

Modified Ventral Fixation on Atlantoaxial Subluxation with Axial Fracture in a Dog

Myung Hee Lee, Tae-sung Han, Kirae Cho¹, Jinuk Park, Gonhyung Kim
and Seok Hwa Choi*

*Veterinary Medical Center, College of Veterinary Medicine,
Chungbuk National University,*

*¹Department of Veterinary Nurse and Pet Science, Seojeong College, Yangju,
Republic of Korea*

Signalment: A 9-month-old male, Pekingese dog was referred for acute nonambulatory tetraparesis after minor trauma. Owner was complained of neck pain, abnormal gait and dysuria.

Results: The patient was aseptically prepared and placed in the dorsal recumbency and a midline skin incision was made from the intermandibular area to the level of the fourth cervical vertebra. The sternohyodeus muscles were separated along their midline to reveal the larynx, trachea, thyroid glands, esophagus, common carotid artery, and vagosympathetic trunk. Before stabilization, the articular cartilage of atlas and axis was removed and subchondral bone was exposed to allow the fusion of the atlanto-axial joint. The stabilization and fixation of the fracture and atlanto-axial joint were achieved with diameter 1.5 mm, length 18 mm cortical bone screws in lag screw manner.

Clinical relevance: In this case, the plate could not be applied according to the main principles of plating, since there were not enough sites for at least two screws and due to a considerable risk of failure in this area the fusion and stabilization could be maintained with double cortical bone screws and also the neck cast supported.

Key words: modified ventral fixation, atlantoaxial subluxation, dog

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* Corresponding author: shchoi@cbu.ac.kr