

Immunohistochemical Study of the Distribution of Endocrine Cells in the Gastrointestinal Tract of the Lesser Mouse Deer (*Tragulus javanicus*)

S. Agungpriyono^{a,c}, J. Yamada^a, N. Kitamura^a, Y. Yamamoto^b, N. Said^c, K. Sigit^c, T. Yamashita^a

^aDepartment of Veterinary Anatomy, Obihiro University of Agriculture and Veterinary Medicine, Obihiro;

^bDepartment of Veterinary Anatomy, Faculty of Agriculture, Gifu University, Gifu, Japan, and

^cDepartment of Veterinary Anatomy, Faculty of Veterinary Medicine, Bogor Agricultural University, Bogor, Indonesia

Abstract

The occurrence and distribution of endocrine cells in the gastrointestinal tract of the lesser mouse deer, *Tragulus javanicus* were studied immunohistochemically. Fourteen types of endocrine cells immunoreactive for serotonin, somatostatin, enteroglucagon, pancreatic glucagon, bovine pancreatic polypeptide (BPP), gastrin, substance P, motilin, gastric inhibitory polypeptide (GIP), cholecystokinin (CCK), methionine-enkephalin-Arg⁶-Gly⁷-Leu⁸ (MENK-8), secretin, neurotensin, peptide tyrosine tyrosine (PYY) and chromogranin were revealed. Chromogranin-, serotonin-, somatostatin- and enteroglucagon-immunoreactive cells were detected in all regions examined, while pancreatic glucagon-immunoreactive cells, except in the proper gastric gland region, were not found in other regions of the gastrointestinal tract. Few BPP-immunoreactive cells in either the proper gastric gland or pyloric gland regions and abundant gastrin-immunoreactive cells in the pyloric gland region were observed. Restricted distributions of substance P-, GIP-, gastrin-, motilin-, CCK-, MENK-8-, secretin-, neurotensin- and BPP-immunoreactive cells in the small intestine, and BPP-, substance P-, PYY- and motilin-immunoreactive cells in the large intestine were noted. The important findings include the presence of BPP-immunoreactive cells in the abomasum, pancreatic glucagon-immunoreactive cells in the proper gastric gland region, and substance P- and motilin-immunoreactive cells in the large intestine. It is suggested that the distribution pattern of gut endocrine cells in the lesser mouse deer is more similar to that in the pig than in the domestic ruminants so far reported.

Copyright © 1994 S. Karger AG, Basel

Key Words

- Endocrine cells
- Immunohistochemistry
- Stomach
- Intestine
- Wild ruminant

Author Contacts

Srihadi Agungpriyono, Department of Veterinary Anatomy, Obihiro University of Agriculture and Veterinary Medicine, Nishi 2, Inada Cho, Obihiro 080 (Japan)