WHAT IS A JONES TUBE USED FOR?

Jones tubes are used to correct canalicular failure.

The procedure creates a bypass channel for tear drainage when the normal tear ducts fail and alternative techniques to restore tear patency have failed or are not possible.

Typically, a Jones Tube is used as a primary procedure in conjunction with DCR (external or endonasal), or secondary procedure following previous DCR.

A Jones Tube placement is known as Conjunctivodacryocystorhinostomy (CDCR).
DETAILED INDICATIONS FOR JONES TUBE

Partial/complete loss/absence of the canaliculi through:

- Congenital absence
- Trauma – accident/surgery/tumour removal
- Infection eg HSV
- Radiotherapy/chemotherapy
- Inflammation
- Unsuccessful canaliculo-DCR
- Failure of previous bypass tube
Jones Tubes were initially invented in the 60’s by Dr. Lester T. Jones

Despite some slight variations over the years, the design basically remained unchanged until today: a glass tube, of different length, with a collarette to prevent the tube migration

PYREX is the material used for such tube, and has proven to be highly safe and biocompatible over the years
TRADITIONAL JONES TUBE

Jones tubes have a high success and patient satisfaction rate

But:

- Little to hold tube in place
- Main complication is tube falling out (extrusion) eg when blowing nose, sneezing, rubbing eye
- 50%+ lost within a few years
STOPLOSS™ JONES TUBE SYSTEM

- Sizing and insertion kit
- Jones tube made of pyrex glass, with flexible silicone flange
- Removal set
STOPLOSS™ JONES TUBE

STOPLOSS JONES TUBE CHARACTERISTICS
STOPLOSS™ JONES TUBE

STOPLOSS JONES TUBE CHARACTERISTICS

- Individually packaged
- Sterile, shelf life up to 5 years
- Single use implantable device
- Pyrex glass
- Flexible silicone flange securely bonded onto glass at 2mm from internal tip
STOPLOSS™ JONES TUBE

STOPLOSS JONES TUBE CHARACTERISTICS

- Range of tube lengths 9-22mm, in 1mm increments
- External flange sizes 3.5 and 4.0mm
- Most common tube lengths 17-18mm, typical range in common use 13-21mm

How to determine the appropriate length?
STOPLOSS™ JONES TUBE

SIZING & INSERTION KIT
STOPLOSS™ JONES TUBE

SIZING & INSERTION KIT

- Individually packaged
- Sterile, shelf life up to 5 years
- Single use, disposable
- Components:
  - Guide wire with sharp and blunt ends
  - Detachable end cap for guide wire
  - Dilator - narrow and broad ends
  - Sizers x4 shaped like Jones tube
STOPLOSS™ JONES TUBE

SIZING & INSERTION KIT

- Sizers:
  - 3.5mm x 15mm
  - 3.5mm x 20mm
  - 4.0mm x 15mm
  - 4.0mm x 20mm

- 5 rings at 1mm increments from internal tip, visible with nasal endoscope

- Allow dimensions of StopLoss Jones tube needed for individual patient (both diameter of external flange and length of tube) to be determined prior to tube insertion
STOPLOSS™ JONES TUBE

STOPLOSS JONES TUBE - VIDEO
STOPLOSS™ JONES TUBE

INSERTION KIT - VIDEO

Insertion of the StopLoss Jones Tube
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REMOVAL SET
STOPLOSS™ JONES TUBE

REMOVAL SET

- Individually packed
- Sterile, shelf life up to 5 years
- Single use, disposable
- Metal rod with loop of silk suture
- Additional guide wire with blunt ends
- Loop placed around neck of tube, shaft rotated to grip tube and traction applied to remove tube safely
STOPLOSS™ JONES TUBE

REMOVAL SET - VIDEO

Removal of the StopLoss Jones tube
SURGICAL TECHNIQUE SUMMARY

- Usually general anaesthesia
- Secondary procedure following previous DCR or primary procedure in association with external or endoscopic DCR
- +/- nasal decongestant
- Adequate bone opening
- Additional procedures as needed:
  - Removal of part of caruncula
  - Removal of part of turbinate
  - Correction of deviated nasal septum
  - Suturing of tube for 2-3 weeks
IDEAL TUBE POSITION

- External flange at caruncula
- Tube angled downwards 30-45°
- Tube passes through opened lacrimal sac
- Internal opening clear of obstructions
- Internal flange separated from lateral nasal wall by at least 2mm
STOPLOSS™ JONES TUBE

SURGICAL TECHNIQUE – GETTING THE SIZE AND POSITION RIGHT

- Proper sizing and positioning are crucial points to ensure the surgical success of the procedure.
- It is essential to use the sizing set as detailed in the surgical video.
- Success depends on:
  - External flange position
  - Tube length
  - Internal flange position
  - Internal tube opening
SURGICAL TECHNIQUE – GETTING THE SIZE AND POSITION RIGHT

STEP 1: Place BACKWARDS one of the dummy Jones tube on the sharp end of the guide wire, and position the flange against the caruncula in the desired final position. SELECT THE FLANGE DIAMETER (3.5mm or 4mm) TO PROVIDE THE BEST FIT
STEP 2: Engage the sharp tip of the guide wire with the conjunctiva, place the end cap on the blunt end and push the guide wire along the desired track into the nose. In general the guide wire passes approximately in the plane of the iris. Aim for the wire to pass through the lacrimal sac just below the opening of the common canaliculus.
STEP 3: Keep the guide wire in place. REMOVE the dummy Jones tube and PASS THE DILATOR (SMALL END) DOWN THE GUIDE WIRE UNTIL IT REACHES THE NOSE
SURGICAL TECHNIQUE – GETTING THE SIZE AND POSITION RIGHT

STEP 4: KEEP THE GUIDE WIRE IN PLACE, REMOVE THE DILATOR, REVERSE IT, and PASS THE LARGE END down the guide wire into the nose as in step 3.
SURGICAL TECHNIQUE – GETTING THE SIZE AND POSITION RIGHT

STEP 5: KEEP THE GUIDE WIRE IN PLACE, REMOVE THE DILATOR and pass a dummy Jones tube with the flange size already selected, down the guide wire until the flange is against the caruncula
STEP 6: CHECK THE DUMMY TUBE HAS REACHED THE NOSE. IF NECESSARY USE THE LONGER LENGTH. THEN REMOVE THE GUIDE WIRE LEAVING THE DUMMY TUBE IN PLACE.
SURGICAL TECHNIQUE – GETTING THE SIZE AND POSITION RIGHT

STEP 6: THE NUMBER OF RINGS VISIBLE ON THE DUMMY TUBE IS USED TO CHOOSE THE LENGTH OF JONES TUBE REQUIRED. COUNT the NUMBER OF RINGS that are visible.

In this case, 5 rings visible

In this case, 4 rings visible

STOPLOSS™ JONES TUBE
SURGICAL TECHNIQUE – GETTING THE SIZE AND POSITION RIGHT

STEP 7: **CALCULATE** the optimal tube length.

**GENERAL RULE:**

1/ **CONSIDER** the dummy tube length used (15 or 20mm)
2/ **DEDUCT** the number of rings visible in the nose (1 ring = 1mm) (NOTE THAT DUMMY TUBE LENGTH – NUMBER OF RINGS = LENGTH OF TISSUE TRACK)
3/ **ALWAYS ADD 4MM** (MIN) to the result obtained to determine the **FINAL TUBE LENGTH** (IE 4MM LONGER THAN THE TISSUE TRACK)

**WHY 4MM MIN?**

1/ There should always be a MINIMUM distance of 2MM between the nasal wall and the silicone flange AND
2/ There is always a fixed distance of 2MM between the silicone flange and the extremity of the tube
SURGICAL TECHNIQUE – GETTING THE SIZE AND POSITION RIGHT

STEP 7: EXAMPLE #1:

1/ TAKE the dummy tube length used: HERE = 15MM
2/ DEDUCT the number of rings visible in the nose: HERE = 1 ring visible (1MM)
3/ ADD 4MM to the result obtained to determine the FINAL TUBE LENGTH

TUBE LENGTH REQUIRED = 15 – 1 + 4 = 18MM
SURGICAL TECHNIQUE – GETTING THE SIZE AND POSITION RIGHT

STEP 7: EXAMPLE #2:

1/ TAKE the dummy tube length used: HERE = 20MM
2/ DEDUCT the number of rings visible in the nose: HERE = 3 ring visible (3MM)
3/ ADD 4MM to the result obtained to determine the FINAL TUBE LENGTH

TUBE LENGTH REQUIRED = 20 - 3 + 4 = 21MM
SURGICAL TECHNIQUE – GETTING THE SIZE AND POSITION RIGHT

STEP 7: EXAMPLE #3:

1/ TAKE the dummy tube length used: HERE = 15MM
2/ DEDUCT the number of rings visible in the nose: HERE = 5 ring visible (5MM)
3/ ADD 4MM to the result obtained to determine the FINAL TUBE LENGTH

TUBE LENGTH REQUIRED = 15 – 5 + 4 = 14MM
INTERNAL APPEARANCE OF CORRECT AND INCORRECT TUBE LENGTH

- Tube length correct: Internal flange clear of lateral nasal wall by minimum of 2mm
- Tube too short: Internal flange too close to lateral nasal wall (<2mm)
- Tube too long: Internal flange substantially >2mm from lateral nasal wall
POST OPERATIVE MAINTENANCE

- Steroid and antibiotic eye drops for 3-4 weeks
- Removal of suture at 2-3 weeks
- Cleaning tube at 6-12 month intervals
- Patients should sniff clean warm water on eye down tube each day
- Patients should keep end of tube free of mucus using cotton bud
- Patients no longer have to close eye+/-put finger over end of tube to stop tube falling out when blowing nose/sneezing
STOPLOSS™ JONES TUBE

KEY FEATURES - TUBE

- Internal flexible silicone flange prevents tube extrusion
- Simple to use as flexible silicone flange folds flat during insertion and opens when inside nose
- Large range of tube sizes
- Tubes provided individually packed and pre-sterilised
- Excellent tear drainage through Pyrex glass
STOPLOSS™ JONES TUBE

KEY FEATURES - SURGEON

- Familiar technique for surgeons used to Jones tubes
- Simple to insert using dedicated disposable introducer set
- Accurate tube sizing for each individual patient
- Proven effective at reducing complications of Jones tube (0% extrusion at follow-up to 25 months; follow-up now to 3.5 years and extrusion remains 0%)
- Simple to remove if needed
STOPLOSS™ JONES TUBE

KEY FEATURES - PATIENT

- High patient satisfaction, reduced complications
- Patient no longer has to close eye +/- put finger over end of tube to prevent tube falling out when blowing nose/sneezing
RESOURCES AVAILABLE

- Brochure SLB1015
- On-line videos: FCI Ophthalmics YouTube Channel
- Off-line videos: Oodrive
- High resolution pictures: Oodrive
- Published articles
- Powerpoint: Oodrive
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