




BASIC TOOLS FOR TEAT/UDDER SURGERY

Tool	Uses	Additional points
<p style="text-align: center; margin-bottom: 5px;">Scalpel blade</p> 	<ul style="list-style-type: none"> - For making large incisions through skin, subcutaneous tissue, and muscles - Can be used for debridement (removing necrotic, hyperkeratotic tissue) 	<ul style="list-style-type: none"> - Has a distinct curved cutting edge - come in various sizes: 10,11,12,15, 20, 21, 22, 23, 24, 25. For udder/teat surgery the number 10 scalpel blade was used
<p style="text-align: center; margin-bottom: 5px;">Scalpel handle</p> 	<ul style="list-style-type: none"> - Has attachment for scalpel blade and thus facilitates safe and easy incision-making. 	<ul style="list-style-type: none"> - Comes in two sizes: 3- small animal handle 4- large animal handle For udder/teat surgery the number 3 handle was used - It is held using a pencil grip which allows small, precise movements
<p style="text-align: center; margin-bottom: 5px;">Doyen Clamp</p> 	<ul style="list-style-type: none"> - A non-crushing (atraumatic) clamp that can be used in teat/udder tissue which facilitates its preservation. Its pointy tip allows effective manipulation of tissues. 	<ul style="list-style-type: none"> - The Doyen clamp is an intestinal clamp used to manipulate the bowels however it can also be effectively used in teat/udder surgery.
<p style="text-align: center; margin-bottom: 5px;">Forceps</p>	<ul style="list-style-type: none"> - Forceps are used to carefully grasp and manipulate tissue during surgery such as to hold the layers for the insertion of suture and to oppose 	<ul style="list-style-type: none"> - Atraumatic ones (without teeth) such as the Brown-Adson tissue forceps is recommended for use in teat/udder



the layers (mucosa, submucosa and skin.)

surgery, where tissues are meant to remain functional

Needle holder



- Used to hold and direct the needle for suturing.

- Available in different sizes and may come with a built-in scissors (Olsen-Hegar) or with no built-in scissors (Mayo.)

Scissors



- To trim tissue and sutures as needed.

- There are different types of scissors such as the Mayo, Iris and Metzenbaum (for blunt tissue dissection.)

TEAT TUMOUR/MASS EXTRACTORS

Tool

Uses

Additional points

Cornell teat curette

- It is inserted into the teat canal to remove abnormal growth in the teat cistern.

- It has a sharp circle with a cutting edge on the distal end which is placed on the



growth and the curette manipulated back and forth to remove growth. Remember to sterilize before and after use to prevent infections.

Hugs teat tumour extractor



- It is used particularly for the removal of calculi formations in the teat canal.

- The blade of this slim instrument is hidden inside the shaft. The instrument is slipped into the teat canal, and the blade is released by pushing on the ring; that allows an incision to be made from the inside to the outside. Remember to sterilize before and after use to prevent infections.

Teat tumour extractor/teat slitter:
1 ring, 3 rings and 3 rings with spring

- To open the teat sphincter in hard milkers or stricture of the teat canal. Teat slitters have concealed blades that will not damage the teat.

- Once you place it into the teat canal, slacken screw at end and push the inner part further up the teat so that the 2 small knives can be released inside the teat canal and can cut and open the teat canal.



Ring With Spring 3 Ring 1 Ring


Teat slitter -Danish pattern



- Same use as the others (to remove abnormal growths in the teat canal)

- Blades are opened by loosening the small burr on the side of the instrument.

TEAT KNIVES

Tool	Uses	Additional points
<p>Teat bistoury</p> 	<ul style="list-style-type: none"> - To open stenotic teats by incising through scar tissue or other constricting tissue 	<ul style="list-style-type: none"> - The handle has a convenient grasping surface.
<p>Litchy teat knife</p>	<ul style="list-style-type: none"> - Same as above 	<ul style="list-style-type: none"> - A slim stainless-steel blade is attached to a handle. The blade may either have a blunt end or a sharp end.



Mclean teat knife

- Incision of the teat canal.

- Blade is arrow shaped, sharp and double-edged.



Hall's teat knife

- Used in cutting during teat laceration repair.

- Has a flat, sharp blade with a pointy tip and a characteristic handle.



OTHER EQUIPMENT/TOOLS

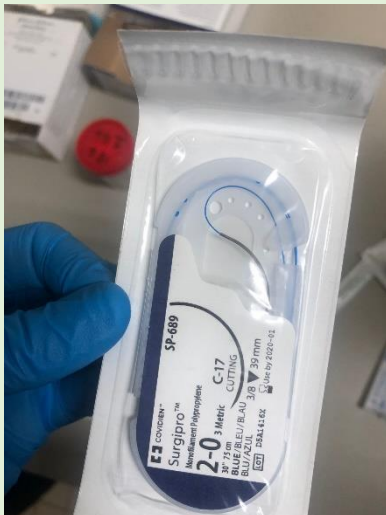
Tool	Uses	Additional points
Syringes and needles	<ul style="list-style-type: none"> - Syringes and needles- used to administer the necessary drugs required in the 	<ul style="list-style-type: none"> - Syringes and needles come in a variety of sizes and gauges. In this lab, 6mL syringe



procedure and to flush lacerations

and 23-gauge needle was used.

Suture



- Used to suture the teat lacerations

- In this lab 2-0 monofilament polypropylene which is a non-absorbable suture was used to close the skin of the teat while 3-0 catgut, an absorbable suture, was used to close the inner layers, the mucosa and submucosa.



Teat blades

- For incisions in the teat

- The blades are designed with a specially shaped



cutting edge inside the hook, making a cut in the sphincter in a manner that the outside opening of the teat canal remains whole.

Alligator forceps



- Used to remove lactoliths or floating growths in the teat cistern.

- At the end of the shaft of the forceps is a small jaw which opens and close, allowing grasping and removal of growths.

Udder infusion cannula



- Enters the teat of the udders and allows the injections of solutions or medications into the udder with ease and without contamination and can also help in drainage.

- Available in different lengths to be used in varying size of animals such as the 2.5 inch and 3.75-inch lengths.

Teat plug (plastic, ring metal and base metal)



- It is inserted into the injured teat so that it can remain open for milking and thus remain patent while healing and after healing.

- There are different types of teat plugs made of plastic or metal and non-self-retaining and self-retaining teat plugs.

Swent milk siphon



- This is used to collect milk samples directly from the teat canal and in the treatment of mastitis.

- It has one lateral eye opening and has a cleaning wire.

Teat dilator



- Used to open the teat canal.

- It is a gradually widening instrument which when slipped into the teat canal, opens it.

DRUGS

Drug

Active Ingredients

Uses

Drycloxakel



- Cloxacillin benzathine 1000 mg

- For the treatment of mastitis caused by gram positive bacteria like *Staphylococcus aureus* in dairy cows during the dry period. Twist off upper portion of the Opti-Sert Protective Cap to expose 3-4 mm of the syringe tip. Insert syringe tip into the teat canal and expel the entire contents of syringe into the quarter. Withdraw the syringe and gently massage the quarter to distribute the medication.

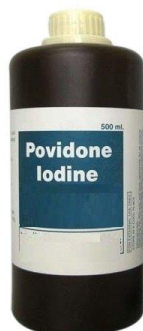
Mastikel



- Neomycin sulphate 500.000 IU,
- procaine benzylpenicillin 300mg

- For treatment of acute mastitis during lactation. Must milk out the udder completely and clean and disinfect teats before administration.

Povidone-Iodine



- Povidone Iodine which is Available in different concentrations: 5% solution or 7.5% surgical scrub

- Used in the pre-operative preparation of the skin and in emergency antiseptics of lacerations.