Epiphora and blepharitis cause unclear vision and discomfort to patients. An obstruction of the lacrimal drainage pathway at any point from the puncta to the nasolacrimal duct causes epiphora. The resulting inflammation and infection distal to the lacrimal sac cause blepharitis. Not only ophthalmologic factors such as a conjunctivitis and conjunctivochalasis but also the rhinological factors such as a postoperative maxillary cyst, tumor, trauma, iatrogenic cause the stenosis and obstruction in the tear route.

Re-opening or making a new tear route through the lacrimal drainage pathway can resolve the discomfort of these patients. There are some surgical methods used to make a drainage route to the nasal cavity: 1) lacrimal tube stenting with or without lacrimal endoscope; 2) laser fenestration operation; 3) external dacryocystorhinostomy (DCR); 4) endoscopic endonasal dacryocystorhinostomy (EDCR).

Recently small-diameter (0.9 mm) lacrimal endoscope has been reported to be one of the initial methods to penetrate the stenosis and obstruction of tear route by mainly ophthalmologist in Japan. Although the resolution of the 0.9 mm endoscope seems to be limited and still developing, this lacrimal endoscope can see the inside and mucosal condition of the canaliculus, lacrimal sac directly. The better success rate of stenting with using lacrimal endoscope for the nasolacrimal stenosis has been reported around 70–80%. Not severe inflamed cases are good indications for this procedure.

The laser operation through the canaliculi has been reported as a relatively easy and useful operation, requiring only local anesthesia and a short operation time. However, the long-term surgical outcome was less effective than that of external DCR because of the small ostium of the drainage route. Although a high success rate has been reported for external DCR (over 90%), external skin scarring and damage to the orbicularis muscle are disadvantages of this method.

EDCR has been an accepted technique for the obstruction of the lacrimal drainage system. The surgical outcome of EDCR, reported over the past 20 years, showed almost the same success rate as external DCR, especially for obstructions at the nasolacrimal duct. EDCR is mainly used to treat obstruction at this level. By improving the technique, now EDCR is an accepted technique for the obstruction of lacrimal drainage system without severe canaliculus stenosis, instead of the external DCR. Powered and radiowave instruments are useful instruments for the control of hemostasis and widely exposure of lacrimal sac and canaliculus. These instruments enable the wide opening for canaliculus from the inside of the nose especially in the patients medicated with anticoagulants. And also, EDCR with lacrimal 0.9 mm endoscope is useful to place the stenting securely in the tear route.

In this session, the surgical procedures for the tear route obstruction are presented and indication and limitation of the EDCR by rhinologist is discussed.