Self-Cleaning Endoscope

Background: Endoscopy has revolutionized the way physicians are able to look inside the body. One of the main advantages of using an endoscope is that it is much less invasive than open surgery because it only requires a small incision for surgeries. However, during endoscopic surgery, the lens is frequently obscured with fog, blood, and other debris, requiring the surgeon to remove the scope and wipe the lens, or to operate with obscured vision. A self-cleaning ability for the endoscope could result in faster, seamless procedures, lowered hospital costs, and decreased patient risks.

Technology Description: The Rotoscope has been developed by Wash U physicians and engineers with a glass disc on the tip serving as a lens protector. When a trigger button is pressed, the glass disc spins to throw away debris. The drive shaft that rotates the lens protector also functions as a tube to deliver fluid that can wet the lens to aid in cleaning of the lens.

Stage of Development: Prototypes of the Rotoscope have been developed and are currently being used by WU surgeons with current plans to scale down the design.

Patents: US Non-Provisional Pending 62/361753

Inventors: Dr. Eric Leuthardt, Neurosurgery
Dr. Guy Genin, Engineer

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