PRACTICAL PROCEDURES AND PATIENT INVESTIGATION

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OUTLINE

- Introduction
- General precautions
- Aseptic technique
- Local anaesthesia
- Suturing
- Airway procedures
- Thoracic procedures
- Abdominal procedures
- Vascular procedures
- Urinary procedures
- Central nervous system procedures
- Excision of lumps and swellings
- Imaging

GENERAL CONSIDERATIONS

- Every procedure should be preceded by adequate explanation.
- Reason for procedure, simplified steps, what is expected during the procedure.
- Communication and reassurance throughout the procedure.
- Counselling regarding the need, the benefit and any alternatives to the procedure.
- Written informed consent is required sometimes.

GENERAL PRECAUTIONS

- Needles should not be resheathed.
- Sharp instruments discarded by the operator should be placed in a special ‘sharps’ container.
- Drapes and other soiled equipment should be placed in appropriate containers.
- Gloves and gown should only be removed after all used equipment / drapes have been placed in appropriate containers.

ASEPTIC TECHNIQUE

- ’using practices and procedures to prevent contamination from pathogens. It involves applying the strictest rules to minimize the risk of infection’
- As a minimum precaution, the skin should be cleansed with an antiseptic solution, and sterile instruments used.
- For some procedures, full aseptic technique should be employed.

ASEPTIC TECHNIQUE

ASEPTIC TECHNIQUE

LOCAL ANAESTHESIA

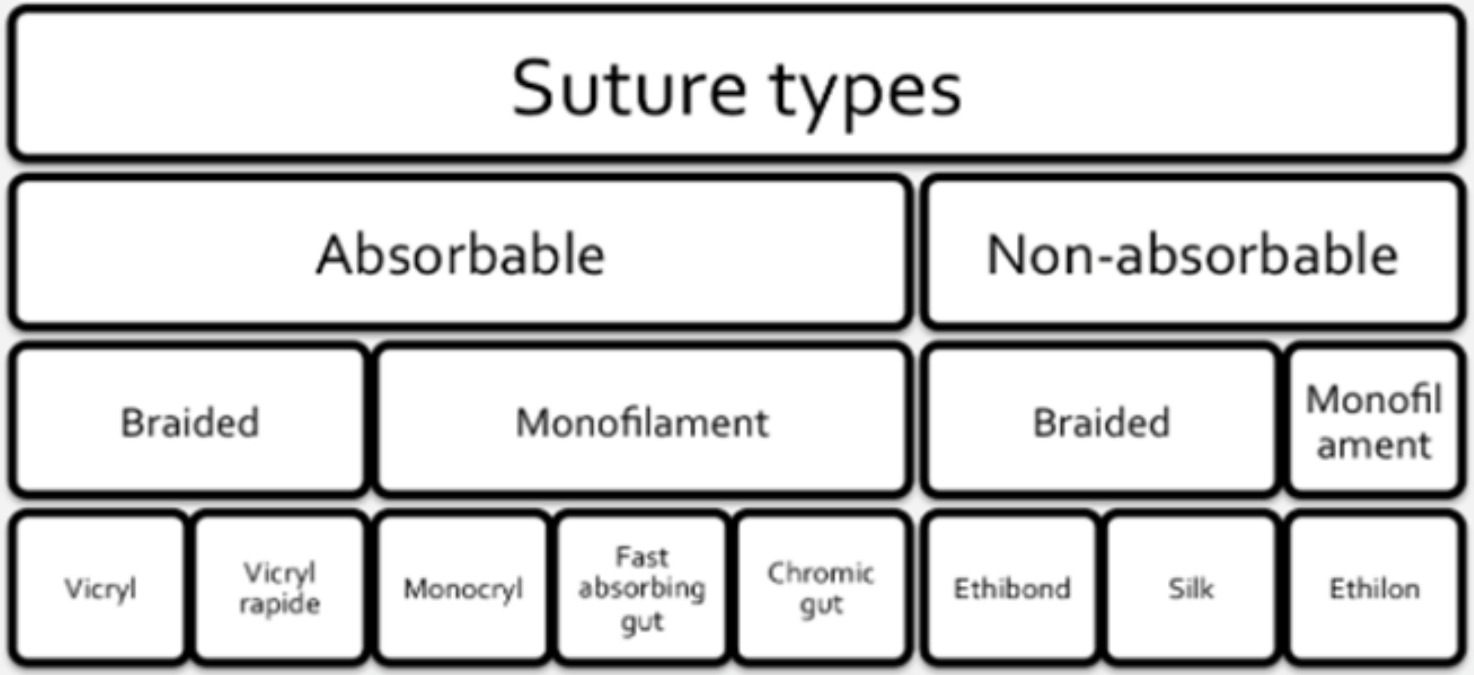
- Local anaesthetic agents inhibit membrane depolarization and hence block the transmission of nerve impulses.
- Either topical, or local infiltration.
- Local anaesthetic drugs are potentially toxic and care must be taken to avoid inadvertent intravascular injection.
- Signs of toxicity: numbness, tingling, tinnitus, light headedness
- Higher doses: LOC, convulsions, arrythmias

LOCAL ANAESTHESIA

Esters	Max Dose (mg/kg)	Duration (h)
Chloroprocaine	12	0.5 – 1
Procaine	12	0.5 – 1
Cocaine	3	0.5 – 1
Tetracaine	3	1.5 – 6

Amides	Max Dose (mg/kg)	Duration (h)
Lidocaine	4.5/(7 with epi)	0.75 – 1.5
Mepivacaine	4.5/(7 with epi)	1 – 2
Prilocaine	8	0.5 – 1
Bupivacaine	3	1.5 – 8
Ropivacaine	3	1.5 – 8

SUTURING



Suture types available in the Kelowna General Hospital ED, divided by type. N.B., "Ethilon" is a nylon nonabsorbable suture. Prolene is a polypropylene nonabsorbable suture that is used in other EDs for similar applications as Ethilon/nylon

SUTURING

Undesired tissues reactivity is greater with:

- Multifilament (compared to monofilament)
- Larger suture gauge
- Natural material (compared to synthetic)

Absorbable Sutures

	Effective Wound Support	Complete Absorption	Comments
Surgical Gut	8-9 days	30 days	Rarely used; high tissue reactivity
Chromic Gut	10-21 days	>90 days	Gut treated with chromium to decrease tissue reactivity and slow absorption
Fast Absorbing Gut	5-7 days	14-28 days	Gut treated with heat to speed absorption
Polyglactin (Vicryl)	21 days	90 days	Less reactive than gut; synthetic
Vicryl Rapide	10 days	42 days	Gamma-irradiated to speed absorption

Non-Absorbable Sutures

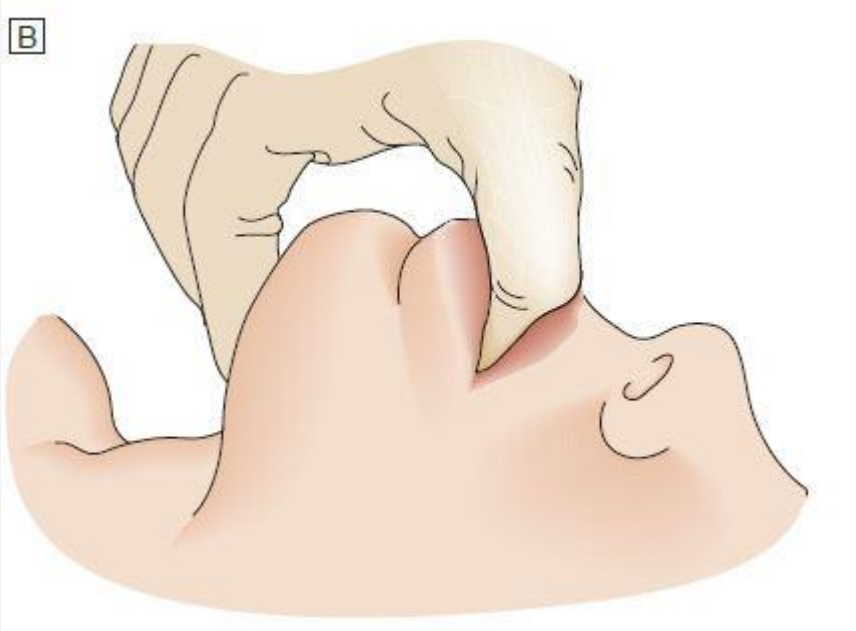
	Tensile strength	Tissue reactivity	Comments
Silk	Low	High	Multifilament, pliable
Nylon (Ethilon)	High	Low	Monofilament, stiff
Polypropylene (Prolene)	Moderate	Very low	Monofilament, less knot security because slippery (may need extra throw in knot)

SUTURING

Suture Removal Timeframes

Body Part	# of days after suturing
Face	3-5
Scalp	7
Chest, Extremities	7-10
High tension areas, Back	10-14

AIRWAY PROCEDURES



AIRWAY PROCEDURES

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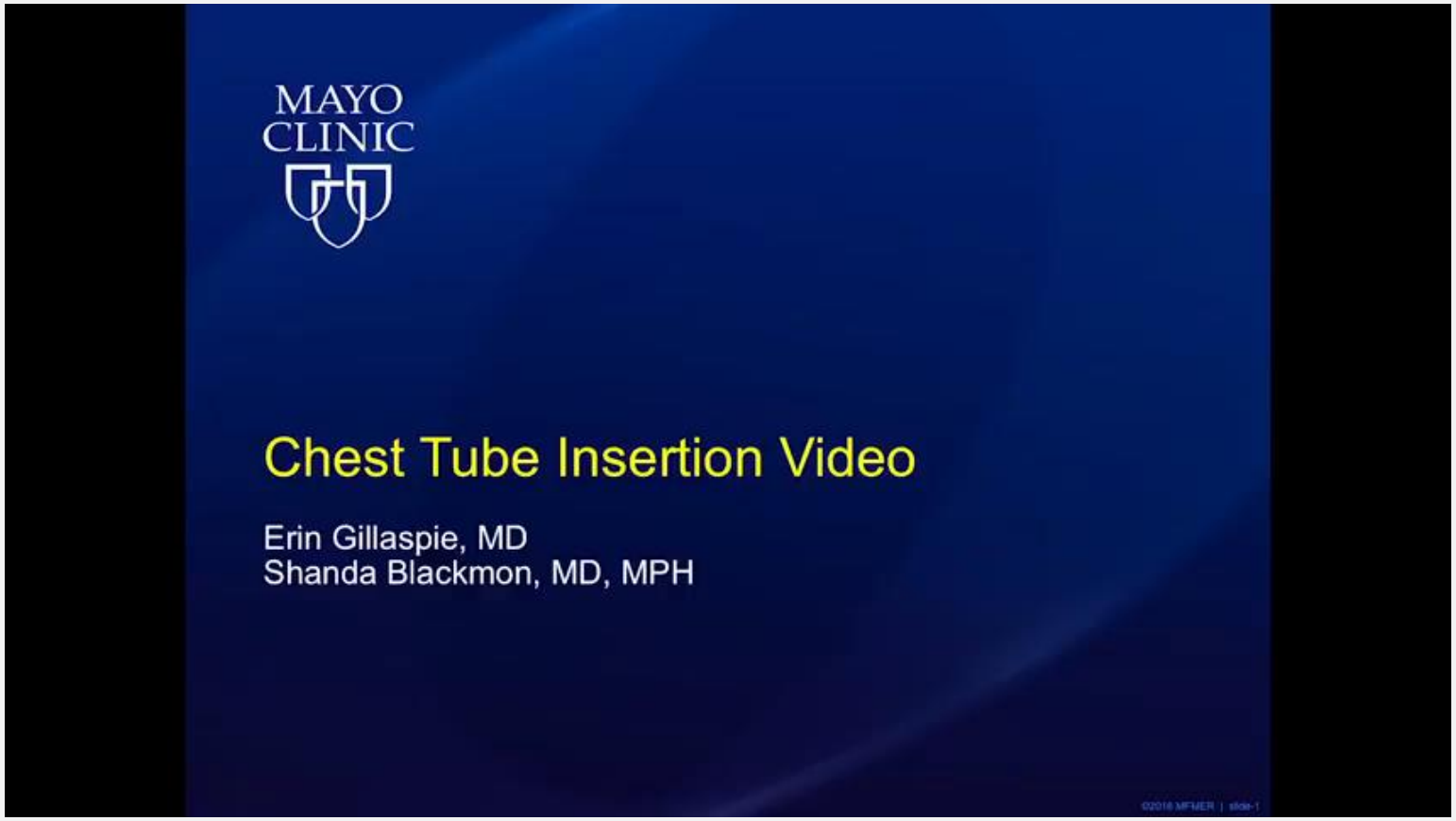
THORACIC PROCEDURES



ABDOMINAL PROCEDURES

SUMMARY

- Protect yourself, colleagues and the patient.
- Aseptic technique.
- Talk to your patients, and the rest of the team.
- Know indications, alternatives, complications of the procedure you are performing.