



FOREST
Veterinary Centre

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TIBIAL PLATEAU LEVELLING OSTEOTOMY ‘TPLO’

Many larger breed (and some smaller breed) dogs can suffer with stifle (knee) problems usually in middle age but sometimes as young as 1 year old. There appears to be an underlying weakness that results in a gradual deterioration of the stifle that can suddenly be made worse by the final breakage of the cranial cruciate ligament. This ligament is inside the joint and controls the tendency for the lower bone (tibia) to dislocate forwards on the upper bone (femur) during weight bearing. This ligament can also be torn more suddenly as a result of an accident with the same long term result.

If left untreated this unstable stifle rapidly develops severe arthritis that can seriously reduce the dog's ability to exercise and lead a full life. Sometimes this arthritis is well established by the time the dog is presented for treatment.

Because there is usually an underlying reason for this ‘cruciate disease’ attempts in the past to replace this ligament with various materials have given very variable results. Some dogs do fairly well, but others can be very disappointing.

An American veterinary orthopaedic specialist, the late Barclay Slocum, worked out the forces working in the dog's stifle joint and showed that if the angle of the weight bearing part of the lower bone (tibial plateau) is reduced from the usual 20 to 30 degrees to the shaft of the bone down to 5 or 6 degrees, the sliding forces on the stifle are removed and the torn cruciate ligament is no longer needed.

The operation involves lifting all the muscles off the area to be cut, carefully making a precise curved cut in the upper tibia, turning the tibial plateau through a distance calculated from the special X ray pictures, and re-fixing it with a specially designed steel plate and screws. The cut bone heals within 6 to 8 weeks and by this time the dog is usually using the leg well. The results are usually very good, even if the dog already has a well established arthritis of the joint.

The operation is fairly long and involves a large amount of specialist equipment and specialist skills. As a result it is fairly expensive but the results make it well worth it.

There are some complications to consider. The most serious is bone infection which is very rare in our hands and can still be treated. Other more minor complications usually resolve easily. The aftercare has to be very strict to prevent the dog damaging the repair.

Remember, the stifle is still a damaged stifle and there will be some occasional set backs, some stiffness on first getting up especially after a period of strenuous exercise. Most dogs will return to a full pet life and working dogs can usually return to work.

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