Distal teat amputation in lactating dairy cows with injury to the distal teat and streak canal

C. A. Klostermann, DVM, MPH; A. Desrochers, DVM, MS, DACVS, DECBHM; M. Babkine, DVM, MS, DECBHM; G. Fecteau, DVM, DACVIM; S. Nichols, DVM, MS, DACVS-LA
Centre Hospitalier Universitaire Vétérinaire, Université de Montréal, Saint-Hyacinthe, Québec, J2S 2M2, Canada

Introduction
When a streak canal injury occurs, there may be subtle or no external signs of damage. The first sign a producer notices is it takes longer for the injured quarter to empty or milk flow is impaired during milking. Given that a dairy cow with 4 efficiently functioning teats is essential to dairy production systems, an economically feasible procedure, such as distal teat amputation, to treat these injuries is necessary. The objectives of this study were to describe the distal teat amputation procedure and determine the short- and long-term outcomes of dairy cows treated with a distal teat amputation. The hypothesis is that dairy cows with internal damage to the streak canal and subsequent difficulty milking will have improved milking efficiency with the machine following surgical treatment with a distal teat amputation.

Materials and methods
This retrospective study examined medical records from the Centre Hospitalier Universitaire Vétérinaire, Université de Montréal from 2015 to 2021. Medical records were included if the cow had a distal teat amputation performed surgically under local anesthesia. Data collected included age, breed, quarter affected, duration of milking issues, California Mastitis Test (CMT) and milk culture results on admission and after surgery, length of passive milking and hospitalization, complications and medical treatment during hospitalization. Long-term follow-up information was collected from the Canadian Dairy Network (CDN) and telephone interviews with producers. Data recorded included how long the cow remained in the herd, if she was bred back after her surgery lactation, reason for removal from the herd, milk leakage from the distally amputated teat, if she developed mastitis on the farm, complications with the distally amputated teat, and producer satisfaction. Short-term outcomes were defined as discharged from the hospital with a functioning distally amputated teat. Long-term outcomes were defined as a success if the cow had a subsequent lactation following surgery. Producers reported 4 of the 6 remaining cows produced an equal amount or more milk during their subsequent lactation. Reasons cows were removed from the herd included mastitis either in their surgery teat or another quarter, had an injury to another teat, or had reproductive issues (being bred back or uterine torsion). Producers reported milk dripping either right before milking or constantly from the distally amputated teat as a complication in 3 of the 10 cows. Overall, producer satisfaction was good, with many stating they would consider this surgical procedure again for other cows with similar injuries but would reserve this option for higher value and high-producing cows.

Significance
Distal teat injuries in lactating dairy cows can be a source of economic loss for the producer. Distal teat amputations to re-establish efficient milk flow is a practical procedure with moderate post-operative care.