



Contribution of radiography to the diagnosis of musculoskeletal disorders in dogs at the Veterinary Center of the Lubumbashi Zoo

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ABSTRACT

Objective: This study aimed to evaluate the quantitative and qualitative contribution of digital radiography to the diagnosis of musculoskeletal disorders in dogs at the Veterinary Center of the Lubumbashi Zoological Garden, with a view to improving the quality of canine medical care in Lubumbashi.

Methodology and Results: A prospective and retrospective study was conducted on radiographic examinations performed on animals presented for consultation. Data were collected from clinical records, registers and archived radiographs. A total of 202 radiographs were analyzed, including 103 (50.9%) concerning dogs. Most examinations (71.8%) were requested by attending veterinarians. Of the 202 radiographs, 197 (97.5%) were compliant, and 137 (69.5%) provided diagnostic information, demonstrating the effectiveness of digital image development. Dogs over 24 months of age and males were the most represented. Various local and exotic breeds were involved, with crossbreeds and Boer Boël being among the most frequently radiographed. The girdle and pelvic limbs (55.3%) were the most examined anatomical regions, particularly the pelvis and thigh, followed by the girdle and thoracic limbs (34.2%). The lumbar and sacral regions were the most affected portions of the spine. Radiographic findings included multiple pelvic fractures, femoral fractures, tibia-fibula fractures, vertebral fractures, hip dysplasia, and osteosarcoma.

Conclusion and Application of Results: Digital radiography proved to be an essential diagnostic tool in the evaluation of musculoskeletal disorders in dogs. It significantly improved image quality and diagnostic accuracy while reducing non-diagnostic examinations. Its wider implementation in veterinary practice in Lubumbashi would enhance early detection of lesions, guide appropriate therapeutic decisions, and ultimately improve canine health management. Clinical symptoms represented only by lameness and local swellings often call for reservations when establishing a precise diagnosis. However, an accurate diagnosis is not always possible with the elements of clinical diagnosis at the disposal of the veterinarian. In view of these limitations, there is a need to resort to the veterinary laboratory to make a definitive diagnosis. X-ray is a complementary

examination frequently performed for all types of consultation (musculoskeletal, cardiology, digestive, respiratory, urinary pathology, reproductive system,).