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Journal of Veterinary Medicine and Research

Short Communication

Topographic Anatomy of Clinically Important Wing and Shank Vein of Non-Descript Deshi Chicken of Bangladesh

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Submitted: 09 January 2018

Accepted: 20 February 2018

Published: 21 February 2018

ISSN: 2378-931X

Keywords

- Topographic anatomy; Wing vein; Shank vein; Clinical important; Non-descript deshi chicken

Abstract

Wing vein and shank vein are two clinically important veins in non-descript deshi chicken. Twenty wings and legs from ten dissected non-descript deshi chickens of different age group were studied. Wing vein and shank vein were always present and they were single in number in each wing and leg. Several metacarpal veins get together to formed wing vein at proximal to the radio-ulnar - metacarpal joint and run deep to the flexor carpi ulnaris muscle. It became subcutaneous ventral to the humero-radioulnar joint and clearly visible through skin. It was more superficial, larger and easily visualized in older non-descript deshi chicken than younger one. Shank vein of leg was largest and superficial at the medial side of tarsometatarsus in older non-descript deshi chicken than younger one. It runs beneath the scaly covering of the foot. Those topographic anatomical findings will enrich the knowledge of clinician and it indicates that wing vein and shank vein are most convenient site to obtain blood samples easily.

INTRODUCTION

Native breed of chickens are playing an important role in rural economics in developing country. Non-descript deshi chicken is one of the faster promising sector for poverty reduction in Bangladesh [1-3]. Topographic anatomy of wing (deep ulnar) and shank (medial planter metatarsal) vein of non-descript deshi chicken is essential for avian practitioners. Wing vein is the branch of axillary vein [4]. Again, axillary vein is formed by small, paired companion veins of brachial artery and basilic vein. Ulnar vein have apparent continuation with basilic vein. And further, ulnar vein becomes wing vein which is the largest venous channel at forearm region of chicken [2]. At ventral of humero-radioulnar joint (elbow joint), wing vein turns into distal arm where it is main continuation of basilica vein. Shank vein is the largest vein of foot [4] and is the branch of femoral vein in chicken. Above the intertarsal joint it become superficial and run beneath the scaly covering of foot. Several studies are carried out on topographic anatomy of clinically important vein of mammals but fewer studies are carried out on deshi chicken [5,6,7]. Here the study is planned to execute the topographic anatomy of clinically important wing and shank vein of non-descript deshi chicken to provide good knowledge for avian practitioners.

MATERIALS AND METHODS

The study was conducted on wing and leg of non-descript deshi chicken of different aged group from the period of 30th March to 10th April, 2016. Ten non-descript deshi chicken of different aged group was purchases from local market, Khulshi, Cgittagong. Dissection of non-descript deshi chickens were performed at laboratory of Department of Anatomy and Histology, Chittagong Veterinary and Animal Sciences University (CVASU), Khulshi, Chittagong, Bangladesh. Twenty wings and legs sample were collected from ten dissected non-descript deshi chickens. Feathers from ventral surface of wings and medial surface of the leg were removed to expose the wing and shank vein respectively. The following studies were conducted on the collected wings and leg sample.

a) Radius-ulnar bone (forearm region) and elbow joint were identified in dissected non-descript deshi chickens

b) Topographic anatomy of wing vein on ventral surface of elbow joint and ventral surface of forearm region were studies with change of their age

c) Tibiatarsal (leg) bone and intertarsal joint were identified

d) Topographic anatomy of shank vein in leg region was studied with change of their age

RESULTS AND DISCUSSION

Radius and ulna are two bones that's constitute forearm. Ulnar bone was larger than the radius bone which faced the caudal face of wing. Length of ulnar bone was also more than the radial bone. Those findings were similar with the findings of [3-5]. In forearm region, several metacarpal veins get together to form wing vein at proximal to the radio-ulnar - metacarpal

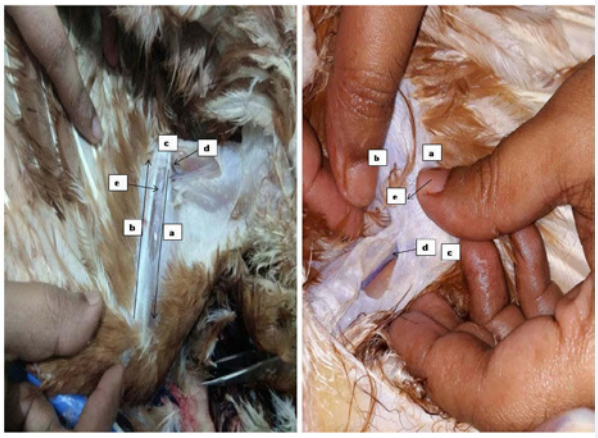

Figure 1 Wing Vein and arm and forearm region of non-descript deshi chicken, a. radial bone, b. ulnar bone, c. elboe joint, d. wing vein ventral to elbow joint and e. wing vein at proximal to the radio-ulnar - metacarpal joint.

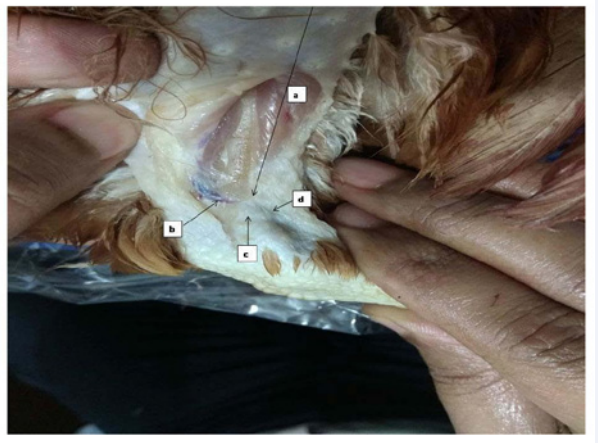

Figure 2 Shank vein in leg of non-descript deshi chicken, a. tibiotarsal bone, b. shank vein at medial surface of leg, c. intertarsal joint, d. shank vein at dorsal aspect of intertarsal joint.

joint and run deep to the flexor carpi ulnaris muscle. Ventral to the humero-radioulnar joint (elbow joint), wing vein was present subcutaneously. Here, it was clearly visible through skin (Figure 1). So this site is most acceptable for blood collection and intravenous drug administration. Those findings were similar with the findings of [3,6,8,9]. The older non-descript deshi chicken showed more superficial and larger wing vein than younger one. In leg, tibiotarsus was the largest bones. Tarsometatarsus was articulated with the distal part of tibiotarsus bone. The shank vein was present at the medial surface of the leg, runs beneath the scaly covering of foot. In intertarsal joint, the shank vein was shifted to the dorsal aspect of the joint (Figure 2). Those findings were similar with the findings of [,7,8]. Shank vein of leg was largest and superficial in older non-descript deshi chicken than younger one.

CONCLUSION

Ventral to the humero-radioulnar joint, wing vein is clearly visible through skin in non-descript deshi chicken. Shank vein is superficial at the medial side of tarsometatarsus. Those anatomical findings provide a most convenient site for avian practitioners to obtain blood to make a precise diagnosis and treatment.

ACKNOWLEDGEMENTS

Author wishes to express his deep sense of gratitude and thanks to staffs and faculty members of Department of Anatomy and Histology, Faculty of Veterinary Medicine, Chittagong Veterinary and Animal Sciences University, Khulshi, Chittagong, Bangladesh for their kindful facilitation during this work.

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Cite this article

Poddar S, Dey T (2018) Topographic Anatomy of Clinically Important Wing and Shank Vein of Non-Descript Deshi Chicken of Bangladesh. J Vet Med Res 5(2): 1125.