ASVP DIAGNOSTIC EXERCISE NO. 31

History:

Blemishes found at slaughter of many old ewes from pasture on a property on the NSW Northern Tablelands. The deposits were widely distributed over peritoneal surfaces and in fascial planes of the diaphragm (peritoneal side) and body wall. Sheep had been injected with cydectin, 5-in-1, and injectable selenium. The problem seems to have developed since last autumn (not noticed in sheep sent to the abattoir at that time). Two mobs of sheep from this property (in March and May) were similarly affected; this one worse (90% affected).



(this page can be enlarged to 200x for greater detail)

Description:

Grossly, peritoneal surfaces (diaphragm?) bear smooth pale yellow plaques, irregular in outline and up to several cm diameter, minimally raised above the surface. Histology reveals extensive mutifocal accumulation of macrophages replete with brownish crystalline material. There is little if any accompanying inflammation. Crystals are also apparent in the cytological smear.

Morphological diagnosis:

Low-grade reaction to foreign material

Cause:

This where we'd hoped that someone might have seen something similar and enlighten us. As

usual, we were underwhelmed by suggestions. It is tempting to ascribe the reaction to misplaced injection of one or other of the vehicles used to deliver the parenteral treatments described above, but this is mere speculation.

Further management of the case:

Further investigations? For a start, try getting hold of samples of the same formulation of cytidectin and selenium as were given to these animals, and compare them microscopically with scrapings from the wet fixed tissues (which, we hope, will not have been thrown out). It would be nice, of course, to do a bit of sleuthing and quietly ask a few non-leading questions of the jackaroo who was wielding the syringe (*but see update, below*).

Update (added May 2012):

After this exercise was posted, a nice collaborative piece of work involving state-of-the-art analytical techniques was done (Dennis et al, <u>Aust Vet J 2011;89:209–212</u>) to show that the foreign material was barium selenate and that the reaction was to misplaced injection of slow-release selenium supplement.

Please contact Michelle Dennis at Michelle.Dennis@qml.com.au if you have any discussion about this case.

Roger Kelly