

“ENDOSCOPIC ENDONASAL SURGERY – BEYOND THE SINUSES”

ENDOSCOPIC ENDONASAL SURGERY (ESS) IS A SURGICAL TECHNIQUE OF OPERATING through the nostrils using endoscopes (nasal telescopes) to view the nasal passages and operate on it.

ESS is used for not only sinus & nasal conditions but also for skull base tumor excision, skull base defect/CS F leaks repair and a variety of orbital conditions.

There is a wider range of vision using the telescopes with different angled lens. “Seeing around corners” is possible, compared to the “line of sight” visual field gained by surgical loupes or microscopes. The computer based system guides the surgeon through the patient’s head with 3-D images on a computer screen.

CASE STUDY 1. Skull Base Tumor Excision

A 67-year-old patient complained of being weak and disorientated. There was low blood pressure and loss of vision. A MRI of the brain showed a large pituitary tumor at the mid region of the base of the brain. This is at the posterior superior aspect of the sphenoid sinus. It secretes nine hormones that regulate normal body functions.

The pituitary mass was displacing the optic nerve that runs adjacent to it hence the loss of vision. Endoscopic Trans-Nasal Trans-Sphenoid decompression of the tumor was done, using computer image guidance. The abnormal pituitary macro adenoma with dark blood clots within was removed leaving the normal looking pituitary gland intact. Access to the tumor was through the nostrils by the ENT surgeon so that the neuro surgeon could operate, without the need for brain retraction and an external incision.

Post surgically, the patient has a speedy recovery after the correction of his hormonal imbalances from the loss of Pituitary function.

CASE STUDY 2. Relief of Eye Tear Duct Sac (Lacrimal Sac) Obstruction

A 32-year-old patient was tearing excessively for one year. A right tear duct X-ray (dacrycystogram) was done and showed complete obstruction of the tear duct at the neck of the sac (lacrimal sac).

This obstruction resulted in the normal tear duct flow not passing down to the

nasal cavity, but instead over flowed at the right eye causing excessive tearing with occasional infections.

Surgery would involve opening directly into the lacrimal sac from the nasal cavity, bypassing the rest of the tear duct that was obstructed. There was no facial incision involved.

With the help of the eye surgeon, who cannulated the sac using the canaliculus light fiber guide, the sac was exposed inside the nose by using a diamond lacrimal burr and visualization using wide angled nasal endoscopes.

The wide opening from the sac into the nasal cavity was then inserted with a silicon stent. The patient recovered well with no more complaints of tearing.

CASE STUDY 3. Brain Fluid (Cerebro-spinal Fluid) Leak Identification and Closure

A 23-year-old patient was bleeding from his nostrils with head injury after a traffic accident He was also leaking brain fluid through his nostrils on the left side (CS F leak) and there was vision loss and headaches. A left frontal craniotomy (incision into the scalp and bone over the left frontal area) was done to close the CS F leak. A defect at the left roof of his nasal cavity was found and plugged with muscle and bone wax and sutured.

The headaches and CS F leak recurred and he experienced loss consciousness occasionally. This time surgery was done to seal the leak using the nasal endoscope and Fluroscein (a dye used to diagnose and localize the source of CS F leakage). It is used with the usual endoscopic light source which shows a photoluminescence effect.

The leak was sealed through the nose using an abdominal fat and local nasal septal rotation flap. A lumbar drain from the CS F was used to ease the pressure and the patient recovered. ■

