A Case of Lobulated Spleen in a Holstein Cow

Ayse HALIGUR *  Ozlem OZMEN **  Mehmet HALIGUR **

* Department of Anatomy, Faculty of Veterinary Medicine, University of Mehmet Akif Ersoy, 15100, Burdur - TURKEY
** Department of Pathology, Faculty of Veterinary Medicine, University of Mehmet Akif Ersoy, 15100, Burdur - TURKEY

Makale Kodu (Article Code): KVFD-2009-275

Summary

A case of abnormal lobulation of spleen in a three years old Holstein cow was described after slaughter. Post mortem evaluation of the cow revealed three lobes and two projections at the spleen. The color of the spleen was normal but lymphoid hyperplasia was observed at the cut surface. Hilus of the spleen was located on 1/3 of the facies visceralis. Histopathological examination of the spleen revealed that lymphoid hyperplasia. No abnormality was observed other visceral organs. This is a first case of lobulated spleen in a three years old Holstein cow.

Keywords: Lobulated spleen, Anomaly, Cow

INTRODUCTION

The spleen is located in the left hypogastric region. It lays the cranial surface of the reticulum on the left side of the abdomen and vertically on the cranial end of the dorsal sac of the rumen . This organ is soft, bright red to dark purple in color and highly vascular. It contains lymphoid tissue. Spleen’s size and weight vary throughout life and under different conditions. Generally, shape of spleen has an elongated, oval outline. In adult cattle, its average weight is about 665-1155 g width is about 10-15 cm and length is nearby 50 cm or and in the middle thickness of organs is about 2 to 3 cm. Parietal surface is convex and related to diaphragm. The visceral surface is concave and related chiefly to the left face of rumen. The dorsal part is attached to narrow adjacent and the ventral part is free. The hilus is situated on the dorsal third of the visceral surface, near the cranial border .

Pathology of the spleen can be categorized as congenital abnormalities, splenomegaly, focal abnormalities (cystic masses, solid masses), vascular abnormalities, trauma and rupture or splenic clefts, notches and lobulations, accessory spleen, wandering spleen and polysplenia . Congenital anomalies of spleen usually together with cardiac and visceral anomalies and rarely polysplenia syndrome may be seen .

In one study in two spleens reported in a Holstein calf , other study in man indicated that polysplenia or asplenia may be seen.

The aim of this study was to report an unusual lobulation in a three years old Holstein cow. This is the first case of lobulated spleen in cattle.
A Case of Lobulated Spleen...

CASE HISTORY

Material was occurred that it was butchered in which slaughterhouse of Burdur Power Confederation and it was not seen symptom of any illness. Spleen was fixed in 10% buffered formalin. It was examined and measured macroscopically for anatomo-pathological findings. Tissue sample of the spleen processed for histopathological examination. After routine pathology procedure it was blocked in paraffin, sections were cut 5 μ thickness and stained with Haematoxylin and Eosin (HE).

The cow was healthy, 3 years old, 752 kg body weight Holstein cow and no clinical symptoms observed related spleen abnormality. During the slaughter only one anomalous organ was spleen, the other organs were normal appearance and situs. Post mortem evaluation of the cow revealed that spleen was highly vascular and dark violet in color and weighted 412 g. Spleen length which between points was 26 cm and in the middle its thickness was width 5.1 cm. Splenic hilus was located in cranial part of organs and distribution of the vessels were normal one enter. It was very different form, both extremitas cranialis and caudalis had thin beginning, and had different two process and three lobes respectively in the spleen (Fig. 1). The one splenic process was located in extremitas cranialis. It length was 0.844 cm and width 1.734 cm. The other process was located on margo cranialis. It length was 2.261 cm and width 4.345 cm. The first lob was located on the dorsal part of the margo caudalis. It arcuated caudally and length (margo caudalis to point of the process) was 8.5 cm and in the its middle width was 2 cm. The second lob was located on distal part of margo caudalis and its had finger like curled shape. It direction was caudal, ventral and cranial respectively. Length of first curl was measured 5.1 cm, second curl was 4.2 cm and width of this process was measured 3.4 cm. The third lob was look like continuing to organ and located to extremitas caudalis. End of the process was curving trough to cranial. Length of the first part of third lob was 8.5, and last part was 3.9 cm. Width of third process was measured as 3.2 cm. Hilus of the spleen was located on 1/3 of the facies visceralis.

Gross examination of the spleen revealed that marked lymphoid hyperplasia at the cut surface. The organ was not flat, and thickness of the spleen was more than normal. The body of the organ was smaller and harder than normal. No abnormality was observed in other organs. Histology of the spleen revealed that slight lymphoid hyperplasia (Fig. 2, 3).

DISCUSSION

The spleen lies vertically on the cranial end of the dorsal sac of the rumen and the cranial surface of the
There was no abnormality of vescicular organs.

As a conclusion, this paper reported that unusual splenic lobulation in normally slaughtered, 3 years old Holstein cow. Post mortem evaluation of the cow organs revealed three lobes and two projections at the spleen. No abnormality was observed other visceral organs.

REFERENCES