

## **Surgical Correction of Persistent Right Aortic Arch in a German Shepherd Puppy: A Case Report**

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Vascular ring anomalies (VRA), such as the Persistent Right Aortic arch (PRAA), result from congenital malformations of the great vessels and their branches, leading to constriction of the esophagus. PRAA is most commonly diagnosed in young large-breed dogs like German Shepard and Greyhounds, and surgical intervention is the recommended treatment option. This case report presents the diagnosis and successful surgical correction of a PRAA in a 2-month-old female intact German Shepherd puppy named “Nico”, was presented to the Veterinary Teaching Hospital, University of Peradeniya, with a history of regurgitation, vomiting undigested food immediately after eating, unthrifty hair coat, bounding pulse with bradycardia, prolonged capillary refilling time, dyspnea, hypersalivation, quiet alert responsive, malnourished, and tachypnea. Diagnostic imaging, including thoracic radiographs and contrast esophagogram, confirmed the presence of a dilated esophagus cranial to the base of the heart and ventral deviation of the trachea, supporting the diagnosis of PRAA. Surgical correction was done through a left lateral thoracotomy. Then the ligamentum arteriosum, a fibrous band encircling the esophagus, was identified and transected followed by meticulous closure of the thoracic cavity. Post-operative analgesia with tramadol (2mg/kg) once daily for one week and Cefuroxime 8hourly for one week continued. Promethazine (0.2mg/kg) was administered intravenously to prevent regurgitation and vomiting. After one week hospitalization, oral feeding was resumed milk and highly nutritious soup every two to three hours were fed while the head was kept in elevated position. The patient was discharged after being given appropriate management advice. At present, 2 months after the surgery, the puppy is active, playful with no vomiting and appears normal. A Contrast esophagography, one month after the surgery, revealed no postsurgical complication.

**Keywords:** Contrast esophagogram, Ligamentum arteriosum, PRAA, Regurgitation, VRA