

## INTISARI

### **Struktur Histologi dan Distribusi Reseptor Hormon Estrogen dan Progesteron pada Ovarium Landak Jawa (*Hystrix Javanica*) Betina Bunting dan Tidak Bunting**

Ermawati Dwi Yuliasatri

14/364683/KH/8102

Landak Jawa (*Hystrix javanica*) merupakan hewan endemik asli Indonesia. *International Union for Conservation of Nature* (IUCN) menggolongkan landak jawa dalam status *least concern* yang berarti populasinya masih banyak di alam. Anggapan bahwa landak jawa adalah hama dan perburuan yang terus dilakukan tanpa disertai dengan upaya pelestarian dapat menyebabkan kepunahan. Pendokumentasian struktur histologi organ reproduksi betina dan distribusi reseptor hormonnya dapat menjadi dasar upaya pelestarian landak jawa. Penelitian ini bertujuan untuk mengetahui struktur histologi serta distribusi reseptor hormon estrogen dan progesteron pada organ ovarium landak jawa.

Sebanyak satu ovarium landak jawa betina bunting dan empat ovarium landak jawa tidak bunting digunakan sebagai sampel. Ovarium difiksasi dalam larutan Bouin's, diproses dengan metode parafin, kemudian dipotong dengan ketebalan 5  $\mu\text{m}$ . Potongan jaringan diwarnai dengan metode pewarnaan hematoxilin-eosin untuk melihat struktur histologi dan imunohistokimia untuk mengetahui distribusi reseptor hormon estrogen dan progesteron. Hasil pewarnaan dianalisis secara deskriptif.

Hasil pengamatan struktur histologi ovarium landak jawa terdiri atas korteks yang berisi folikel dan corpus luteum pada landak bunting serta medula yang berupa jaringan ikat kaya vaskularisasi. Reseptor hormon estrogen dan progesteron pada ovarium landak jawa tidak bunting berada pada sel folikel atresia dan sel teka folikuli interna sementara pada ovarium landak jawa bunting tampak pada sel folikel atresia. Sel lutein pada korpus luteum tampak imunoreaktif terhadap antibodi reseptor progesteron.

Kata kunci : landak jawa, ovarium, *hematoxylin-eosin*, imunohistokimia, reseptor estrogen, reseptor progesteron.

## ABSTRACT

### **Histological Structure and Distribution of Estrogen and Progesterone Receptors in Ovary of Pregnant and Non-Pregnant Female Sunda Porcupine (*Hystrix Javanica*)**

Ermawati Dwi Yuliastri

14/364683/KH/8102

The Sunda porcupine (*Hystrix javanica*) is a native endemic animal of Indonesia. The International Union for Conservation of Nature (IUCN) classifies the Sunda porcupines in the least concern state, which means that the population is still abundant in the wild. Sunda porcupine hunting that continues to be done without the conservation effort can lead to extinction. Documenting the histological structures and the distribution of hormonal receptors of female reproductive organs could support the conservation effort of the Sunda porcupine. This study aims to determine the histological structure and distribution of estrogen and progesterone receptors in the ovary of Sunda porcupine.

Ovaries of pregnant and non pregnant female porcupine were used as samples. The ovaries were fixed in Bouin's solution, processed with paraffin method, then cut into 5  $\mu$ m thickness. The tissue then dyed using hematoxylin-eosin staining method to show the histologic structure and immunohistochemical staining method to determine the distribution of estrogen and progesterone receptors. The result was analyzed descriptively.

The result from histological structure observation of Sunda porcupine's ovary showed that the cortex containing follicle and corpus luteum on pregnant porcupine and the medulla formed by connective tissue rich of vascularization. The estrogen and progesterone hormone receptors in the ovaries of non-pregnant Sunda porcupines were detected in the atresia follicle and theca interna cells of growing follicle, whereas in the ovaries of pregnant Sunda porcupine found in atresia follicle. Luteal cells of corpus luteum appears to be immunoreactive against progesterone receptor antibodies.

**Keywords:** Sunda porcupine, ovary, hematoxylin-eosin, immunohistochemistry, estrogen receptor, progesterone receptor.