

ANEMIA IN A LAMB

Harold Tvedten
Clinical Chemistry Laboratory
University Animal Hospital (UDS)
Swedish University of the Agricultural Sciences (SLU)

Specimen: History, laboratory data, Advia 2120 graphics and photomicrographs of blood smears.

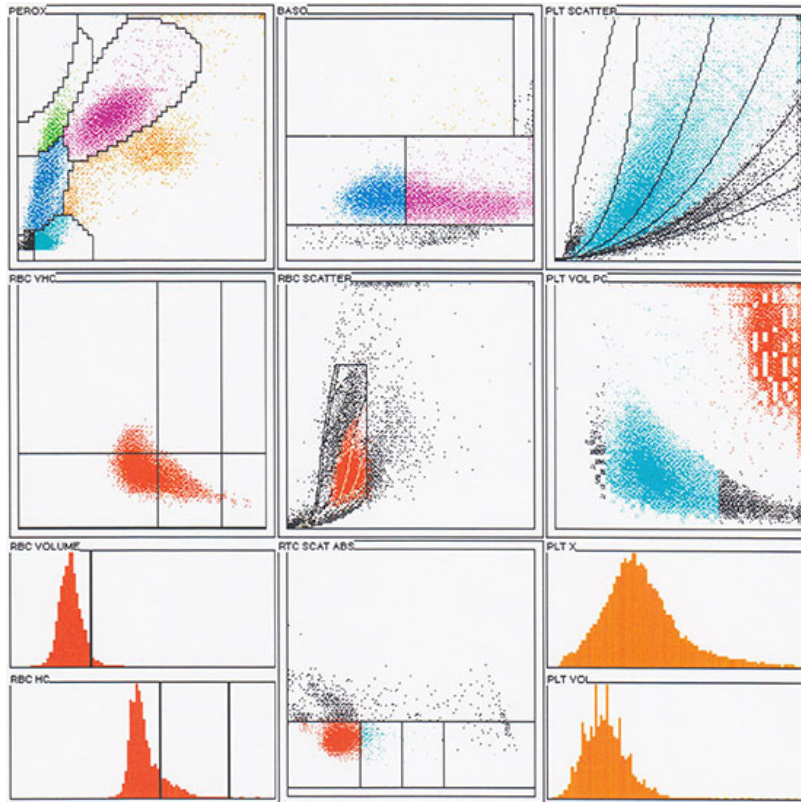
Signalment:

A 7 month old lamb had bloody urine, depression and pale mucous membranes. It was not kept with other sheep but was a pet and was housed with the family's horses. EDTA blood and serum clot tube were submitted. The specimens arrived at our laboratory 3 days after collection.

Table 1 Advia automated results

Analysis	Patient	Reference values
RBC	$2.63 \times 10^{12}/L$	9.5-15.1
Hgb	62 g/L	100-150
Hct	0.12 L/L	0.27-0.42
MCV	46 fl	24-36
MCHC	513 g/L	323-420
Reticulocytes	1.6 %	3-16
Reticulocytes	$42 \times 10^9/L$	10-110
PLT	$2770 \times 10^9/L$	300-920
WBC	$13.2 \times 10^9/L$	5.1-14.1
Neutrophils	$7.5 \times 10^9/L$	1.2-6.1
Lymphocytes	$3.3 \times 10^9/L$	2.5-9.6
Eosinophils	$1.2 \times 10^9/L$	0.1-1.0
Monocytes	$0.8 \times 10^9/L$	0.1-1.0
Basophils	$0.1 \times 10^9/L$	rare
MPV	13.4 %	?
Platelecrit	3.7 fl	?
nRBC	7/100 wbc	rare

Figure 1 Advia Graphics



Questions

1. What type anemia did the lamb have? What is the most likely primary problem?
2. Was it a regenerative anemia? Did you use the Advia reticulocyte count or new methylene blue stained blood smear (Figure 5) to make that conclusion?
3. Why was the platelet count increased?

Figure 2 Serum, microhematocrit tube, and EDTA blood on a paper towel (left drop was patient; right drop was normal blood).

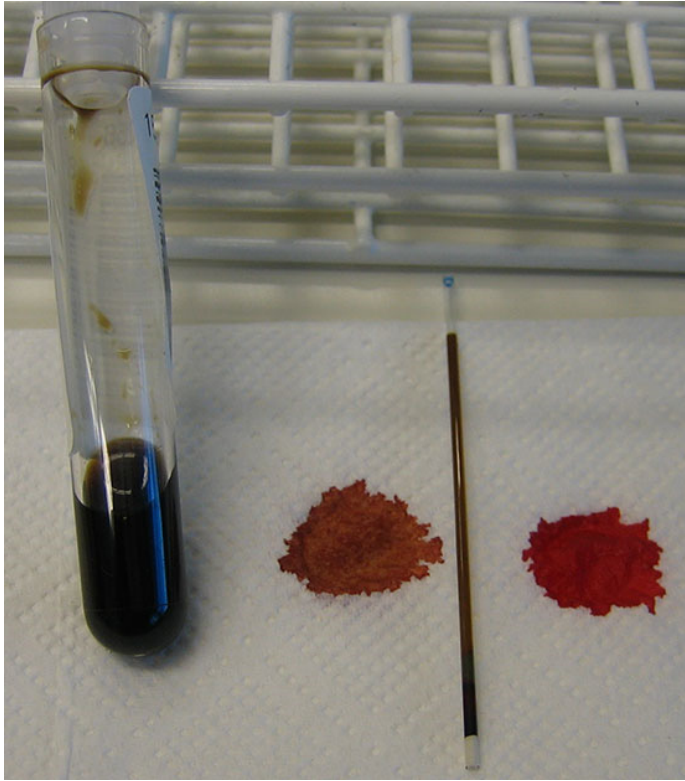


Figure 3 Original blood Smear (Giemsa stain, original magnification was about 500X)

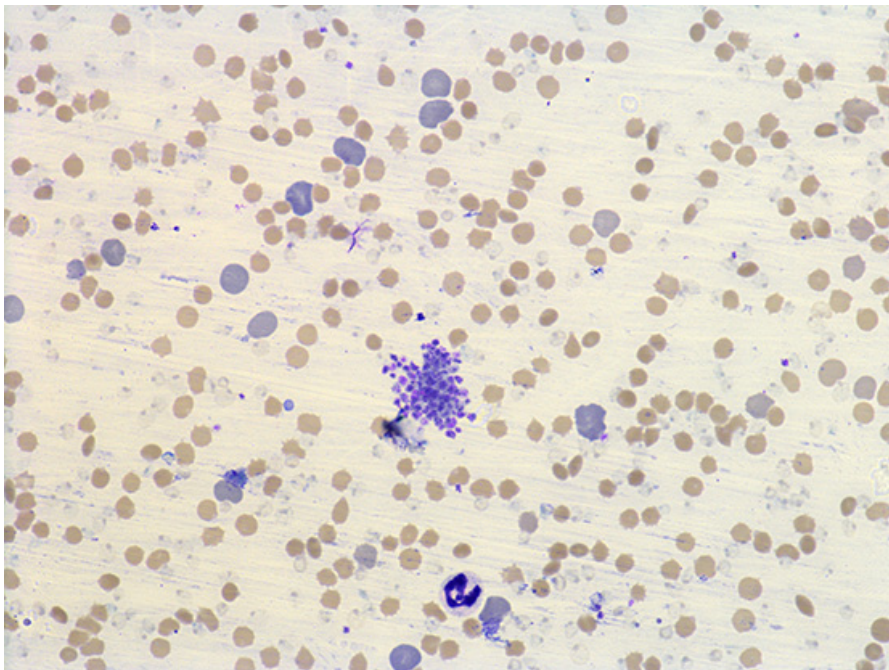


Figure 4 Blood smear was 3 days old
(Giemsa stain, original magnification was about 500).

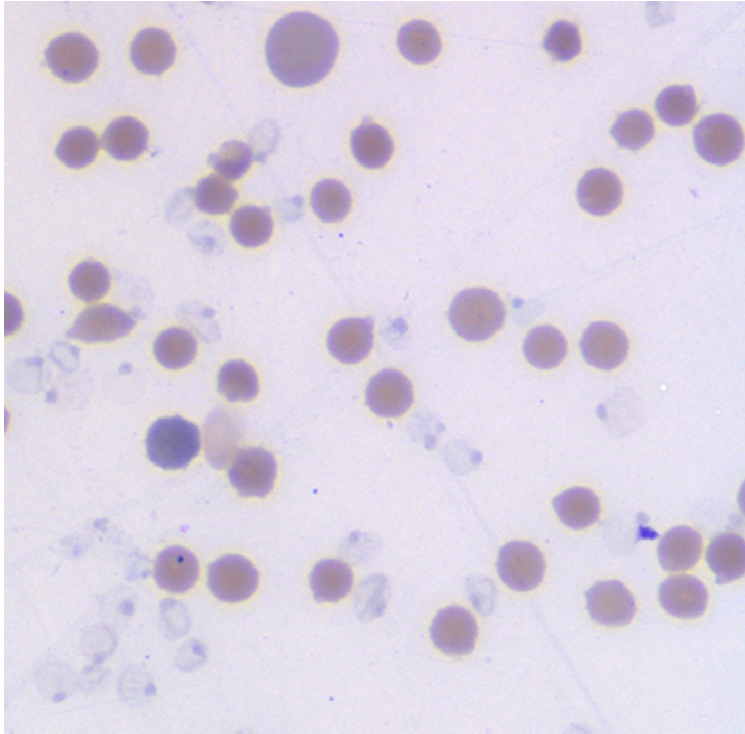


Figure 5 New Methyene blue stained blood smear original magnification was about 1000). How many reticulocytes are present in the photo?

