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دراسات مورفولوجية على العظم الطرى في الجاموس

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أجرى البحث على عشر رؤوس جاموس بالغة مختلفة الجنس.

وقد تم توصيف العظم الطرى بها وصفا تفصيليا وقورنت بمثيلاتها في الحيوانات الأخرى . ولقد تبين من البحث أن العظم الطرى في الجاموس يشبه ماهو في الماشية عامة .

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MORPHOLOGICAL STUDIES ON THE OS-HYOIDEUM OF BUFFALO (BOS Bubalis 1)

(With 2 Figures)

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SUMMARY

The Os-hyoideum of the buffalo is studied morphologically in details and compared with those of other domestic animals. Generally it is similar to that of the ox.

INTRODUCTION

The information about Os-hyoideum of the buffalo were still virgin. In this respect, Os-hyoideum of most domesticated animals was morphologically studied by many authors.

The Os-hyoideum plays an important role in supporting the pharynx, larynxa and the root of the tongue. Therefore, the present work is carried out to get a full description on this bone of the buffalo with the object to fill an important gap in the comparative anatomy.

MATERIALS and METHODS

The Os-hyoidelium was obtained from ten heads of adult buffaloes of different sex and age.

The materials then were treated by the usual methods for the preparation of bones and they were subjected to carefull studies. The nomenclature used in this work was that adopted by Nomina Anatomica Veterinaria (1973).

RESULTS

The Os-hyoideum of the buffaloes consists of Basihyoideum and extremely rudeminted Processus lingualis in addition to paired Ceratohyoideum, Epihyoideum, Stylohyoideum and Thyrohyoideum.

Basihyoideum (Fig. 2/1):

It is a short transverse bar measured about 1.5 - 2.0 cm from side to side with thick rostral and thin caudal borders, so it appears triangular in cross section with its base rostrally directed. The dorsal surface is nearly flattened while the ventral surface is convex rostrally and concave caudally and carries a very small rough tubercle for muscular attachment. The rostral border of the Basihyoideum is convex forming the short eminence (Processus lingualis), while the caudal border is concave. It is observed that on either sides, the Basihyoideum is connected caudally with the Thyro hyoideum and rostrally is articulated with the Ceratohyoideum through bar of cartilage.

Processus lingualis (Figs. 1 , 2/2):

It is very short roughened tubercle attached to the rostral convex border of the Basihyoideum. It supports the root of the tongue.

Ceratohyoideum (Fig. 1, 2/3):

Each is directed rostro-dorsally. It is measured about 3.0 - 4.0 cm in length and is constricted at its middle having two enlarged ends. Its lower extremity carries a concave oval facet for articulation with the Basihyoideum, while the upper extremity articulates with the Epihyoideum through another concave facet.

Epihyoideum (Figs. 1, 2/4):

It is a short rod which is directed caudally and slightly dorsally and measures 1.5 - 2.0 cm in length and 1.0 - 1.5 cm in width. It is flattened bone, compressed laterally showing two gently concave surfaces. The rostral and caudal ends present convex articular facets for articulation with the ceratohyoideum and Stylohyoideum respectively.

Stylohyoideum (Fig. 1, 2/5):

Each of Stylohyoideum. It is directed caudodrsally and measures 12.0 - 13.0 cm in length. The bone is flattened laterally with 1.5 - 2.0 cm thick. The lateral surface is smooth and flat, and carries 1 - 2 nutrient formen in the middle, near the caudal border. The medial surface is also smooth but slightly convex along its whole length except a narrow concave area at its distal extremity. The Stylohyoideum has a thin and sharp concave rostral border, while the caudal border is somewhat thicker and smooth with convex distal and concave proximal halves. The proximal extremity has wide triangular shape with two pointed angles' The rostral angle is thick and attached to a rod of cartilage (Tympanohyoideum), by which it articulates with the styloid process of petrous part of temporal bone. The caudal angle is thinner and broader than the rostral one, curved laterally and has medial and lateral areas for the muscular attachment. The distal extremity of the Stylohyoideum measures 1.5 - 2.0 cm in width with a convex end articulates with the Epihyoideum at its dorsal part, while its ventral part is rough and covered by the cartilage for the muscular attachment.

Thyrohyoideum (Figs. 1, 2/6):

Each bone measures 4.0 - 4.5 cm in length and is directed caudodorsally. It is fixed firmly by a plate of cartilage to the caudal border of the Basihyoideum on either side. The bone appears rounded and thicker rostrally, while it is pointed caudally and attached to a small rod of cartilage. The latter connects with cornu rostrale of Cartilago thyrodiea of the larynx through a fibrous ligament.

DISCUSSION

The Basihyoideum of the buffalo is short, curved transverse bar, a case which similar to that of the dog, and cat (Mc FADYEAN, 1953; HARE, 1958 & 1959; BRADLEY and GRAHAME, 1959; MILLER, CHRISTENSEN and FVANS, 1964 and NICKEL, SCHUMMER and SEIFERLE, 1977). The present investigation was revealed that processus lingualis is short and tuberous, a condition which met with the reports of RAGHAVAN and KACHROO (1964), GETTY (1975) and NICKEL et al. (1977) in ox. However, in sheep, processus lingualis is short (MAY, 1970 and GETTY,

1975), in pig, it is short and pointed (GETTY, 1975) and in horse this process is compressed laterally and has a pointed free end (GETTY, 1975). Whereas, processus lingualis is absent in came (EL-SHAIEB and MAJEED, 1979) and dog (HARE, 1958; MILLER et al.,1964; GETTY, 1975 and NICKEl et al., 1977). Thyrohyoideum of the buffalo is firmly attached to Bqsihyoideum, like that of the came (El-SHAIEB and MAJEED, 1979), while in sheep, it is not firmly attached (GETTY, 1975)

Ceratohyoideum of the buffalo is constricted in its middle part, with enlarged ends, a condition which was observed in horse (GETTY, 1975). Moreover, this part is longer than Epihyoideum, nearly similar to that of ox and in contrast to that was found in pig (Nickel et al., 1977 and GEETY, 1975) and camel (EL-SHAIEB and MAJEED, 1979).

Stylohyoideum of the buffalo resembles in length that of the camel (EL-SHAIEB and MAJEED , 1979) while in horse it was more longer, measure 18 - 20 cm (McFADYEAN, 1953 and GETTY, 1975). The dorsal extremity is wide and had two angles similar to that of ox, horse (GETTY, 1975), and camel (EL-SHAIEB and MAJEED, 1979).

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LEGENDS

Fig. (1): Photograph of Os-hyoideum of the buffalo (left view).

Fig. (2): Photograph of Os-hyoideum of the buffalo (ventral view).

1. Basinyoideum.
2. Processus lingualis.
3. Ceratohyoideum.
4. Epihyoideum.
5. Stylohyoideum.
6. Thyrohyoideum.
7. The rostral angle.
8. Angulus stylohyoideus.

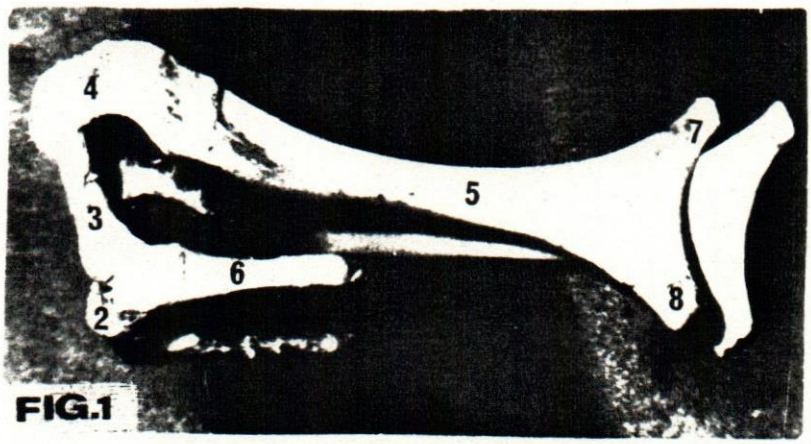

FIG.1

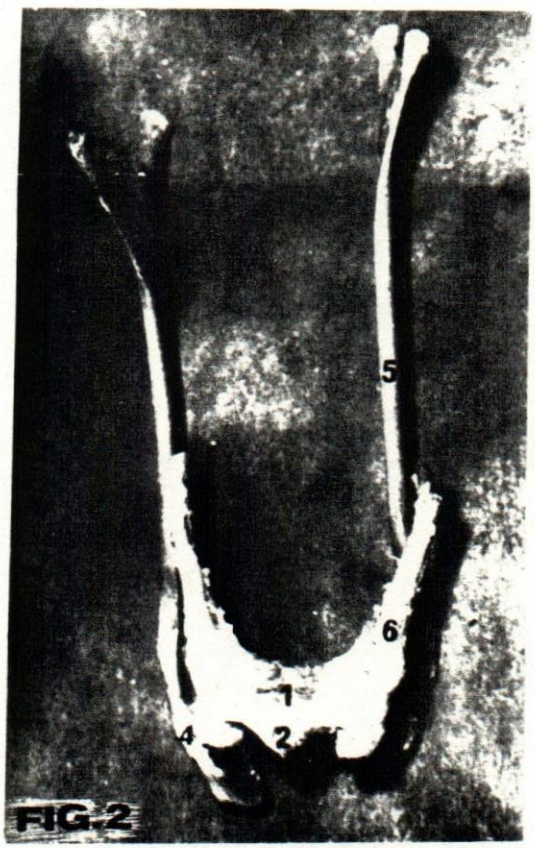

FIG.2