It is another object of the invention to provide an end cap for medical tubes which provides a plurality of apertures through which a guide member may be inserted.

It is still another important, additional object of the invention to provide a connector cap for endotracheal tubes for example, which supports a stylette or guide therein.

It is yet another important object of the invention to provide a connector cap of tubular elastomeric material of flexible thin-walled construction, having almost universal adaptability with various diameter medical tubes.

It is yet another important object of the invention to provide an easily manufactured, low cost medical tube end cap which may be utilized to support a guide or stylette and also provide a means of anchoring the proximate end of the guide or stylette. These and other objects and advantages of the present invention will become apparent from the following specification and accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the stylette connector cap;

FIG. **2** is a top view thereof;

FIG. **3** is a cross-sectional view taken along the line of **3**—**3** of FIG. **2**;

FIG. **4** is a bottom view of the stylette connector cap shown in FIG. **1**;

FIG. **5** is a bottom perspective view thereof; and

FIG. **6** is a schematic illustration showing how the end cap of the invention is used with an endotracheal tube and stylette.

DESCRIPTION OF THE PREFERRED EMBODIMENT(S)

Referring to the drawings wherein like numerals of reference refer to like elements throughout, it will be noted that the connector cap or stylette connector cap **2** is of integral construction of elastomeric or the like materials, which is somewhat flexible or pliable, preferably having a durometer rating of between 20–90 on the A scale. The end cap **2** has a first open end **4** of sufficient diameter to receive the end for example, of an endotracheal tube. Opposite open end **4** is outwardly flaring end **6** having what may be considered an outwardly flared head **6** by which the end cap may be easily manipulated with fingers of the hand of the user.

It will be noted that end cap **2** is of tubular construction with flexible sidewalls **8** terminating in rounded radius edge **10**. The interior wall **12** has a slight draft of about 1° which is required in the molding process, and which further allows for easily associating the end cap **2** with the termini of medical tubing or the like.

The second or closed end **6** is provided with two spaced through bores **14** and **16** of the same diameter and having about the diameter of stylettes or guides found in the endotracheal art for reasons that will be further described.

Along the diameter line of the head **6** are three smaller spaced apertures **18** to receive small diameter guides or stylettes, that those in the medical profession will recognize.

Interiorly, of the cap **2** and positioned about 45° from aperture **18** and aperture **16**, is depending integral leg or projection **20** along a minor portion of the circumference of the interior of end cap **2**.

In the end cap **2** shown as an example, the same is a 15 millimeter female stylette connector made of for example, PVC, of medical grade, and wherein apertures **14** and **16**, for example, may be about 6 millimeters in diameter, with apertures **18** being about 3 millimeters in diameter.

It is, of course, well-recognized that these through bores and apertures may be of various sizes in keeping with the desired end results to be achieved with the stylette connector cap of the invention.

Referring to FIG. **6**, it will be seen that the end cap **2** is associated with medical tube **40**, which in this instance is an endotracheal tube. FIG. **6**, also shows the mode of manipulation by the hands **42** of a medical technical or the like. In this instance, the stylette or guide **44** is positioned through through bore **16** and inserted a predetermined length within the tube **40**. The proximal end **46** of the stylette or guide **44** is bent in the shape of a handle portion **48** with the terminus **50** being fashioned and maneuvered to fit into opposed through bore **14** so that a complete assemblage is now ready for intubation of a patient.

Thus, in using the end cap, one would insert the stylette **44** into the endotracheal tube **40** to within about one-quarter inch of the distal tip. The end of the medical tube is then pushed into the interior of tubular end cap **2** and held in friction fit, releasable engagement by reason of sidewalls **12** and depending leg or projection **20**. The end **46** of stylette **44**, is then bent into an acute right angle to form the handle as **48**. Thereafter the free end **50** is secured into the through bore **14**.

The end cap **2** as shown herein may have an interior diameter of about 0.610 inch with the outside diameter of head **6** being about 0.810 inch and an overall length of about 0.75 inch. The interior leg or projection extends about 0.125 inch as measured from the underside or interior of cap **2**. The interior length of cap **2** is about 0.687 inch. Thus, a preferable ratio of leg or projection **20** length to the interior of cap **2** is about 1:4 to 1:6 with the preferred being about 1:5.5.

In the preferred embodiments of the invention, the upper surface of head **6** is shown as flat, but may be domed or concave as well, and while a plurality of apertures or through bores has been shown, those of ordinary skill in the art that these may be decreased or increased as the need arises. Additionally, while PVC material has been described as a material of construction, and has been described as being integrally-formed, those of ordinary skill in the art will recognize that the end cap of the invention may be made differently and indeed, materials of construction may be different; although as indicated, it is preferred to have a flexible thin-walled material preferably with a durometer rating of 50–70 on the A scale.

While the present invention has been described with regard to particular embodiments, it should be recognized by those of ordinary skill in the art that various modifications and adaptations will make themselves apparent, all of which will not depart from the invention as defined in the appended claims.

I claim:

1. A connector cap for providing stylette support and connection to an endotracheal tube comprising the combination of:

a tubular, elastomeric member of flexible thin wall construction having a first open end adapted to interiorally receive an elongate endotracheal tube in friction fit engagement therewith and a second end of substantially closed wall construction and having a plurality of spaced, through bores to receive one of a selected size stylette therethrough in supportive relationship therewith, said second end having an interior, depending integral projection about a minor portion of a circumference of the interior of said second end, and being spaced away from said plurality of spaced,