FESS in the COVID Era
The Microscope Drape Method to Reduce Aerosolization

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Endoscopic Sinus Surgery

- Aerosol Generating Procedure
- Involves Nasal And Paranasal Sinus mucosa
- Harbours high load of Coronavirus
- Identified as high risk of COVID virus transmission as powered instruments with suction and irrigation
- Need to minimize risk
- Innovative use of microscope drape to reduce spread of aerosol
A surgical tent is created using a microscope drape which is secured around the head and upper torso.

We describe the procedure in step by step manner in following slides in a simulated setting (Please note that correct PPE is not worn by the team)

The patient is positioned and draped after anaesthetising in theatres with ET tube and throat pack
- It is mandatory to wear PPE for the surgeon and rest of the team
- We recommend surgical cap, FFP-3 mask with visor or PAPR hood
- Double gowns and gloves
- The correct donning and doffing procedure meticulously supervised by the designated buddy
• L-shaped metal bar is secured to the operating table on the opposite side of the surgeon which supports the tent.
• Surgical instruments are secured on metallic mat placed on patient’s chest.
• A plastic pouch with pockets to place bipolar diathermy, micro-debrider and suction is secured to the side on a drape (not shown in photo)
- The microscope drape has three outpouchings for the pairs of eyepieces.
- Each of these are favourably used to cover surgeon’s hands and camera along with a light carrier cable.
- The microscope lens attachment is used as a port to pass the microdebrider, endoscrub, suction and bipolar.
- These are sealed by wrapping an adhesive tape around
- Two of the outpouchings are slit open between its cover for individual eye pieces to make insertions for the surgeon’s hands.
- The third outpouching is similarly slit to introduce camera and light carrier cable.
• Surgeon’s hand is introduced in the drape tent and is secured with the adhesive tape around the arms
Both the hands are now secured within tent.

The lens port is used to insert microdebrider, suctions, bipolar and endoscrub in the tent and sealed with an adhesive tape.
The tent is secured around the head and upper torso.

The surgeon can enjoy reasonable freedom of movement to operate within the tent.

Intra-operative safety checks like examining the eyes can be carried out without any compromise.

The required instrument can be easily picked up by the surgeon within the tent or can be handed in by the assistant by picking it from outside of the tent.
One of the contributors (HIK) has performed one ESS procedures using this technique comfortably.

Pre-procedure nasal wash with diluted aqueous Betadine 1/20 and/or hypertonic solution can be considered to reduce viral load

A second suction connected to an anaesthetic viral filter can be inserted in the drape to reduce aerosol related viral load
- Ideally the surgeon should wear two gowns along with full PPE
- Meticulous donning and doffing of PPE is vital
- A buddy can help in doffing by removing the outer gown which is rolled inwards along with the drape tent