INTRODUCTION
The word LASER is an acronym for Light Amplification by Stimulated Emission of Radiation. The CO₂ laser is the mainstay of lasers in Otorhinolaryngology. The CO₂ laser was first developed by Patel et al. in 1964 and introduced for medical use in the early 1970. The CO₂ laser is a type of gas laser. It is the most widely used, well understood, and well studied of the medical lasers. It was the first laser to be used clinically in Otorhinolaryngology and first to be used by Strong and Jako (1972).

Its wavelength of 10.6 micron is at the peak of absorption of water. Because of its wavelength, the CO₂ laser has strong affinity for water. This accounts for the good absorption of CO₂ laser energy by the oral mucosa, which account of more than 90% water. The CO₂ laser has excellent cutting and ablating properties, especially in soft tissue. Its maximum depth in tissue is less than 1 mm. The CO₂ laser beam itself is not reflected or scattered in the mucosa. Absorption of the laser energy by water causes rapid generation of heat, which carbonizes the tissue.
Lasers should be regarded as assisting, and not replacing, conventional management with cold and power instruments, diathermy, cryosurgery, radiosurgery, radiotherapy, etc. A laser should only be used when it can be shown to offer distinct advantages to the surgeon, and when its use results in a comparable or better surgical outcome and reduced morbidity for the patient. All lasers cause collateral damage, however small. Sometimes, a combination of lasers and cold steel instruments can be advantageous – the best of both worlds.

A poor laser surgical result is rarely due to the laser, it is the surgeon who does the operating, not the laser!

Patient and staff safety should never be jeopardized; surgical lasers are class 4 lasers, the most hazardous class of all medical lasers.

In a nutshell, this study highlights the various applications of CO₂ Laser in ENT in routine day to day practice. In this dissertation we discuss the benefits, limitations, outcomes and various applications of CO₂ laser.