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Anil Deka

Assistant Professor, Department of Anatomy & Histology, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

KB Dev Choudhury

Assistant Professor, Department of Anatomy & Histology, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

J Rajkhowa

Assistant Professor, Department of Anatomy & Histology, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

S Sinha

Assistant Professor, Department of Anatomy & Histology, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

Corresponding Author:**Anil Deka**

Assistant Professor, Department of Anatomy & Histology, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

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Macro anatomical studies of internal organ of Morden domestic turkey (*Meleagris gallopavo*) in agro climatic condition of Assam, India

Anil Deka, KB Dev Choudhury, J Rajkhowa and S Sinha

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Abstract

The Morden domestic turkey (*Meleagris gallopavo*) contained triangular shaped tongue and it attached with oral cavity by mucosal folds. The dorsal surface of the tongue contained transverse row of lingual papillae of Morden domestic turkey (*Meleagris gallopavo*). The syrinx of the Morden domestic turkey was situated at the termination of trachea. The dorsal surface of lung contained cut mark of ribs of turkey. The inner surface of oesophagus contained mucosal folds and ingluvies looks like a balloon of Morden domestic turkey (*Meleagris gallopavo*). The heart had base and apex. The length of the ileum was approximately to the length of the caeca. The shapes of the caeca were finger like. The stomach of the Morden Domestic Turkey was composed of proventriculus and ventriculus. The jejunum contained numbers of U shaped loops of Morden domestic turkey (*Meleagris gallopavo*). The liver composed of right and left lobe. The U shaped duodenum contained pancreas of Morden domestic turkey (*Meleagris gallopavo*). One pair of testes was observed above the cranial lobe of kidney of Morden domestic turkey (*Meleagris gallopavo*). The spleen was situated on right side of the proventriculus of stomach.

Keywords: Macro, anatomical, internal organ, Morden domestic turkey

Introduction

The modern domestic turkey is one of the popular birds in poultry industry. It increases the upliftment of the poultry industry. The integument of head as well as cervical region contains caruncles, snood, wattles, major caruncles and beard. The black colour beard is situated in thoracic inlet and it looks like a hair. The plumage colour of the body of Morden domestic turkey is white. Since there is very scant literature on internal organ of Morden domestic turkey, hence the present study was designed to establish a anatomical norms on internal organ of Morden domestic turkey in agro climatic condition of Assam, India.

Materials and Methods

The current study was conducted on the internal organ of Morden domestic turkey. The bird was collected from Instructional Poultry farm, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati, Assam, India. After collection, the abdominal cavity of bird was opened by knife as well as in situ and ex-situ position of the organs were studied.

Results and Discussion

The present study was conducted on internal organ of Morden domestic turkey (*Meleagris gallopavo*) (Fig.1). The palatine papilla and palatine cleft was attached with the upper beak of Morden domestic turkey (*Meleagris gallopavo*) (Fig.2). The floor of the oral cavity contained triangular shaped tongue and it attached with oral cavity by mucosal folds (Fig.3). The apex of the tongue was free. The dorsal surface of the tongue contained transverse row of lingual papillae and laryngeal cleft of Morden domestic turkey (*Meleagris gallopavo*). Similar observation was reported by Nickel *et al.*, (1977) [2]. The inner surface of oesophagus contained mucosal folds and ingluvius that looks like a balloon of Morden domestic turkey (*Meleagris gallopavo*) (Fig.5). The size of the ingluvius was large; it might be due to large size of thoracic inlet. The ingluvius was also called as doggy bag, when bird's eating. The stomach of the Morden Domestic Turkey was composed of Proventriculus and Ventriculus.

The shape of the proventriculus was spindle shaped. The U shaped duodenum contained pancreas of Morden domestic turkey (*Meleagris gallopavo*). These findings were total agreement with the findings of King and Mclelland (1975)^[1]. The mesentery of intestine was attached with the Jejunum. The jejunum contained numbers of U shaped loops of Morden domestic turkey (*Meleagris gallopavo*). The length of the ileum was approximately to the length of the caeca. The shapes of the caeca were finger like and it contained ileo-caecal tonsil as well as blind end (Fig.6). The liver composed of right and left lobe (Fig.7). The caudal part of the left lobe consisted of dorsal and ventral part where as gall bladder was attached with the right lobe. The syrinx of the Morden domestic turkey was situated at the termination of trachea (Fig.4). This finding was in accordance with the finding of Ragab *et al.*, (2016)^[4] in Turkey and El Karmoty and Khattab (2018)^[4] in Ostrich. The dorsal surface of lung contained cut mark of ribs of turkey and rings of tracheae were complete in Morden domestic turkey (*Meleagris gallopavo*). The heart had base and apex. One pair of testes was observed above the cranial lobe of kidney and one pair of vas deference arises from the testes of Morden domestic turkey (*Meleagris gallopavo*) (Fig.8). The spleen was situated on right side of the proventriculus of stomach (Fig.9).

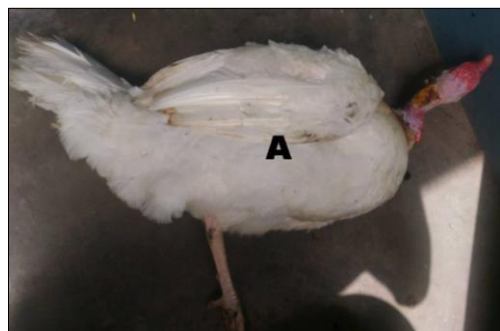


Fig.1: Photograph showing the Morden domestic turkey (*Meleagris gallopavo*)



Fig 2: Photograph showing the upper beak (A), palatine papillae (B) and palatine cleft (C) of Morden domestic turkey (*Meleagris gallopavo*)

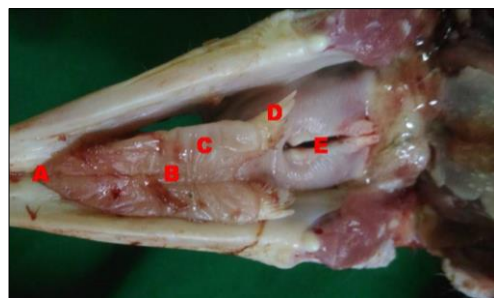


Fig 3: Photograph showing the lower beak (A), tongue (B), transverse row (C), transverse row of lingual papillae (D) and laryngeal cleft (E) of Morden domestic turkey (*Meleagris gallopavo*)



Fig 4: Photograph showing the syrinx (A), dorsal surface of lung (B) and trachea (C) of Morden domestic turkey (*Meleagris gallopavo*)



Fig 5: Photograph showing the oesophagus (A) and ingluvies (B) of Morden domestic turkey (*Meleagris gallopavo*)

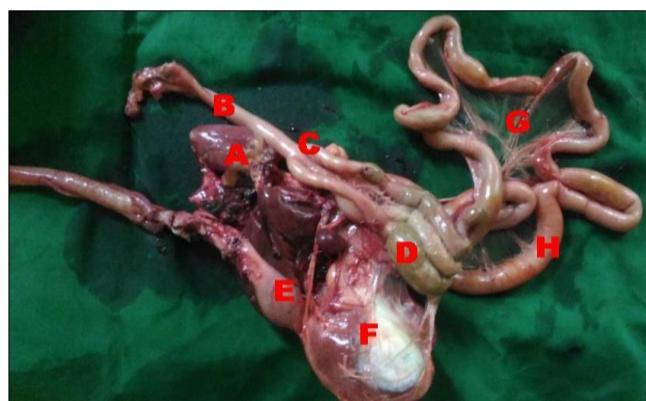


Fig 6: Photograph showing the heart (A), ileum (B), ileo-caecal junction (C) Caecum (D), Proventriculus (E), Ventriculus (F), mesentery of intestine (G) and Jejunum (H) of Morden domestic turkey (*Meleagris gallopavo*)

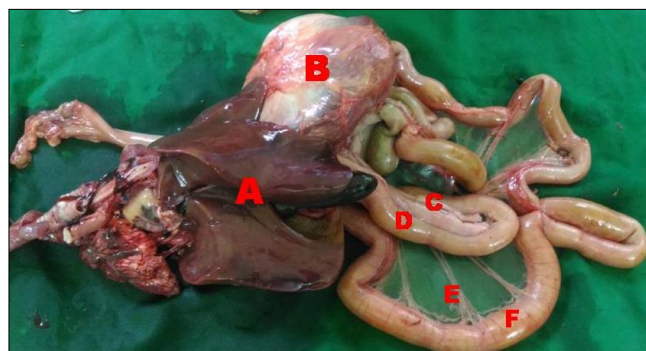


Fig 7: Photograph showing the liver (A), Ventriculus (B), Pancreas (C), Duodenum (D), mesentery (E) and Jejunum (F) of Morden domestic turkey (*Meleagris gallopavo*)

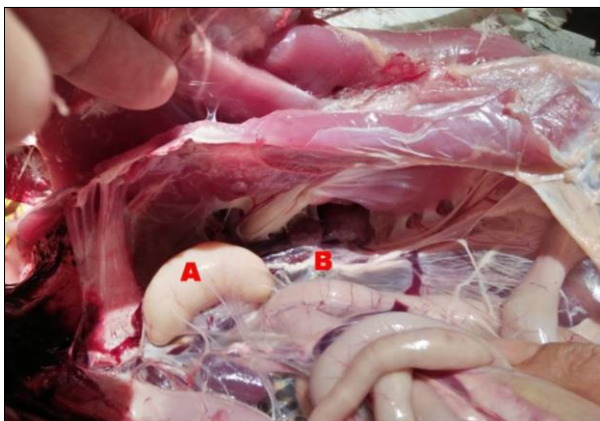


Fig 8: Photograph showing the testes (A) and vas deference (B) of Morden domestic turkey (*Meleagris gallopavo*)



Fig 9: Photograph showing the spleen (A) of Morden domestic turkey (*Meleagris gallopavo*)

Summary and Conclusion

The Morden domestic turkey (*Meleagris gallopavo*) contained triangular shaped tongue. The dorsal surface of the tongue contained transverse row of lingual papillae of Morden domestic turkey (*Meleagris gallopavo*). The inner surface of oesophagus contained mucosal folds and ingluvius looks like a balloon of Morden domestic turkey (*Meleagris gallopavo*). The stomach of the Morden Domestic Turkey was composed of proventriculus and ventriculus. The U shaped duodenum contained pancreas. The jejunum contained numbers of U shaped loops of Morden domestic turkey (*Meleagris gallopavo*). The length of the ileum was approximately to the length of the caeca. The shapes of the caeca were finger like. The liver composed of right and left lobe. The syrinx of the Morden domestic turkey was situated at the termination of trachea. The dorsal surface of lung contained cut mark of ribs of turkey. The heart had base and apex. One pair of testes was observed above the cranial lobe of kidney of Morden domestic turkey (*Meleagris gallopavo*). The spleen was situated on right side of the proventriculus of stomach.

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