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Contribution to the Paranasal Sinuses of the One Humped Camel (*Camelus dromedarius*)

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With 5 figures

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Abstract

A gross anatomic and radiological examination of the paranasal sinuses of the camel is described. Radiological examination was enhanced through the use of a barium sulphate paste.

Introduction

Although the morphological features of the paranasal sinuses of camels have been described (LESBRE, 1903; LEESE, 1921; DROANDI, 1936; GEORGE, 1951; MOUSTAFA/KAMEL, 1963), nothing is available concerning their radiological-anatomical pictures.

The present work is an attempt to obtain some informations regarding what should be considered within normal structures of the paranasal sinuses in the camel to score the best radiographic pictures of the sinuses and in the meantime to stimulate further investigations on clinical cases of sinusitis, which uptill now are neglected.

Material and Methods

Twelve camel skulls of different ages and sexes were used for this study. For thorough examination of the sinuses and its relations, paramedian and transverse sections at different levels were carried out.

Radiographic views (dorso-ventral, ventro-dorsal, lateral and 45° oblique lateral) were taken for studying the paranasal sinuses. At first plain films were taken and then the outline classification of the sinuses was afforded by using of contrast medium, injected into the sinus. Barium sulphate with flower paste was used for filling. Flexible wire was also used for outlining the major sinuses, which was fitted in the opened sinus at its boundaries. A 70 KVP, 100 mA, half second exposure time and 80 cm distance were the parameters used for radiographical examination.

Results and Discussion

The paranasal sinuses of the camel are arranged into dorsal and ventral systems. The dorsal system comprises the frontal and dorsal turbinate sinuses while the ventral system comprises the maxillary, sphenoidal and ethmoidal sinuses. The frontal sinus (sinus frontalis) is considered the largest of the paranasal sinuses of the camel (Fig. 1).

Its boundaries are limited to the frontal bone. Similar observations have been reported by (LEBRE, 1903; LEESE, 1927; DROANDI, 1936). However MOUSTAFA/KAMEL (1963) reported that the excavation of the frontal sinus may extend beyond the angle of divergence of the external parietal crest.