

# Clinical trial of a new permanent milk flow teat bougie during cases of external and internal teat injuries

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## Introduction

Teat injuries are common in dairy cattle, around 2 to 3% are affected and compared to other frequently occurring diseases, these injuries often result in premature culling of affected cows. Teat injuries can be divided into 2 categories: external or internal injuries. These injuries often result in premature culling of affected cows. Surgery and treatment of these injuries has been described and discussed intensively. However the question whether complete rest (no milking) or temporary resting of the injured teat by temporary cessation of milking or continuous milking is not yet clearly answered, and may vary from case to case. This paper describes a new technique that allows a permanent milk flow alongside an undisturbed healing process of external and internal teat injuries. A special silicon catheter ("teatflow") is introduced into the teat canal to allow continuous milk flow at a minimum risk level for udder infections.

## Materials and Methods

Cows with covered or open teat injuries are suitable to benefit from the permanent milk flow system. The surgery of open lesions differs from traditional methods as no blood stasis is applied. Oxytocin (10 IU) is administered intravenously to achieve an intensive milk drop-down, and single suture knots are carried out without internal pressure on

the wound. This procedure results in a faster consolidation of fibrocytes for an undisturbed healing process. To keep a minimal low internal milk teat pressure, milk is allowed to permanently exit the teat by the inserted catheter for 9 days. The insertion is eased by application with the help of the traditional Fuerstenberg-catheter. Penethamat-Penicillin (Boehringer Ingelheim; 2 x 5 Mio I.E./day intramammary) is administered at 2 consecutive days systemically to reduce concurrent teat infections.

## Results

In total, 9 cows are documented by this new technique over a 2-month time period starting upon their treatment. Out of these cases, only 1 cow developed clinical mastitis (11% infection risk). This was a much lower rate than reported in the literature. In Germany and Austria, around 800 similar catheters have been sold so far and successfully applied in practice.

## Significance

The described procedure of permanent milk flow allows better and undisturbed healing for external and internal teat injuries. The "teatflow" catheter can easily be introduced into the teat canal with the Fuerstenberg catheter. The risk for infections is significantly reduced.