Association between endometrial cytology and uterine ultrasound findings in postpartum dairy cows

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Purpose

- To investigate the association between endometrial cytology and uterine ultrasound findings, and their effect on pregnancy.

Approach

- 16 primiparous and 23 multiparous cows were utilized. On day 25 postpartum:
  - A cytological sample was obtained from the endometrium, using a modified cytobrush, smears prepared, stained and % of polymorphonuclear cells (PMN) assessed (Fig. 1).
  - Quantity of uterine fluid determined by transrectal ultrasound (U/S; Fig. 2).
  - Interval from calving to first ovulation and pregnancy status was also determined by U/S.
  - Cows were grouped as having low (<8%) or high (>8%) PMN count.

Findings

- 75% of primiparous and 30% of multiparous cows classified as high PMN.
- Cumulative pregnancy at 270 d tended to be higher in high PMN multiparous cows (80 vs 58%).

Take Home Message

- Combining transrectal ultrasonography with endometrial cytology in early postpartum has diagnostic valued in the assessment of uterine inflammation.
- Future studies should focus in the relationship between ultrasound findings, parity and fertility.

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