

Abdominal steatonecrosis in a twelve-year old Highland bull.

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Steatonecrosis, also called lipomatosis or abdominal fat necrosis (AFN), is frequent in cattle, but is often an accidental finding during transrectal palpation or slaughtering process.

We herein describe an abdominal fat necrosis in a twelve-year old Highland bull.

A 12-year old Highland bull was referred to the Clinic for Ruminants of the University of Liège for anorexia, scant feces since few days. At the arrival, the clinical examination revealed a high rectal temperature. Special abdominal examination highlighted an absence of digestive sound and ruminal contractions and a large firm mass was felt at the flank succussion. Rectal palpation revealed a large mass located around the left kidney and some other smaller masses around the intestinal tract.

Hematology and biochemistry were within normal values. Transabdominal ultrasonography showed a heterogeneous hyperechoic mass with undefined shape and a hyperechoic omentum. The right-flank celiotomy confirmed the AFN with colic obstruction. Due to the generalized and severe lesions, the bull was euthanized.

The necropsy revealed the presence of hard necrotic fat masses surrounding and stenosing spiral and distal colon, a thickened hard great omentum including necrotic fat masses and the left kidney was completely included in fat necrotic mass. Histopathological examination showed typical lesions of fat necrosis (granulomatous reaction with fibrosis).

AFN is a common finding in domestic animals and humans. In cattle, etiology seems to be multifactorial. Excessive fattiness of abdominal tissue in the growing stage, disturbance in lipid metabolism, genetic predispositions and fescue toxicity have been associated with the occurrence of AFN. Vitamin E and selenium deficiency or acute pancreatitis were suspected.

Isoprothiolane appears to be an effective treatment to AFN in cattle. Clay could prevent the occurrence of AFN. To our knowledge it is the first report of AFN in highland cattle.