

## A REVIEW OF ORTHOPAEDIC SURGERY IN CATS AND DOGS PERFORMED IN THE UNIVERSITY VETERINARY HOSPITAL (UVH-UPM) OVER 3 YEARS (1994-1997)

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### Introduction

Orthopaedics is a branch of surgery dealing with the preservation and restoration of the function of the skeletal system, its articulations and associated structures (Blood and Studdert, 1988). Most orthopaedic problems are not typically life-threatening, but their treatment is important as the skeletal system support the normal functions of many other organs, and help to avoid any secondary problems. A general view of the common orthopaedic problems that occur in cats and dogs would provide clues to better techniques and understanding of surgical management of orthopaedic problems. The objectives of the study were: (1) To get an overview of the surgical management of orthopaedic problems in cats and dogs; (2) to understand the dynamics of using various types of fixation hardware in treatment of various bone and joint diseases, and to analyse the follow-up assessment of the techniques used; and (3) To identify the complications during the course of treatment of bone and joint diseases.

### Materials and Methods

The study was conducted at UVH-UPM for the period from January 1994 to December 1996. The front office registration book, small animal surgery record book and the radiology records were used to identify orthopaedic cases seen in the Hospital and treated surgically. The orthopaedic cases were classified according to the various body regions: Head, forelimbs and joints, hind limbs and joints, spine, pelvis, and tail. The causes of the problems, the method of diagnosis, treatment, follow-up and complications if any were recorded (Denny, 1993; Ibrahim, 1993).

### Results and Discussion

Nearly 40% of all surgical cases in cats and dogs presented to the Hospital were orthopaedic cases, of which more than 90% were due to traumatic causes (Loqman, 1997). Cats made up 47% and dogs 53% of the orthopaedic cases. A higher percentage involved were adult animals (>12 months

old, 60%) and intact males (56%). The most common problems involved the hind limbs (54%), followed by the pelvis (17%), forelimbs (10%), spine (6%) and head (6%). Various causes of the problems tabulated from which it was seen that more than 90% were due to traumatic injuries. Road traffic accident showed the highest percentage (27%). Cases caused by diseases (4%) and congenital defects (2%) were also recorded. The treatments used were external fixation (2%), internal fixation (45%), re-constructive surgery (39%) and spinal decompressive surgery (4%). A cheaper and easier bone fixation technique using plumber's paste as a modified Kirschner-Ehmer fixation device had been successfully tested to be useful and efficient in fracture repair. A modified Denny's technique of elbow repair had also been successfully used in dogs (Denny, 1993). Fracture and joint repairs at each anatomical regions previously mentioned were tabulated for easy reference. Co-existing problems involved organs or tissues adjacent to the site of orthopaedic injury. The follow-up study had identified complications in the use of fixation devices and post-operative procedure inadequacies (Mavin, 1991).

### Conclusions

This study of bone and joint diseases in cats and dogs tend to focus on the physical nature of the injury and their management, as well as any complications. This study shows that most of the orthopaedic problems in cats and dogs occur at the hind quarters, mostly involving the hind limbs and the pelvis. Fractures in the forelimbs were less common, except the forelimb fracture in dogs and mandibular symphysis fracture in cats. Immediate and priority attention was necessary when orthopaedic problems caused trauma to vital organs at the related sites such as lungs, liver and organs of the urinary system. Modified techniques had been successfully employed in managing bone and joint repairs.

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