

Short communication

ARTERIAL SUPPLY TO THE ESOPHAGUS OF BLACK BENGAL GOAT

M. S. Islam¹, M. A. Quasem, M. A. Awal, S. K. Das and M. M Uddin²

Department of Anatomy and Histology, Faculty of Veterinary Science, Bangladesh Agricultural University, Mymensingh-2202, ¹Department of Anatomy and Histology, Faculty of Animal Science and Veterinary Medicine, Patuakhali Science and Technology University, Dumki, Patuakhali, ²Department of Anatomy and Histology, Faculty of Veterinary Medicine, Chittagong Veterinary and Animal Sciences University, Chittagong

ABSTRACT

To study the blood supply to the esophagus of Black Bengal goat a research was conducted in the Department of Anatomy and Histology, Bangladesh Agricultural University, Mymensingh-2202 with 12 Black Bengal goats of over 6 months of age of both sexes. The esophagus of Black Bengal goat was sampled at six sites- cranial cervical, middle cervical, caudal cervical, at the level of thoracic inlet, at the middle mediastinum and at the level of cardia. The arteries supplying the cervical and thoracic part of the esophagus came from the left common carotid and esophageal artery respectively. The esophageal artery arose from the thoracic aorta independently in Black Bengal goat.

Key words: Blood supply, esophagus, Black Bengal goat

INTRODUCTION

It is very essential to know the blood supply to the esophagus of goat as it is an important organ of digestive system and in Bangladesh, only Black Bengal goat is considered as a pure breed playing a vital role in the development of livelihood of the rural people. As there is no information is available about blood supply to the esophagus of Black Bengal goat yet in Bangladesh, thus, the present study was initiated.

MATERIALS AND METHODS

In the present study, a total of 12 Black Bengal goats of over 6 months of age of both sexes were sacrificed to study the blood supply of esophagus of Black Bengal goat in the Department of Anatomy and Histology, Bangladesh Agricultural University (BAU), Mymensingh. The animals were purchased from local village markets, near BAU, Mymensingh. Before killing, the animals were weighed after fasting for 12 hours. The animals were bled to death by dissecting the left common carotid artery, through which the fixing solution containing 10% formalin, 1% phenol and 0.05% glycerin was injected for fixation. Dissecting microscope and magnifying glass were used to follow the finer branches of arteries and veins.

RESULTS AND DISCUSSION

In Black Bengal goat the left common carotid artery and esophageal artery supplied the cervical and thoracic part of esophagus respectively whereas Getty (1975), Ghosh (1998) and Venugopalan (2000) stated that the arteries of the esophagus came from the cranial thyroid, common carotid, bronchoesophageal and reticular arteries in ruminant. Sisson (1910) reported that the esophagus was supplied by the carotid, bronchoesophageal and gastric arteries in horse. Miller et al. (1964) stated that the cranial two thirds of esophagus were supplied by the bronchoesophageal arteries and the remaining parts were supplied by the esophageal branches of the aorta and/or dorsal intercostal arteries in dog. The abdominal part was supplied by the esophageal arteries of the left gastric arteries in dog (Adams, 1986). Pansky (1975) stated that the arteries of esophagus were derived from the esophageal branches of the inferior thyroid (cervical part), right intercostal and bronchial arteries from the thoracic aorta (thoracic part) and left gastric and left inferior phrenic from abdominal aorta (abdominal part) in human.

REFERENCES

1. Adams DDR (1986). *Canine Anatomy: a systems study*. 1st edn., Ames Iowa State University Press.
2. Getty R (1975). *Sisson and Grossman's The Anatomy of the Domestic Animals*. Vol. 1, 5th edn., WB Saunders Company, Philadelphia. pp. 881-884.
3. Ghosh RK (1998). *Primary Veterinary Anatomy*. 2nd edn., Current Books International, India.
4. Miller ME, Christensen GC and Evans HW (1964). *Anatomy of the Dog*. WB Saunders Co., Philadelphia, London. pp. 664-667.
5. Pansky B (1975). *Dynamic Anatomy and Physiology*. Macmillan Publisher, New York.
6. Sisson S (1910). *A text book of veterinary anatomy*. WB Saunders Co., Philadelphia.
7. Venugopalan A (2000). *Essentials of veterinary surgery*. 6th edn., Oxford and IBH Publishing Co. Ltd.