Sanjay Datta and the Evolution of the Short-Handled Laryngoscope

Abstract Type: Other
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Introduction: Having previously worked in India, the United Kingdom, and Canada, Dr. Sanjay Datta was immediately aware of differences in the practice of obstetric anesthesia when he arrived at the Boston-Lying In Hospital in 1974. For one, general anesthesia was more commonly employed for cesarean deliveries, particularly when compared to McGill University under Dr. Phil Bromage. Secondly, parturients appeared to have a higher body mass index with more significant macromastia. Comparisons of the incidence of obesity between the Canadian Health Survey and the Center for Disease Control's Report in the mid 1970's corroborated this belief. These alterations resulted in the greater use, and subsequent greater difficulty, with the insertion and manipulation of the laryngoscope blade.

Development: Dr. Datta considered various ways by which the laryngoscope itself could be altered. One way was to increase the angle between the laryngoscope handle and the blade. (1) However, anesthesiologists were trained and comfortable with a handle/blade angle of 90 degrees, and further increasing this angle could potentially create more dental trauma. A second way was to retain the 90-degree angle, but to shorten the handle. Dr. Datta sought the assistance of John Briwa, a talented and clever anesthesia technician. Following much trial and error, Briwa adeptly cut off the majority of a penlite laryngoscope handle and slipped it into the barrel of a 20mL syringe long enough to hold a 4.05-volt battery. (2) A small wire was connected from the negative end of the battery to light source, and two small screws with epoxy glue was used to hold the device together.

Use and Legacy: The new modified short handled laryngoscope appeared to increase the ease and success of intubation in pregnant women for Dr. Datta and his colleagues. In hopes of sharing the invention, Dr. Datta entered an exclusive verbal agreement with the Foregger Company. Unfortunately, the company was focused on developing a new anesthesia machine, and the device and a patent for it, were never completed. In hopes of having the new device developed, Dr. Datta published news of the invention and a number of anesthesia equipment companies began manufacturing their own versions of the short handle laryngoscope.

Today, this handle can be found in many operating rooms and anesthesia carts around the world. It is likely to have facilitated in securing many difficult airways since its inception.

References:
(1) Canad Journ of Anesth1989;36:94-8
(2) Anesthesiology 1991;74:242-9