Maquet and TTA technique combination for the treatment of cranial cruciate ligament rupture in dog

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Dear Editor-in-Chief,

Many techniques have been described for the treatment of cranial cruciate ligament rupture in dogs. The most commonly used of the corrective osteotomies are: tibial plateau leveling osteotomy, tibial tuberosity advancement (TTA), and more recently the Maquet technique has been described (1).

Complications from TTA can be divided into major and minor complications. Major complications are those requiring surgical intervention, such as meniscal tears, tibial fracture, implant failure, infection, granuloma, osteomyelitis and medial patellar luxation. The minor complications do not require surgical intervention (2).

The Maquet or Fast TTA technique is a new technique for the treatment of cranial cruciate ligament rupture. This technique follows the same principles as the TTA technique, but uses only the cage to position the tibial crest osteotomy, without the need for a plate. In this technique, holes are drilled in the distal part of the tibial crest osteotomy before the osteotomy is performed (3). The main disadvantages of this technique are that large advancements are not possible and there is a potential for fracture of the tibial crest, particularly in the distal part of the osteotomy (4).

The combination of the two techniques has not been described previously, but has been used successfully in our research group. Initially the Maquet technique is performed using a large drill to perforate the distal part of the tibial crest osteotomy, allowing the advancement of the tibial crest with the aid of a spacer or a cage, but without a complete tibial osteotomy. Subsequently, the TTA plate is placed on the tibial crest and tibial diaphysis. The main advantages of this combined procedure versus the classic TTA, is that it avoids a high patella, medial or lateral displacement of the tibial crest, and the bone plate support is simpler resulting in a shorter surgery and postoperative hospitalisation. We have completed this procedure in eight dogs and report that the osteotomy is consolidated more rapidly, probably because the tibial crest remains connected and the periosteum is not detached. Further cases must be evaluated to confirm these findings. If confirmed, the decrease in bone healing time would be a great advantage of this combined technique.

Sincerely,

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Conflict of interest

None declared.

References