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"HOW I DO IT" — OTOLOGY AND NEUROTOLOGY.
A Specific Issue and Its Solution

TYMPANOSTOMY T-TUBE INSERTER.*

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The use of tympanic cavity ventilation tubes in refractory cases of middle ear effusion is considered at present the treatment of choice in most centers. Many different tympanostomy tubes are now available since their introduction by Armstrong in 1954.[1] Further modifications and improvements have since been suggested by many investigators.[2-5] These are aimed at facilitating smooth insertion and postponement of extrusion. However premature extrusion of the tubes remained their common disadvantage.[6] In 1969 Per-Lee[7] described a wide flanged tube with extrusion rate of 2.5% in 80 ears over a 4-year period. This tube is difficult to insert even in experienced hands. Wide popularity has been gained by the T-Tube described by Goode.[8] This is a versatile, silicone rubber tube, relatively easy to manipulate and ensuring low extrusion rate. It is made from medical grade silicone rubber, inert and resistant to blockage. One end opens into a 6 mm right angle half tube forming a T. The internal diameter is 1 mm. The half tube collapses readily upon insertion and removal, and its curved wall prevents its medial opening from obstruction against the promontory. The insertion is accomplished by grasping the tube at the junction of the T with alligator forceps[8] so that the half tube is closed into a straight tube. Even so the insertion in cases with atrophic ear drum or into atelectatic ears with retraction pockets may be difficult.

As the indications for use of "permanent" or long-term ventilating tubes have been extended[9] a need for an improved method of their insertion arose. The T-tubes inserter described below represents our attempt to fulfill this demand.

The instrument consists of an arched external metal tube of 1.5 mm i.d., held by a grasping handle (Fig. 1). Inside the tube an internal semirigid silicone pin can move freely forward and backward by gentle pressure of the thumb on the knob. The T-tube is loaded into the external tube of the instrument with its split end toward the opening (Fig. 2). The tip of the instrument is then gently placed in the myringotomy incision. A slight pressure with the thumb pushes the pin which in turn propels the tube into the tympanic cavity. The flanges spread out beneath the ear drum and the tube is released to remain in its chosen position.

The inserter is held in one hand, its arched barrel provides unobstructed

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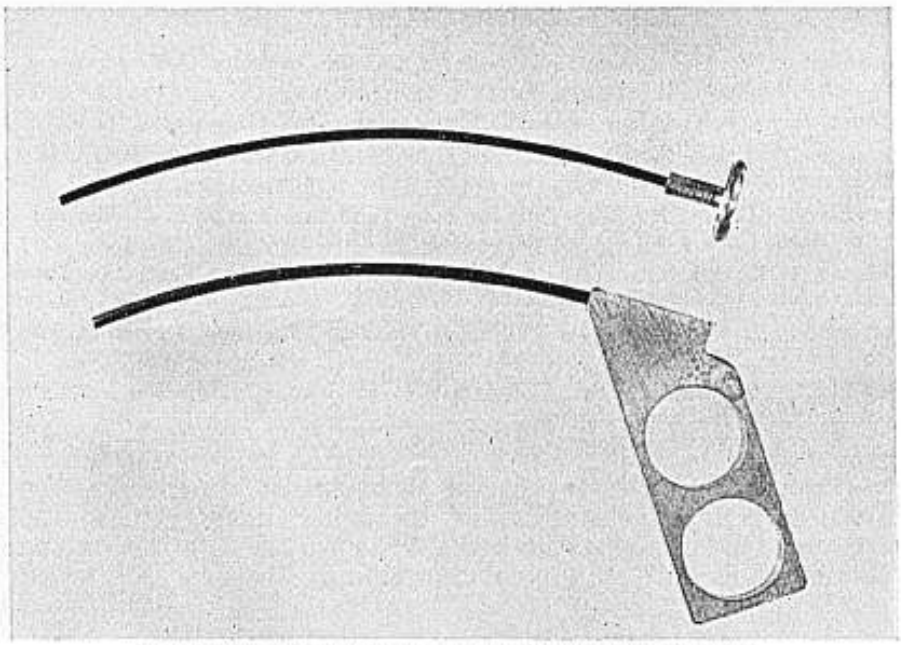

Fig. 1. The inserter below and the internal pin shown above.

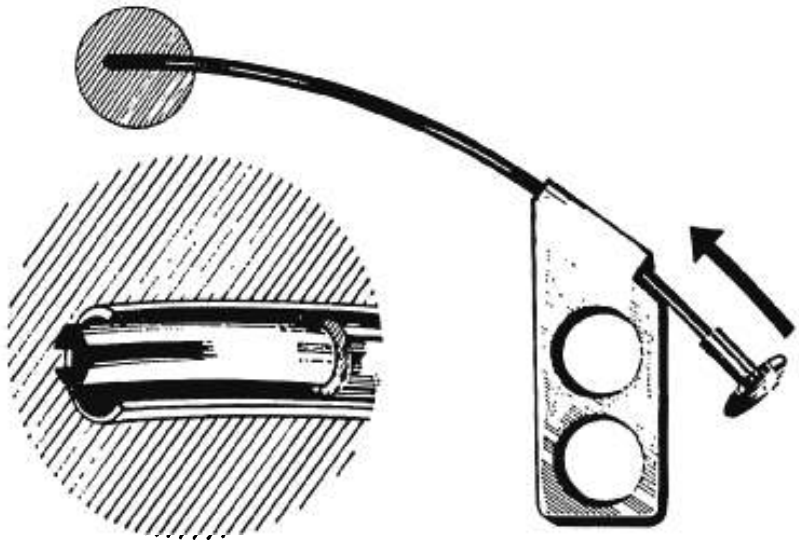

Fig. 2. The arrow shows direction of pressure by the thumb. The inset shows T-Tube loaded into the inserter.

view either when used with the operating microscope or an otoscope as an office procedure. The silicone pin practically eliminates friction between the moving parts and very gentle pressure of thumb is sufficient to insert the T-tube.

The construction of this inserter is simple, inexpensive and it is maintenance free. The procedure is quick and easy. To date it has been performed on over a hundred ears by our staff members, and found to be extremely easy. No complications have been encountered during the procedure. Our residents prefer to introduce the Goode tubes using this new inserter over the technique originally described.[8]

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