

Two Case of Bilateral Cranial Cruciate Ligament Rupture Corrected by Tibial Wedge Osteotomy

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Signalment. There were two patients presented for bilateral hindlimb lameness with cranial cruciate ligament (CrCL) rupture. One was 6 year-old male Shi tzu breed with bilateral hip joint luxation and the other was 4 year-old castrated male maltese breed which visited several animal clinics. The latter was diagnosed as chronic patellar luxation and treated but lameness was remained about one year. Both patients showed sudden lameness during ordinary exercise without special cause.

Results. The causes of CrCL rupture was suspected as degenerative changes on ligament. In these cases, tibial wedge osteotomy (TWO) to correct CrCL rupture was applied because of lateral suture ended higher failure rate.

On surgery the medial meniscus and remnant of CrCL were removed by medial parapatellar incision. The incision site was closed. A cranial wedge osteotomy, immediately below the proximal tibial metaphysis, was performed with a bone saw. The angle of tibial wedge is determined from preoperative measurements of the tibial plateau slope angle on a radiograph and equal to the measurement of the tibial plateau slope angle reduced by 5° or 6°. Measured tibial plateau angles in Shih Tzu were 33° in the left and 36° and in the right hindlimb, Maltese were 28° in the left and 31° in the right. An external fixation device was applied to stabilize the tibia after removing the bone wedge. The patients recovered normal weight bearing gait in one month. The external fixation device were removed 2 month after clinical union

Clinical relevance. This study suggests that TWO is useful surgical method for reconstruction of CrCL rupture

Key words: cranial cruciate ligament, tibial wedge osteotomy (TWO), dog

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