



Mastoidectomy in the COVID Era – The 2 Microscope Drape Method to Reduce Aerosolization

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Mastoidectomy

- Aerosol Generating Procedure
- Involves Mucosa of the Upper Airways – Middle ear Mucosa
- High burden of Coronavirus in Nasopharyngeal Mucosa
- Recognised as High Risk of COVID aerosolization as high speed burr and irrigation used to open mastoid.
- Need to minimize Risk
- Novel use of second microscope drape to Minimize spread of aerosol

2 Drape Method



- Drape Microscope with first drape as normal
- The following slides show the technique for fitting a second drape to reduce aerosolization. This is illustrated in an unsterile way, but would normally be done in a sterile manner after the first sterile drape is placed.

2 Drape Method



- Take new second microscope drape

Find rubber surround for lens, and cut out with a pair of scissors



Once cut away, take 2nd drape and place cut hole over rubber Lens surround of first microscope drape.

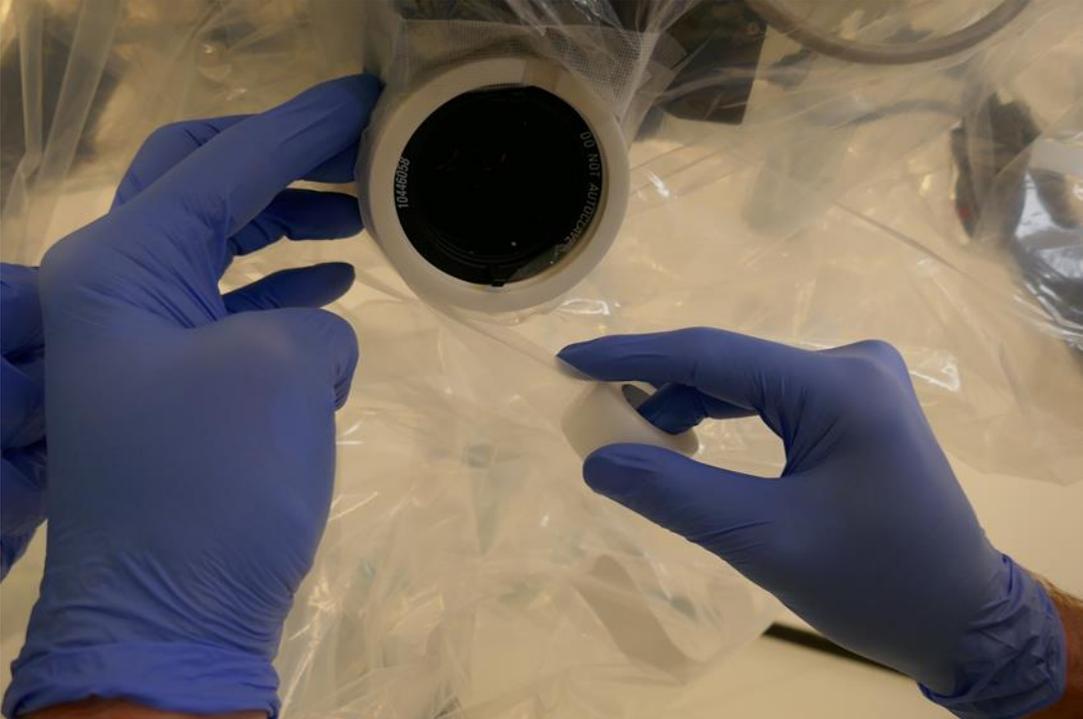


Once cut away, take 2nd drape and place cut hole over rubber Lens surround of first microscope drape.



Hold Second drape in place around Rubber lens surround of first drape, and pull second drape over microscope as one would normally drape the microscope





- Tape plastic hole of second drape securely around rubber lens surround of first drape

With 2 drapes in place bring microscope into desired position over patient (usually intubated)



Pull second drape down, over microscope, and over patient to form a “Tent” over patients head and upper torso



A metal bar secure to the table on the opposite side to the operated ear can be used to hold the drape, the bar and the microscope lens acting as the “tent” supports (gloved hands in place of bar in this photo)



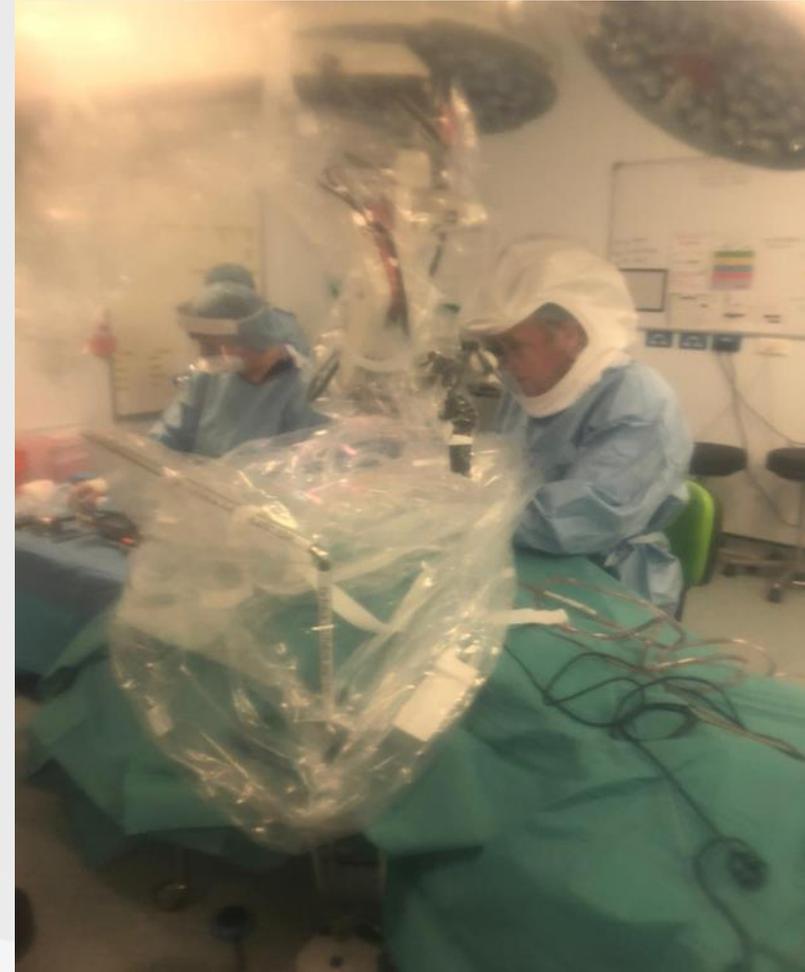
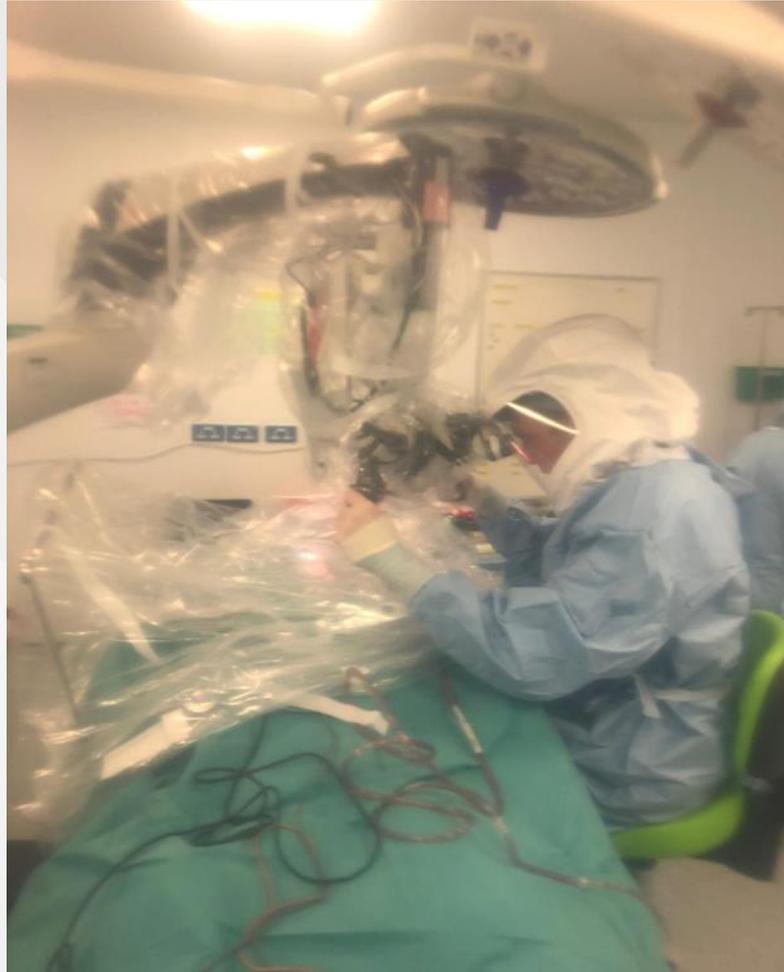
The surgeon's hands then go under plastic drape to operate. All bone dust, spray from irrigation is contained within plastic drape "tent". Instruments need to be exchanged outside the tent, or could be placed on a magnetic mat inside the tent



At the end of the procedure, the bottom of the drape “tent” is gathered together to stop escape of aerosol, and the top of the second drape taken off the rubber lens cover and held closed to isolate the aerosol, or closed with an Opsite dressing. The drape can then be disposed of safely .



One of the authors, WPLH ,has already used this technique since the start of the COVID crisis, and everyone in theatre found it very effective at controlling all aerosolization of bone dust and irrigation fluid. The pictures of poor quality but show the use of the metal bar opposite the microscope lens.



Thank you

