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Agalactia/"hard bag" in ewes

We wish to alert practitioners to a syndrome of transient agalactia in sheep, because we are developing a survey to investigate the risk factors for this condition.

Each year we hear of a few flocks in Great Britain and Northern Ireland with partial or complete agalactia with variable prevalence (in some cases up to 80-100% of the flock). The affected ewes develop a hard udder at the time of, or soon after lambing, and little or no colostrum/milk is produced. There is no associated mastitis, and milk production/let down usually gradually returns over 3-7 days, although some ewes do not achieve full production. During the period of agalactia lambs have to be bottle fed, with all the accompanying cost and management difficulties. Most flocks are affected during one lambing; only a small number of flocks have had cases in more than one lambing season. Oxytocin injections have been tried in some cases, with the majority reporting no beneficial response.

A similar problem was observed in the Loire valley in France in 2012 – 15 farms reported agalactia in at least half the ewes, with lactation returning 2 to 8 days post parturition (PROMED 2013).

A typical case seen in this country is described below.

In the 2014 lambing period many ewes in a 470 ewe flock of Scotch Mules and Texel x Lleyns showed milk drop which resolved within 3 days (following treatment with antibiotics and anti-inflammatories). Most of the ewes affected were later culled, but 6 were retained and none of the flock including the retained affected ewes showed milk drop the following year (2015).

However, this lambing period at least 100 ewes have shown milk drop – within 12 hours of lambing the udders became hard, little milk was produced but there was good response within 3 days to treatment in most ewes.

The only change this year is that the ewes were in much better condition (6 had had vaginal prolapses). There was no age or breed predilection in the ewes affected.

A live affected ewe was submitted to the University of Bristol Farm Animal Pathology Service (FAPS), part of the APHA third party post-mortem provider surveillance network.

The udder was symmetrically swollen and firm, but well differentiated from the surrounding sub-cutaneous tissue and skin (Figure 1). Normal milk was expressed from both teats. The ewe was euthanased; at post mortem examination there was no indication of mastitis or any other pathology to explain the milk drop/hard udder/failure of let-down. Extensive bacteriological testing of the udder and milk (including Mycoplasma DGGE) was unrewarding as was serology for Maedi-visna, Leptospirosis, and exotic Mycoplasma including *M.agalacticae*, *M.capricolum* and *M.mycooides.mycooides*.

Histology of the udder showed normal active mammary tissue and there were no abnormalities detected in liver, kidney and other organs. These findings were consistent with a case previously investigated by Veterinary Laboratories Agency (VLA) Langford, with testing for the above diseases followed by udder histology.

The cause of this condition is currently unknown although an aberrant physiological response, possibly due to a hormonal failure or failed receptor development, could be involved.

We propose the following case definition - transient agalactia, not associated with mastitis, in freshly lambed ewes affecting a significant proportion of the flock. Please contact us at the email address below if you have a client that has reported this condition that fits the case definition, and would be willing to take part in the survey to further identify risk factors.

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References: PROMED (2013) AGALACTIA, EPHEMERAL, OVINE - FRANCE.
<http://promedmail.org/post/1526207>. Accessed 07/06/2016

Figure 1: Udder of ewe with agalactia ("hard bag") - symmetrically swollen and firm but well differentiated from the surrounding sub-cutaneous tissue and skin

