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HISTOLOGICAL AND HISTOCHEMICAL STUDIES ON PRIMARY AVIAN LYMPHOID ORGANS OF KADAKNATH

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Kadaknath is locally known as '*Kalamasi*', meaning the fowl having black flesh, native breed of Jhabua region of Madhya Pradesh, India. As Kadaknath breed of poultry is known for its disease resistance trait. The present study was carried on primary lymphoid organs of different age groups of thirty Kadaknath birds. The thymus gland was encapsulated by thin connective tissue capsule along with adipose tissue. From capsule, Septae arised entered into lobes dividing them into lobules. Each lobule had outer cortex and inner medulla. Few Hassall's corpuscles appeared at second week of age. Two types of Hassall's corpuscles were seen as type-I and type-II. On the basis of histomorphology, three types of myoid cells were found as type-I, type-II and type-III. There was no regression of thymus after 26th week of age. The bursal mucosa was lined by pseudostratified columnar epithelium except at crypts it became simple columnar epithelium. From capsule,

trabeculae arise and enter into plicae dividing them into follicles. The plicae were composed of several numbers of follicles. Bursal epithelium had four types of cells as type-I, type-II, type-III and type-IV. The number of plicae and follicles were maximum at eight week of age. The two different type of epithelium were found. Follicle associated epithelium (FAE) which was associated with follicles and interfollicular epithelium (IFE) was completely surrounded by loose connective i.e. lamina propria. Positive activity of both PAS and alcian blue-PAS were recorded in most of the component of thymus and bursa of Fabricius. Weak to intense activity of both alkaline phosphatase and acid phosphatase were recorded in most of the component of thymus and bursa of Fabricius. Melanocytes were the unique feature of Kadaknath bird which was found in most of the components of thymus and bursa of Fabricius.

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