case Pictorial

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Locked Acute Vertical Patellar Dislocation in Background of Ligamentous Laxity: A Rare Presentation

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When the femur rotates internally and the tibia externally with the foot fixed on the ground, the patella may dislocate almost always occurs in the lateral direction.[1] Usually, acute dislocation of patella managed with closed reduction by extension of flexed knee along with pressure applied to the lateral aspect of dislocated patella and maintained by plaster cylinder applied from groin to ankle for 4-6 weeks.[2] Cash and Hughston[3] divided acute dislocation of patella into two groups. In the first group, the patients showed anatomic predisposition to patellar instability, e.g. lateral hypermobility of patella and dysplasia of vastus medialis muscle and in the second group no predisposing factor. The stabilizing role of the medial patellafemoral ligament has been emphasized with cadaver studies demonstrating that this ligament is responsible for >50% of the lateral restraining force of the patella.[4] Vertical dislocation is termed when dislocated patellar articular surface faces lateral or medial, suggesting rotation along vertical axis.[5]

A 14-year-old girl with generalized joint laxity (Figure 1) presented with acute right patella dislocation on January 2014 at casualty in RKMSP. She had twisting injury of right knee during her bath. X-ray right patella dislocated laterally with 90° rotated (Figure 2). Reduction attempted within 4 h under spinal anesthesia but failed. Next day open reduction done. Medial patella-femoral ligament found to be torn (Figure 3). Patellar dislocation was reduced, and rotation was corrected. Small osteochondral fragments were removed. Medial soft tissue plication and

Figure 1: Generalized ligamentous laxity

Figure 2: Radiologically dislocation of the patella showing rotational malalignment

reinforcement done with 3-0 proline sutures. Post-operative X-rays showing good alignment (Figure 4). Guarded knee movement started 3 weeks later. Now 12 months follow-up she had a good range of motion of the knee and no

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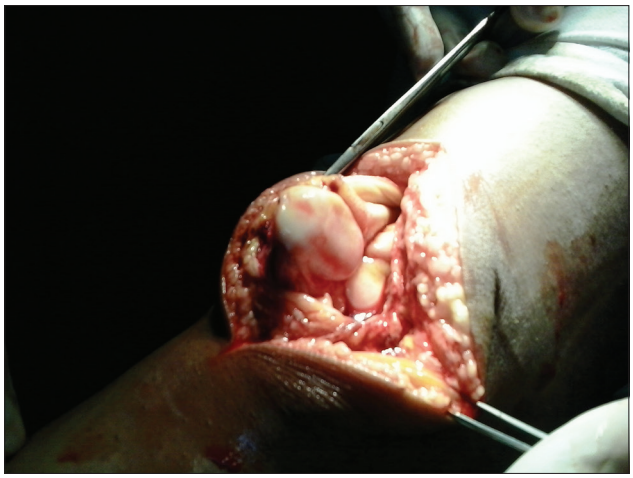

Figure 3: Operative photograph showing tear of the collateral ligament

Figure 4: Post-operative (6 months) X-ray showing good radiological reduction

recurrence of dislocation (Figure 5). She had similar left patella dislocation on May 2012 and managed by closed reduction. No history of recurrent left patellar dislocation.

Points to Ponder

1. Dislocations along with rotational components are very difficult to reduce by closed method, and they are usually associated with the osteochondral injury. Some authors recommended primary open reduction in cases where rotational components are suspected, to reduce chance of further chondral injuries during repetitive reduction maneuvers.[6]
2. Here, in this case, the patella rotates more than 90° along its vertical axis and locked in the lateral parapatellar gutter. Very limited data are available about similar presentation.

Figure 5: Post-operative photograph showing good clinical outcome at follow-up at 1 year

REFERENCES

1. Sillanpää PJ, Mattila VM, Mäenpää H, Kiuru M, Visuri T, Pihlajamäki H. Treatment with and without initial stabilizing surgery for primary traumatic patellar dislocation. A prospective randomized study. J Bone Joint Surg Am 2009;91:263-73.
2. Patella Dislocation Joint Reduction. Moira Davenport. Available from: http://www.emedicine.medscape.com/article/109263. [Last updated on 2015 Apr 16].
3. Cash JD, Hughston JC. Treatment of acute patellar dislocation. Am J Sports Med 1988;16:244-9.
4. Hautamaa PV, Fithian DC, Kaufman KR, Daniel DM, Pohlmeyer AM. Medial soft tissue restraints in lateral patellar instability and repair. Clin Orthop Relat Res 1998;174-82.
5. Huang CJ. Lateral patellar dislocation with vertical axis rotation of the patella after attempted reduction of typical patellar dislocation. Pediatr Emerg Care 2008;24:694-6.
6. Abdelhalim E, Elmrini A, Boutayeb F, Habi S, Maatougui K, Leleu JM. Lateral patellar dislocation with vertical axis rotation of 90 degrees. Am J Emerg Med 2007;25:733.e1-2.

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