

Surgical Correction of Flail Chest in a Dog

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Signalment: A 5-year-old intact male Yorkshire Terrier was referred for dog bite injury to Veterinary Medical Teaching Hospital of College of Veterinary Medicine of Konkuk University. At initial presentation, abnormal respiratory signs such as dyspnea and abdominal breathing were observed.

Result: The dog was revealed six skin punctures and flail chest through physical examination. Fractured ribs (with a flail segment, right 7th to 9th rib) and subcutaneous emphysema were found on thoracic radiographic views. The fractured ribs were displaced into the thoracic cavity. Additionally, full-thickness tearing of thoracic musculature and pulmonary contusions and lacerations were surgically confirmed. In this case, stabilization of the thoracic wall was achieved by reconstructing fractured ribs using cerclage wires and correcting extensive damaged latissimus dorsi and intercostal muscles. Supportive therapy including oxygen supply within oxygen cage rest, antibiotic therapy, and pain management performed. General condition and respiratory pattern showed normal at 4-month postoperative recheck.

Clinical relevance: Generally, surgical reconstruction of the fractured ribs is not performed. In this case, internal fixation using cerclage wire applied for stabilization of the fractured ribs, because lung damage could be induced by severely displaced ribs. Exploratory surgery should be considered if lung damage were suspected by displaced rib fragments.

Key words: rib fracture, flail chest, surgical correction, dog

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