

**Traumatic Reticulo-pericarditis in a Goat*****Aydın ÇEVİK¹**
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In this study, a case of traumatic reticulo-pericarditis was described in a goat. Clinically, the animal exhibited poor general condition characterized by weakness and dyspnea. At necropsy; ascites and local fibrinous peritonitis were observed. There were severe adhesions between thoracic cavity, diaphragm and reticulum in which antero-ventral region corroded needle of 5 cm length. In thoracic cavity, there were fibrinopurulent exudate and fibrinous adhesions between pericardium and left apical lobe of the lung. In the pericardial sac, cardiac tamponade resulting from excessive clotting was observed. Furthermore, several abscesses were determined in the reticular wall and thoracic cavity. Histopathologically, fibrinopurulent inflammatory reaction was detected in the wall of the reticulum, pericard, epicard and lung.

Keywords: Goat, pathology, traumatic reticulo-pericarditis.

Bir Keçide Traumatik Retikulo-perikarditis

Bu çalışmada bir keçide rastlanan traumatik retikulo-perikarditis olgusu tanımlandı. Olguda, klinik olarak genel sağlık durumunda kötüleşme ve solunum güçlüğü, makroskopik olarak, karın boşluğunda sıvı birikimi ve lokal fibrinli peritonitis gözlemlendi. Retikulumun anteroventral bölgesi ile diyafram arasında şiddetli fibröz yapışmalarla birlikte 5 cm uzunluğunda paslı bir iğne vardı. Göğüs boşluğunda purulent bir eksudat, akciğerin sol apikal lobu ile perikard arasında da fibröz yapışmalar belirlendi. Perikard boşluğunda aşırı kanamaya bağlı kalp tamponadı tablosu gözlemlendi. Göğüs ve karın boşluğunda ayrıca çok sayıda apselerle rastlandı. Histopatolojik olarak, retikulum, perikard, epikard ve akciğerlerde fibrinopurulent yangısal bir reaksiyon gözlemlendi.

Anahtar kelimeler: Keçi, patoloji, traumatik retikulo-perikarditis.

Introduction

Traumatic reticulo-pericarditis results from injury or perforation of the reticulum and pericardium by sharp foreign bodies (1, 2). Foreign bodies such as nail, piece of wire, or needle are ingested with feed and reach the reticulum. The objects causing no perforation might remain in the reticulum for some time without causing harm (2). However, objects which pass through the reticulum can cause bleeding, abscess and adhesion in surrounding tissues and organs (3, 4). Objects which proceed in a cranioventral direction may cause reticulo-pericarditis by perforating the diaphragm or the pericardium (1, 5). Although reticulo-pericarditis is known to occur in cattle, it is rarely observed in small ruminants (6-8). The present study identified a case of reticulo-pericarditis in a goat with macroscopic and microscopic findings.

Case History

In this study, an 19-month-old female goat was observed to have deteriorated in general condition, with excessive weight loss and dyspnea, and the necropsy was performed. The tissue samples from visceral organs such as heart, lungs, liver, reticulum, peritoneum were fixed in 10% neutral buffered formalin, embedded in paraffin, tissue sections were stained with hematoxylin and eosin (HE). Macroscopically, 200 ml of yellowish ascitic fluid with fibrin clots was observed in the abdominal cavity. The reticulum, liver, diaphragm and peritoneum contained numerous fibrous adhesions. A rusty needle, 5 cm in length, which reached to the pericardium, was found (Figure 1). There were also many abscess foci in adhesion areas. Approximately 1000 ml fibrinopurulent exudate was observed in the thoracic cavity. The left apical lobe of the lung was found to be hepatized (Figure 2). Between the pleura and pericardium, there were greenish to yellow fibrous adhesions and abscess foci. Cardiac dilatation, pericardial thickening and cardiac tamponade resulting from excessive clotting in the pericardial sac were observed (Figure 3). Furthermore, there was petechial hemorrhage of the endocardium.

Microscopically, neutrophil leukocytes, macrophages, a few lymphocytes, fibrin fibriles and a proliferation of connective tissue were found in the pleura, epicardium and pericardium. The inflammatory reaction was more severe in the pericardium. Variably sized abscesses surrounded by a wide zone of fibrous capsule were seen in the affected

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lobe of lung. Local connective tissue proliferation along with numerous neutrophil leukocytes and mononuclear cell infiltrations were observed in the reticular wall and peritoneum. Inflammatory cell reaction and connective tissue proliferation in Glisson's capsule were also found in the liver. No remarkable lesion was seen in the other organs.



Figure 1. Traumatic reticulopericarditis. A rusty needle reached to the pericardium (arrow).

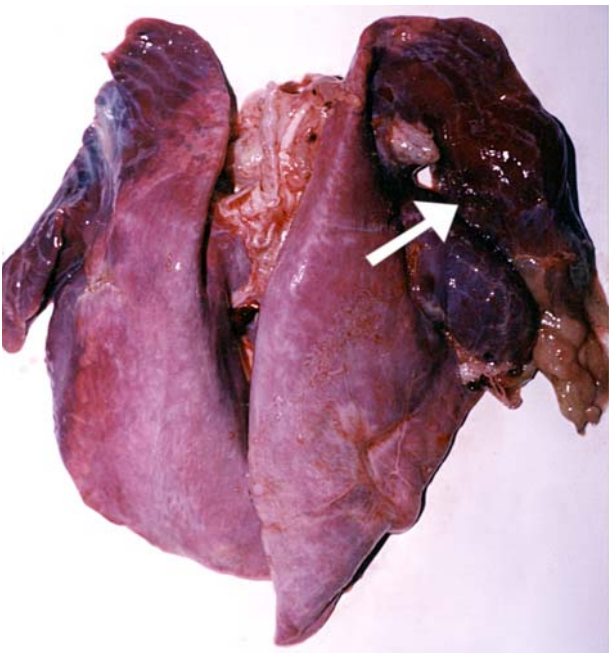


Figure 2. Traumatic reticulopericarditis. Hepatized the left apical lobe of the lung (arrow).

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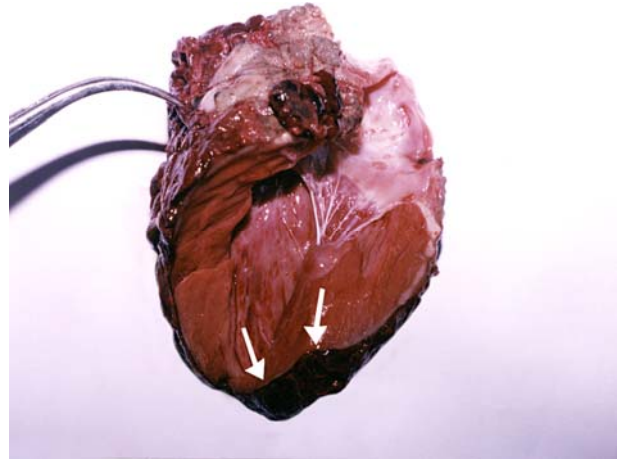


Figure 3. Traumatic reticulopericarditis. Cardiac tamponade resulting from excessive clotting in the pericardium (arrows).

Discussion

Traumatic reticuloperitonitis/pericarditis develops as a consequence of perforation of the reticulum by foreign bodies (1). The presence of potentially injurious materials are very important in development of the disease (3, 8). Sharp objects which reach the reticulum can not penetrate internal organs unless the intra-abdominal pressure rises (5). Increased intra-abdominal pressure due to pregnancy and ruminal tympany may facilitate the penetration of the foreign body into the reticular wall and other abdominal and thoracic organs (2). The object may stay there or it can penetrate through the diaphragm and causes traumatic reticulopericarditis (6, 7). The animal in the present case gave birth two months previously and, hence pregnancy and/or parturition seemed important in the development of the disease as in earlier reports implied (2). The macroscopic and microscopic findings of the case are in agreement with the literature (1, 6, 8). The prognosis for reticulopericarditis is poor and the disease generally results in death. Although reticulopericarditis is known as a cattle disease (2,3), it is rarely observed in small ruminants (6-8). This case shows that the potential risk of this condition should be taken into consideration for small ruminants.

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