

# UNUSUAL ABDOMINAL FLUID IN A DOG

**Contributors:** E. Piseddu<sup>1</sup>, M. Trotta<sup>1</sup>, L. Berlese<sup>2</sup>, L. Solano Gallego<sup>3</sup>, G. Mezzalira<sup>1</sup>, C. Masserdotti<sup>1</sup>,

<sup>1</sup>Veterinary Diagnostic Laboratory and Hospital “San Marco”, Padua, Italy

<sup>2</sup>Private Veterinary Clinic “Madonna di Rosa”, Gorizia, Italy

<sup>3</sup>Royal Veterinary College, London (UK).

Clinica e Laboratorio Veterinarie Private “San Marco”

Via Sorio 114/c

35141 Padova (Italia)

Tel. 00-39-049-8561098

Fax. 00-39-02 700 51 8888

E-mail: [grifondoro@hotmail.com](mailto:grifondoro@hotmail.com)

## Case Presentation

### Signalment

A 10-year-old, 15 kg, mixed-breed male dog.

### Presenting complaint

Vomiting, anorexia and depression.

### Clinical history

The dog was presented to the referring veterinarian for acute vomiting and anorexia of three days duration. The dog was adopted at 3-months of age in Sicily and moved to Gorizia (North Italy). The dog lived indoors and outdoors, without other animals at the time of clinical presentation. He was currently vaccinated and did not receive regular heartworm prevention treatment.

### Physical examination

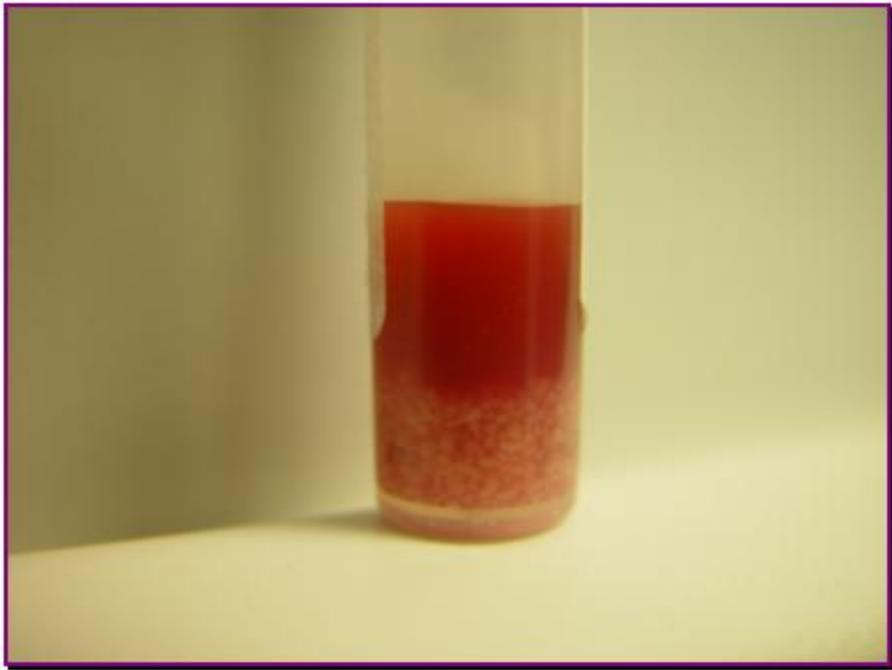
Physical examination revealed congested oral mucus membranes, dehydration and abdominal distension with discomfort on abdominal palpation. A fluid wave was balloted, consistent with an abdominal effusion.

### Clinical pathology data

Whole blood and serum samples were submitted for CBC and a chemistry panel by the referring veterinarian. The hematological parameters revealed a marked leucocytosis, characterized by marked neutrophilia and mild monocytosis. The results of the biochemical profile included mild hyperproteinemia with normal A:G ratio. Other test results were within reference intervals.

Abdominal ultrasound revealed marked ascites, with hyperechoic particles. Multiple cystic structures scattered on the peritoneal surface of the liver, spleen and omentum were also observed. The small intestine appeared normal while the colon showed sign of occlusion without motility. Exploratory abdominal surgery revealed ascites, multiple lobulated fluid-filled cysts, and numerous yellow flecks of material scattered diffusely over and within all abdominal viscera and peritoneal surfaces. The colon appeared non motile with atypical structure. A partial colonic resection and anastomosis were performed. A sample of abdominal fluid, including the yellow flecks of material, was collected in an EDTA tube and submitted to Laboratory San Marco (Padua, Italy) for fluid

analysis and cytological evaluation. The fluid had a protein concentration of 50 g/L, a specific gravity of 1.031, a total cell count of 54460/ $\mu$ L, and a total nucleated cell count of 34460/ $\mu$ L.



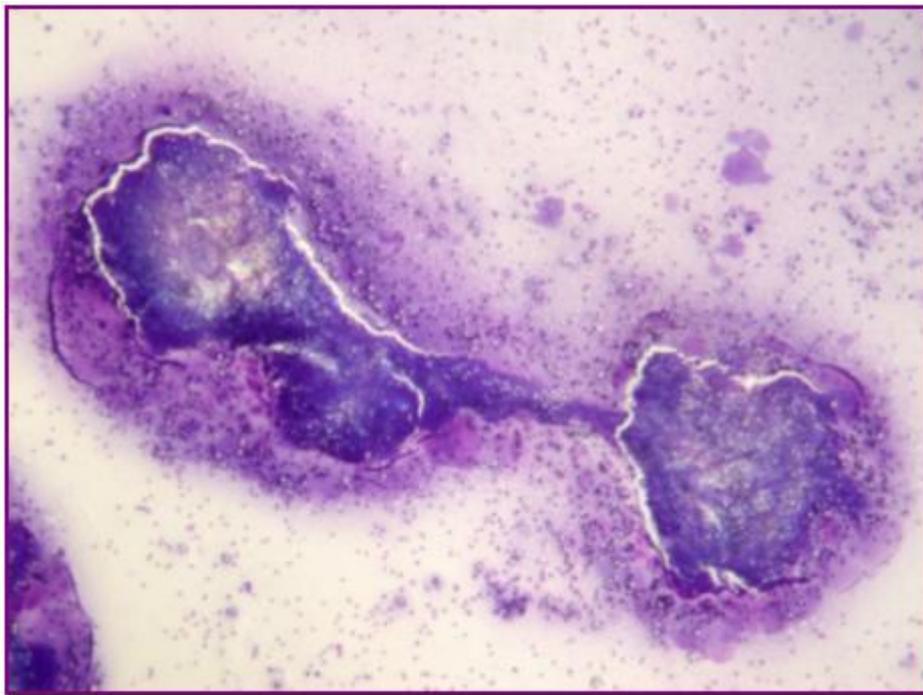
**Figure 1.** Abdominal fluid from dog.



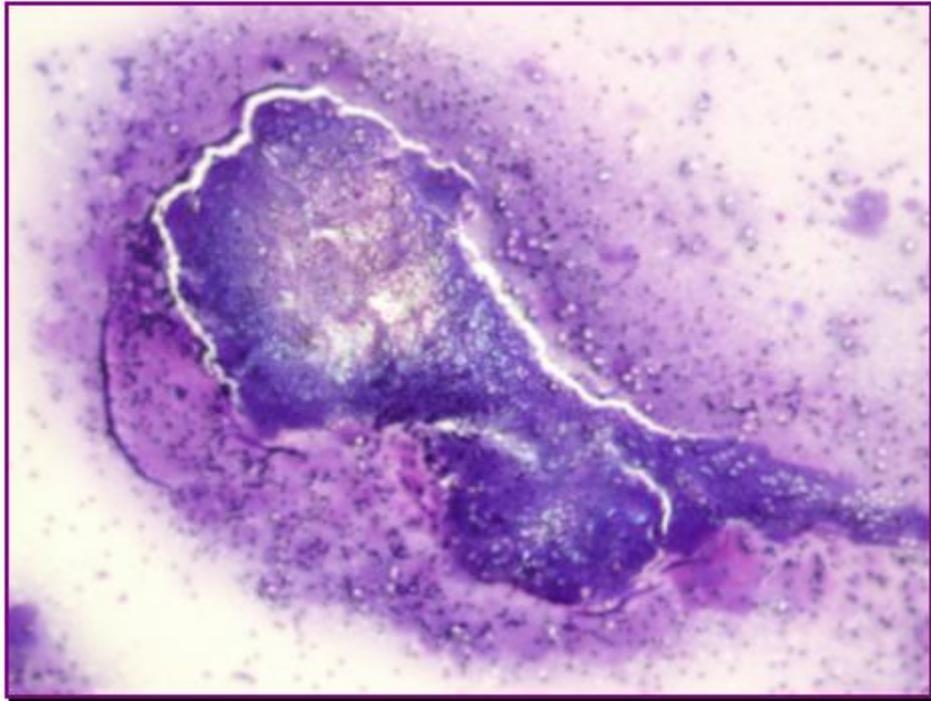
**Figure 2.** Numerous opaque flecks suspended throughout fluid.



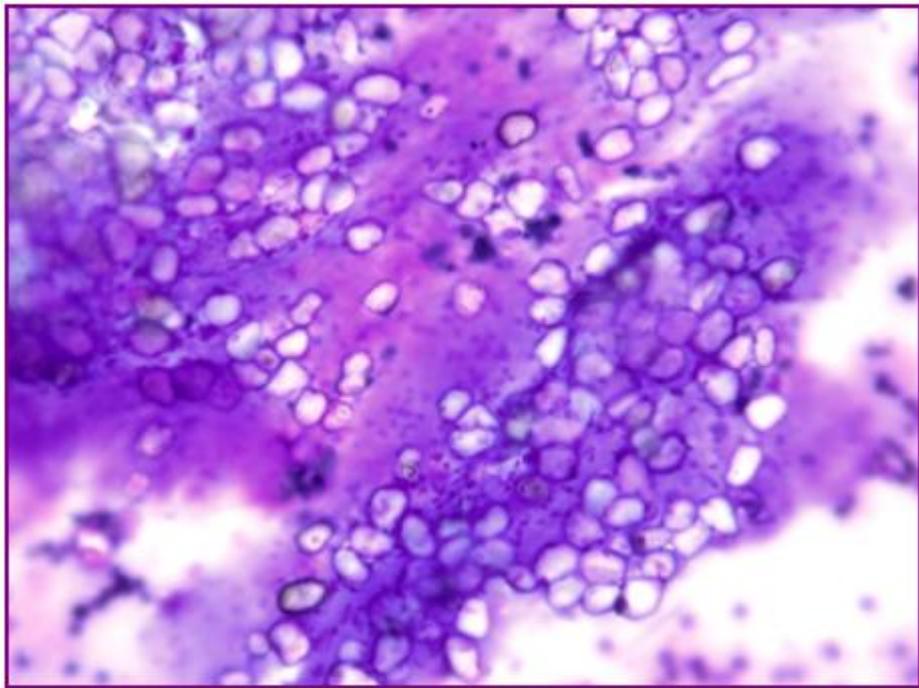
**Figure 3.** Abdominal fluid, unstained flecks suspended throughout fluid, 200x



**Figure 4.** Abdominal fluid, May Grunwald - Giemsa in an automatic stainer (Aerospray slide stainer 7120, Wescor Delcon<sup>®</sup>), 100x.



**Figure 5.** Abdominal fluid, May Grunwald - Giemsa in an automatic stainer (Aerospray slide stainer 7120, Wescor Delcon<sup>®</sup>), 200x.



**Figure 6.** Abdominal fluid, May Grunwald-Giemsa in an automatic stainer (Aerospray slide stainer 7120, Wescor Delcon<sup>®</sup>), 500x.

What is the most likely diagnosis in the present case?  
What further diagnostics are available for this cytological finding?