

A Retrospective Study Comparing Three Surgical Techniques for Correction of Left Abomasal Displacements in Lactating Dairy Cattle (1999-2003)

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Introduction

Several surgical techniques have been advocated for correction of left displaced abomasum in cattle. A retrospective study was performed to compare three surgical techniques for fixation of left abomasal displacements in lactating dairy cattle. The right flank omentopexy, omento-abomasopexy (omento-pyloropexy) and the left flank abomasopexy were compared. We hypothesized that there was a significant difference between the success rates of these three techniques. Differences in success were measured by comparing the milk production of the cattle before and after surgery. The objective of the study was to assess if there is a significant advantage of one surgical technique over another.

Materials and Methods

Medical records of lactating dairy cows admitted to a teaching institution over a five-year period were reviewed if they contained the diagnosis "left displaced abomasum", or had surgery performed with keywords "omentopexy," or "abomasopexy." The following information was recorded from the medical records: signalment, history, diagnosis, method of surgical correction, date of surgery, surgeon and stage of lactation (if known). A questionnaire was designed to obtain follow-up information from clients such as how the cow produced following surgical correction of their LDA for the remainder of that lactation and subsequent lactations, how the aforementioned milk production compared to their production prior to displacement, and if surgical complications or any further displacements occurred. Chi-squared analysis was used to compare the data sets.

Results

The following breeds were represented in the study: Holstein (n=146), Jersey (n=22), Guernsey (n=5), Ayrshire (n=2), Brown Swiss (n=2) and Milking Shorthorn

(n=1). The mean age of cattle undergoing surgery was 4.7 ± 2 years. The mean days in milk (DIM) of the cattle at the time of surgery was 44 ± 73 days.

Follow-up was attempted on 178 animals that met the initial criteria. To date, follow-up information has been obtained on 74 animals, 52 of which the owner could provide sufficient follow-up information. Normal milk production following surgery was reported for 63% (n=28) of the cattle undergoing right flank omentopexy for correction of LDA, while 32% (n=13) showed decreased milk production compared to the previous lactation. Normal milk production was reported for 33% (n=2) of those cattle undergoing left flank abomasopexy for LDA correction while 67% (n=4) were reported to have decreased milk production compared to the previous lactation. Normal milk production was reported for 60% (n=3) of the cattle that had omento-abomasopexy while 40% (n=2) showed decreased milk production for the lactation of the DA. Approximately 50% of cattle undergoing right flank omentopexies (n=20) and left flank abomasopexies (n=3) were still in the herd at the time of follow-up, while only 40% (n=2) of the cows undergoing omento-abomasopexies were still in the herd.

Significance

It is our impression that the breed distribution of cattle in our study is consistent with the overall hospital admittance. There was not a significant difference between the three surgical techniques for return to milk production using chi-squared analysis ($X^2=2.787$, $p>0.1$). There also was not a significant difference between the three surgical techniques for cull rates using chi-squared analysis ($X^2=0.148$, $p>0.1$). Based on data collected to date, there does not seem to be a statistical difference between the three surgical techniques. The surgical techniques studied (right flank omentopexy, right flank omento-abomasopexy and left flank abomasopexy) are acceptable correction options for left displaced abomasum in lactating dairy cattle.