TITLE: Smart Portable App-Based ENT Endoscopy System with Integrated Image Management and Teleconsultation Platform

DESCRIPTION: Most ENT procedures involving endoscopes require large rigid endoscopes together with camera systems, light sources, video monitors, and power supplies. Although portable endoscopic systems are available, they are generally expensive, bulky, require battery backup and are not suited for outreach programs, rural health care, emergency medicine, or even for bedside use. The ideal system should be a lightweight, miniaturized, portable device that can be clipped to a standard ENT rigid endoscope and linked to the smartphone or tablet. So we need a portable camera head to which any ENT endoscope with same dimensions can be fitted with a cold light source and this should be attached to mobile and using an app the images and videos can be sent to both doctor and patients

The app should allow real-time visualization, imaging and video recording, secured storage, annotation and opinion sharing with the clinician at the time of the consultation, as well as the option to share with the patient. This may reduce the need for printed reports, improve care continuity and allow teleconsultation.

The system should be small enough to be carried in a pocket and allow for ENT endoscopy to be done without a continuous external power supply, whether in clinics, hospitals, community outreach programs, or remote locations.

REFERENCES

This is standard endoscope head routinely used in ENT procedures

EXPECTED OUTCOME: To develop a pocket-sized ENT endoscopy and teleconsultation system, with a smartphone interface that securely acquires, stores, and transmits high-quality image and video taken with off-the-shelf ENT endoscopes to enable portable examination anywhere.