

## Endoscopic Ear Surgery in Nepal: The Shift of Paradigm?

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The endoscopic ear surgery was first described by Professor Ahmed El-Guindy in 1992.<sup>1</sup> It was later pioneered and disseminated by Dr. Muaaz Tarabichi during the late 90s in Dubai. The extensive contributions in the field of endoscopic ear surgery had led him recognized globally as the father of endoscopic ear surgery.<sup>2</sup>

Though there was use of endoscope in the field of ear surgery during the late 90s, but in Nepal still the microscopic approach to the middle/inner ear has been a mainstay of ear surgery. However, with the development of high-definition endoscopic systems and specifically designed instruments led the endoscope progressively used in the field of otology within last few years in Nepal. We had pioneered the use of endoscope in ear surgery starting from 2012 A.D. in Dhulikhel hospital, Nepal.<sup>3,4</sup> From thereon and thereafter, there had been many endoscopic ear surgeries being performed in our institution and other institutions of Nepal.<sup>4</sup>

The endoscope has partially taken over the role of microscope mainly in the repair of tympanic membrane, ossicular chain and partly in the clearance of cholesteatoma. But still the endoscope has been used in combination with microscope. Endoscopic ear surgery (EES), or transcanal endoscopic ear surgery (TEES), is defined as using a rigid endoscope for middle ear and inner ear surgery through the transcanal approach. EES has multiple advantages. It allows surgeons to see better and clearly around the hidden areas in the middle ear cavity, because the use of angled endoscopes, such as 30°, 45°, or 70°, provides a wide field of view.

TEES seems to have advantages over conventional microscopic ear surgery techniques because the surgeons can perform the surgery through transcanal route, thus avoiding unnecessary scar marks around the ear. Apart from that, the concept of functional ear surgery can be achieved via use of endoscope like functional endoscopic sinus surgery. Nowadays, the role of endoscope has been mentioned in the lateral skull base surgery which opens the door for the new innovation in minimal invasive lateral skull base surgery.<sup>5</sup>

Like other surgical techniques, there are some disadvantages of endoscopic ear surgery also; such as the single handed technique, lack of 3 dimensional vision, possibility of heat induced inner ear damage, and the slow learning curve. So, the long term follow up of different endoscopic ear surgery is required to know about the advantages of TEES over conventional microscopic ear surgery. However advancement in the development and innovation of technology, refinement of surgical approaches, long term follow up of results with different studies will incorporate the use of endoscope in otology and there may be shift of paradigm in ear surgery in near future in Nepal.

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