

PILOT TRIAL OF A NOVEL INTERVENTIONAL SINGLE-USE MICROENDOSCOPE IN PEDIATRIC ENT PATIENTS.

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SurgiVue is a novel single-use flexible microendoscope 2mm in size. It offers two (2) interventional working channels that can be used for passing small instruments and for irrigation/suction. The microendoscope uses laser light and 1mm camera at the distal tip. Its use was compared to that of a standard flexible nasopharyngoscope.

This study was conducted at the Eastern Virginia Medical School and the Children's Hospital of the King's Daughters with IRB approval.

Fifteen children aged one month to 16 years were enrolled in this study. All but one of the children were tracheotomy dependent, with the exception of one patient having a distal tracheal hemangioma.

Results show that the microendoscope is easy to use and ideal for pediatric intervention, given the small size. The image is clear, and being single-use made it of particular interest during the COVID-19 pandemic. The presence of two (2) working channels allows the performance of interventional procedures such as tissue biopsy and retrieval of foreign bodies. Instrumentation is defined by the channel size (1.1 mm), including laser fibers.

The present scope is challenging to maneuver around the nasopharynx and for exposing the larynx. Still, this burden will be overcome by adding maneuverability of the tip (30 degrees), which is present in the next version to be available in 2023.

In conclusion, the SurgiVue microendoscope is a unique addition to the diagnostic and interventional devices available to pediatric ENT. It is expected to have a positive impact on reducing infection transmission, given the fact that it is single-use. The presence of two (2) working channels allows the user to perform interventional procedures both in the operating room and in the clinics.