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LIPID & CHOLESTEROL CONTENT IN CEREBELLUM & CEREBRAL HEMISPHERE OF INDIAN RHINOCEROS *(RHINOCEROS UNICORNIS)*

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ABSTRACT

The brain of the 2 1/2 yrs old male Indian rhinoceros *(Rhinoceros unicornis)* was oval in shape. The maximum length and breadth were 15 cm and 13 cm respectively. The weight of the brain with meninges was 775 gm, while the weight of the meninges was 100 gm. The water (%), total lipid (gm % DM basis) and cholesterol (% of total lipid) content in cerebellum and cerebral hemisphere were 49.45 , 77.52 and 54.50 and 32.96, 26.40,20.40 respectively.

INTRODUCTION

Scientific information on physicochemical aspects of Indian rhinoceros *(Rhinoceros unicornis)* is scanty. The author got a chance to collect the brain from a male Indian rhinoceros calf at about 2 1/2 years of age and an attempt was made to communicate a report on lipid and cholesterol content in the brain.

MATERIALS AND METHODS

An Indian rhinoceros calf was found injured with a sharp weapon by poacher(s) at the upper part of the right forelimb at the Manas Sanctuary, Assam. The animal was transferred by the authorities to the State Zoo cum Botanical Garden, Guwahati, Assam for treatment where it succumbed to injury. Postmortem examination was carried out immediately and the brain was collected. After recording weight and measurements, the brain was transferred into a precnilled polythene bag and kept in ice cold condition. Random triplicate samples were taken from cerebellum and cerebral hemisphere. The samples were analysed for water, total lipid (either extract) as per-AOAC (1970). From the extracted lipid cholesterol level was estimated by the method of Pearson *et al* (1953).

RESULTS AND DISCUSSION

The brain was oval in shape and closely attached to the cranium. The maximum length and breadth of the brain was found to be 15 cm and 13 cm respectively. The weight of the brain with intact meninges was 775 gm and the weight of the meninges was 100 gm. The results show that the cerebellum contained more solid matter, lipid and cholesterol than that of cerebal hemisphere. The chemical composition of different parts of the brain varies widely; the high solid containing part of the brain is rich in lipid and chief lipid of the brain is cholesterol (West *et al*, 1966).

Table :1.
Water, total lipid and cholesterol content in brain of Indian rhinoceros *(Rhinoceros unicornis)**

Brain tissue	Moisture % Mear +/- S.E.	Fat gm/100 gm dry tissue Mean +/-S.E.	Cholesterol % of total lipid Mean +/-S.E
Cerebellum	49.45+/-1.54	54.50+/ - 1.39	26.40+/-0.6
Cerebral hemisphere	77.52 +/-1.41	32.96+/-1.50	20.40+1.12

* Result are on triplicate samples of single rhinoceros

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