

## **A Surgical Technique of Medial Patellar Luxation in Dogs**

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### **SUMMARY**

Medial patellar luxation is a displacement of the patella from the trochlear sulcus, a common cause of lameness in small-breed dogs, but also occurs in large-breed dogs. Without an adequate treatment, medial displacement of the quadriceps muscle group, lateral torsion of the distal femur, a lateral bowing of the distal one third of the femur, femoral epiphyseal dysplasia, rotational instability of the stifle joint, or tibial deformity can occur. The grades of luxation (4 grades) and the best therapeutic management can be established after the signalment, history, diagnostic imaging and physical examination findings.

A 9-month-old female was presented for an intermittent weight-bearing lameness at left hindleg. The leg held in a flexed position at steps, patella luxated medially most of the time and medial displacement of the quadriceps muscle group were the physical examination which included the disease in grade 3 of medial patellar luxation.

Under general inhalatory anaesthesia, the method performed was trochlear resection. After a lateral parapatellar arthrotomy, the technique consisted in removing of the articular cartilage and bone from femoral trochlea with a rongeur. Medial and lateral trochlear ridges were made parallel to each other and the base of the groove perpendicular to each trochlear ridge, so the new groove could accommodate 50% of the height of patella. After trochlear resection, two layers of interrupted mayo mattress sutures (polyester 1-0) were done for a lateral capsular imbrication. No major intraoperative and postoperative complications were noted. The local swelling of stifle decreased progressively in the first days postoperative due to anti-inflammatory drugs (carprofen). A long-term sample protocol of physical rehabilitation consisting in exercises (massage, passive range of motion, swimming, criotherapy) was recommended. The normal function of the leg was observed after 12 weeks postoperative.

Our case confirm that the trochlear resection is a simple surgical procedure which can re-establish the normal alignment of the patellar complex mechanism, but it should only be performed when a recession procedure or a lateral imbrication are impossible, because removing the articular cartilage of the trochlea allows articulation of the patella on the rough cancellous surface, which results in wearing of patellar articular cartilage in time.

**Keywords:** dog, patella, medial luxation.