

## TOE INJURIES IN THE RACING GREYHOUND

**Dr Des Fegan MVB MRCVS**  
**Walnut Veterinary Clinic**  
**Cranbourne Vic 3177**

Injuries of the toes have been comprehensively covered earlier in the seminar. I would like to relate some treatment approaches to injuries that I have evolved over the years. In my hands they are simple to perform and seem to give me much better results than previously available techniques. With experience I tend to approach surgery with caution. If it is simple and quick and atraumatic it has a chance of doing no harm. In addition if the surgery can remedy a situation to render the animal pain free then the procedure is worth considering.

### **Dislocated P1P2 joint.**

This is commonly referred to as sprung toe. The toe is presented with some swelling. There is often little lameness and the greyhound may have performed very well in a recent race. Palpation of the toe joint reveals a laxity of the collateral ligament and usually some resentment on the part of the dog. If the dog is oblivious to the articular manipulation then it is possible that the injury is old and therefore with exhausted healing processes, a ligamentous non-union. Fresh dislocations should be radiographed. Avulsion fractures from the collateral ligament should be removed surgically. They do not dissolve and are a common cause of failure of conservative management. Without avulsions the decision can be made to try conservative treatment. The fundamental veterinary treatment is the local injection of a sclerosing agent. This agent will stimulate the formation of scar tissue which encourages the severed ends of the collateral ligaments to bond. The agent I use is called fibro vein but there are many chemicals with sclerosing properties. In addition to the fibro vein I use local anaesthetic, antibiotic and I harvest some buffy coat layer of an autogenous blood sample in the hope that the platelet content may help in the healing process.

The toe is supported for 10 days and the dog is rested for a further two weeks. Many do well and it is usually evident if the healing process has resulted in a strong taut joint. At this stage if the healing is lax and there is some movement in the joint then I would advise the client that the last month of treatment has been a complete waste of time and surgery is required to strengthen the joint. Some may balk at surgery and it is possible for a greyhound to race with a partially healed toe supported by tapes.

Many techniques have been promoted for the repair of dislocated P1P2 Joints. This proves the theoretical proposition that the likelihood of a cure is inversely proportional to the number of remedies. Among the many advocated techniques have been: crude cat gut embrocation of the collateral ligament area (including skin); carbon fibre implant; dewclaw tendon implant; tunnel techniques with stainless wire and then simple repair of the ligament by suturing the ends together with a Bunnell suture pattern. I have tried all these techniques and they have all been successful some of the time, but in my hands they did not give me confidence that I was not going to see the patient again to repair the repaired.

My treatment today is a hybrid of the above. I attempt to repair the ligament by using 3/0 catgut in a Bunnell suture. However to stabilise the joint I insert a 2mm Kirschner pin through the base of P1 into the joint and along the shaft of P2. This makes the P1P2 toe joint rigid and gives the sutured ligament time to heal in situ no matter what the patient gets up to in his kennel. It also damages the articular surface of the p1 and p2 bones which triggers an arthritic stiffening of this joint. The toe is kept bandaged for three weeks when the pin is removed and the nail shortened to half its length. The dog is confined to his kennel for a further three weeks, and then goes back to normal exercise. The joint is always a little stiff but this seems to be of no consequence during the rest of their career.

### **Partial dislocation metacarpo-phalangeal joint**

This is primarily an injury of the inside and outside toes (D2 & D5) of the hind limbs. There is swelling evident but minimal lameness and the toe is obviously displaced to a more ventral position on the foot. Traditional treatment is usually the complete dislocation of the toe. Occasionally conservative management with tapes to provide some stability to the toe are utilised. I have seen dogs race successfully after both options however some greyhounds do not cope well with complete digit amputation.

An alternative approach that seems give very consistent results is amputation of the P3 bone. This releases the tightening pressure on the plantar side of the metacarpo-phalangeal joint and thus reduces its tendency to dislocate. I make no effort to repair ligaments at the MP joint and over a couple of months the toe stabilises in a normal position. The bulk of the toe is still present and minimal loss of performance.

It is prudent to radiograph any dislocated toe before embarking on treatment. Conservative treatments generally fail if fragments of bone are present near to the articular surface.

### **Toe amputation**

The amputation of the complete toe is generally done at the articular surface of the metacarpal or metatarsal bone. Some surgeons prefer to amputate by sectioning through the distal metacarpal or metatarsal. In my experience these greyhounds have a prolonged recovery time. The removal of the metacarpal stump exposes the adjacent body of the bone to shearing forces much greater than it had previously experienced. This specific area of the metacarpal (tarsal) level with the new stump is very vulnerable to stress fracture. It certainly requires many weeks of patient galloping and trials to condition this bone for racing. Removal at the articular surface transfers the shearing forces to the much stronger head of the metacarpal bone.