TREATMENT OF FRACTURES AND LUXATIONS IN RABBITS

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Introduction

Most trauma in small mammals occur at home. Diagnosis can be compared with that in dogs or better cats, but species specific differences are important and have to be considered. In case of a rabbit or a rodent with a fracture or dislocation of a joint presented in private practice or clinic therefore the question arises, what is best in treatment, alternative treatment and financies. Body smallness, special moving features and fragility of bones in these animals present challenges to the veterinary surgeon. The shapes and sizes of the bones often do not allow the use of plates and screws. In some animals (e.g. Chinchillas) here may be considerable stress for instance on a bone like the tibia. Several requirements have to be recognized in the treatment of fractures or dislocations.

Fracture treatment

In fractures of radius and ulna intramedullary pin fixation (penetrating distal radius / alternatively a “dowel” technique and proximal ulna) is the preferred technique in our clinic. In very young rabbits an external coaptation technique (butterfly splint) also may show a satisfying healing of the fractured bones. A fractured tibia, femur or humerus will best be fixed by a tie-in-fixation technique (intramedullary pin plus external fixation device) which also can show a good result in cases of delayed union. With this technique a rotation instability can be addressed, a shortening of the fracture stumps and an implant failure can be avoided. Open fractures must be debrided, a swab has to be taken, after that the wound is lavaged. External fixation is the treatment of choice (4).

Spontaneous femoral capital physeal fractures may be seen in male cats, seldom in dogs or human beings. Own cases and the case description by Knudsen and Langley-Hobbs (2) demonstrate that the same problem also occurs in continental giant rabbits. Diseased rabbits show a long lasting hindlimb lameness, muscle atrophy, the radiograph osteophytes around the femoral neck, head and neck distally positioned. Femoral head and neck excision and physiotherapy is recommended.

Dislocations

The most common dislocations in rabbits are caudal elbow luxations followed by hip luxations. Rabbits undergo elbow luxation approximately four times more often than cats (1). Closed reduction of the elbow and sling immobilization is the first treatment option, but due to relaxation tendency often an open reduction is necessary. There are only experimental studies of rabbits with hip dislocations. In one study it could be demonstrated that after 4 mths the articular cartilage of the acetabulum showed fibrous degeneration but only in 25 % at the femoral heads (5). Own cases of traumatic hip luxations will be presented. Different stabilization techniques in elbow and possible options of hip dislocations will be discussed.

Amputation

Irreparable traumatic conditions, financial reason or osteomyelitis may also be a reason for amputation of a leg in rabbits. The technique is easy and at least should include the distal two third of the femur. Results of a study show that amputation especially in heavy rabbits, those with concurrent pododermatitis, muscle or neurologic disease should be considered carefully because of chronic complications (3).


