

# The need for awareness raising on the causes and treatment of mastitis in livestock among pastoralists in southern Ethiopia

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# Introduction

- Maintaining the health and productivity of milk producing animals is crucial to ensure health and nutrition of pastoralists
- Mastitis is one of the many factors hindering proper utilization of livestock resources:
  - impact on milk production
  - milk safety
  - animal welfare



# Introduction

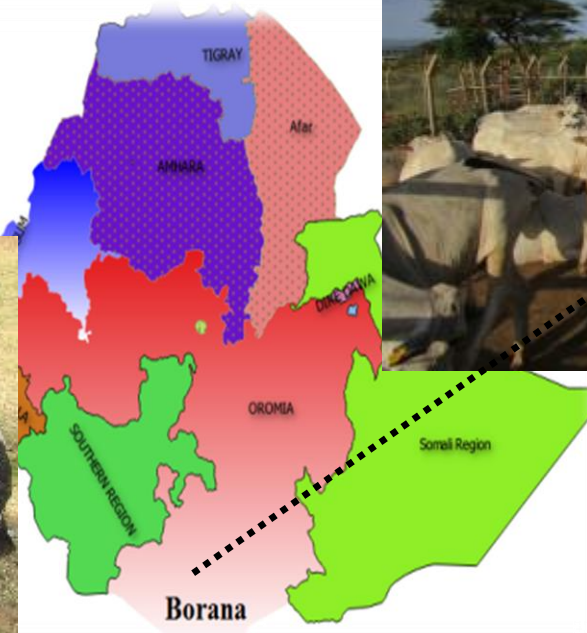
- Mastitis has been studied in the past - identification of microbial pathogens and associated risk factors for mastitis
- Little is documented about the knowledge and beliefs of livestock keepers regarding mastitis and its control
- Understanding the beliefs is central to the design of effective communication

The study aimed at exploring knowledge and beliefs on the causes, clinical signs and treatments for mastitis in pastoralist communities

# Qualitative study

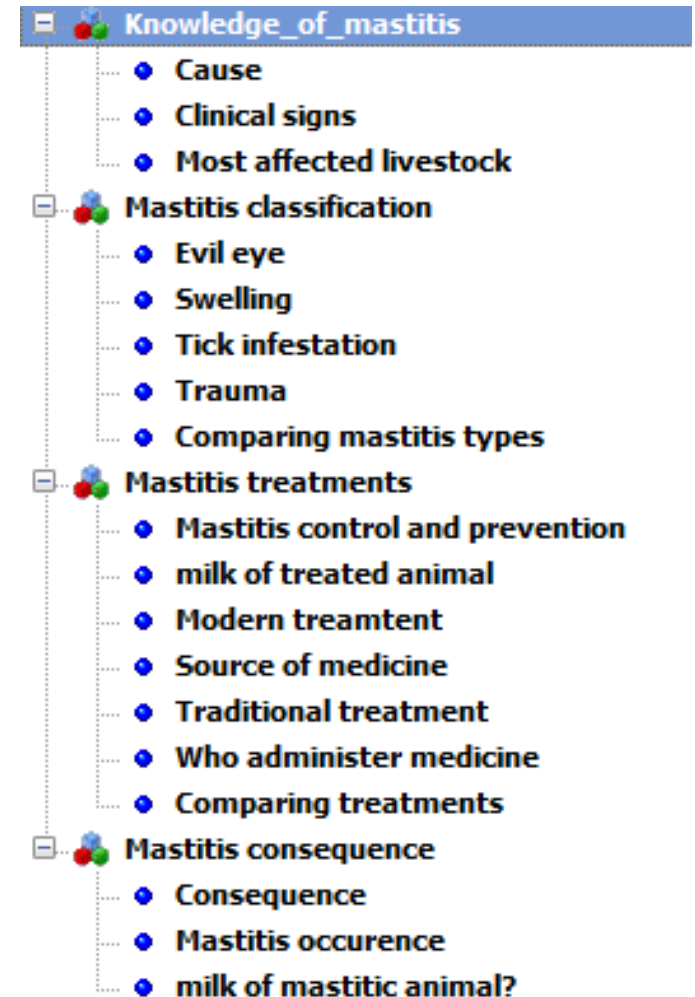
FGDs, KIs, and 40 individual interviews with women conducted in 4 villages in Borana, southern Ethiopia

- Dharito
- Elweya
- Surupha
- Dida Yabello



# Data management

- Audio recording of interviews and discussions: transcribed and translated into English
- Thematic analysis to identify nodes
- Content analysis for perceived clinical signs of mastitis



# Results

- Mastitis known as “dhukkuba muchaa”, literally ‘disease of teats’
  - ~15% cows with lesions, 50% of these CMT positive
  - ~15% CMT trace positive
- Multifactorial nature of mastitis is recognised, 3 main types of mastitis mentioned
  - Tick infestation (**dirandisa**)
  - Swelling of udder often with pus discharge (**nyaqarsa**)
  - Acute mastitis perceived to be caused by evil eye (**buda**) characterized by bloody milk

# Results

## Mastitis causes

### ➤ Tick infestation

*“Tick infestation can cause mastitis. Even if you remove [the tick], the mouth can remain [attachment site] and lead to ill health. Also cows can acquire and experience chronic swelling of udder” (IDI 14).*

### ➤ Nyaqarsa (=boil)

*“Nyaqarsa, like boil, causes swelling. Whether medicine is applied or not nyaqarsa can burst. Wound formed and washed with medicine and healed. It is also this one which causes discharge from udder” (FGD 4).*

# Results

## Mastitis causes

### Evil eye (buda)

- Belief that there are people whose eyes can change '**white milk**' into '**red milk**' when they stare at the udder of animals
- Late pregnant and early lactating cows with large udder reported to be more vulnerable
- *Kajellaa* (Envy): literally referring to an intense desire or need for other people's livestock, crop or property.
  - believed to aggravate the occurrence of evil eye when information about something good is publicized (praised) among community



# Results

## Clinical signs from content analysis

<b>Clinical description of mastitis</b>	<b>no of times mentioned</b>
Swelling of udder	33
Bloody (red) milk	16
Pus, discharge when milking	9
Blind teat	8
Painful udder and teat	6
Difficulty in milk letdown	3
Teat perforation	3
Milk with stinky odour	2
Cracks on teat	2
Abnormal discharge from teats	1
Skin sloughing of teats/udder	1

# Results

## Treatment

People tend to resort to either traditional or modern medicine when first treatment regime is not working:

*“When Borana medicine is not effective (does not cure), we try black medicine [oxytetracycline]”  
(FGD 2)*

*“The udder swells. When udder swells, black or white medicine is injected by ourselves or the animal taken to clinic ...” (FGD 4)*



# Results

## Traditional treatment

- Application of plant material (local healer)
  - Chewing the plant and dropping the juice into nostril/mouth
  - Smearing of plant on udder or teat after burning and mixing with butter
  - Fumigation of udder with the smoke of burning plant
  - Rubbing with the dying burning charcoal wood
- Magical practices
  - *Tufaa* (literally means **spitting**), the common magical practice employed to cure animals afflicted with evil eye

# Discussion

Pastoralists have accumulated knowledge about livestock production and diseases management

→ pastoralists can have animal health knowledge and skills comparable to trained animal health professionals.

On the other hand

→ strong cultural beliefs about diseases can be a barrier for seeking treatment and provide effective health services (in human medicine)

→ wrong understanding of the causes and transmission of diseases can lead to ill-directed treatments

# Discussion

Traditional treatment for evil eye is often administered through nostrils, procedure may not be effective against the disease

Resorting of the pastoralists to traditional magical treatment can have negative impacts on welfare of the animals and cause further economic losses

The delay in appropriate treatment of mastitis can lead to loss of teats due to progression of mastitis to terminal stage and leading to early elimination of animals

# Conclusion

Lack of understanding on causes of mastitis

- Misperceptions of acute mastitis can be problematic in the management of mastitis
- Leading to poor welfare
- Continuing mastitis problems

Modern and traditional treatments in use and accepted

# Recommendations

- Need for effective and culturally sensitive communication strategies and trainings on mastitis prevention, treatment and management
- Promote good milking practices
- Confirm effectiveness of herbs used in traditional treatment



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