

the patients comfort. It is noted that all attachment strips are replaceable allowing the device to be reused or repositioned if necessary.

Referring also now to FIGS. 5 and 6, the support tab 24 is shown with accessory ports 27 and 29. The accessory ports are spaced apart allowing for the positioning of the attachment tape in the channel formed between the front lip 32 and backing strip 19. The arcuate underside 25 of support tab 24 (also see FIG. 7) is shaped to approximately conform to the shape of the ETT to more securely hold the ETT in place. In addition, the arcuate shape positions the tubes placed through the accessory ports to parallel the ETT wherein the frictional engagement between the tubes eliminates the need for separate securement of the tubes placed through the accessory ports.

Referring also now to FIG. 7, a front view of the ETT holder 10 is shown. The support fixture 18 is adhered via the backing strip 19 to the front surface 20 of the foam strip 12 along the center of the bottom edge 14. The upper edge 16 is arcuate shaped with relatively wider ends 13. The tape strip 30 is adhesively positioned on the arcuately shaped upper surface channel 60 of support tab 24, shown in phantom line. Also shown in phantom line is the plurality of ridges 27 which frictionally engage the ETT 28 to prevent slippage. The left side portion 34 and the right side portion 36 of the tape strip 30 each includes a protective peel-away covering strip 50, 52 placed along the downward facing left and right sides 34, 36 of tape strip 30.

A grasping or pull tab 51, 53 is located on each covering strip 50, 52 along the central portion of the tape strip 30 where the strip 30 adheres to support tab 24. This arrangement allows the user to grasp the ETT holder 10 with one hand and alternate between peeling away the protective coverings 50, 52 for each left and right side 34, 36 of the tape strip 30 with the other hand. Moreover, a central portion 31 of the tape 30 can be first exposed by peeling back and forming grasping or pull tabs 51, 53, with the exposed portion thereafter adhered to the channel 60 of the arcuate-shaped support tab 24. The pull tabs 51, 53 would then flex back over the lower surface 25 of support tab 24 for convenient future access by the user.

Referring to FIG. 8, a top view of the ETT holder 10 is shown. As above, support fixture 18 is attached via backing strip 19 to the center portion of front surface 20 of foam strip 12. Support tab 24 extends outward substantially perpendicular to the front 26 of the backing strip 19. Lip 32 forms a channel 60 (see FIG. 9) for receiveably containing the attached adhesive tape strip 30 which is placed along the upper surface 60 of support tab 24. A medical-grade adhesive such as MASTISOL or BENZOIN is applied to the skin where the foam strip 12 attaches to the face and covered with protective covering strips 54 and 56.

The strips 54, 56 include respective pull tabs 55, 57 for grasping and peeling away the strips and exposing the underlying adhesive. As similar to the protective strips 50, 52 for tape 30 described above, strips 54, 56 peel outward from the center portion of the strip 12. Again, this facilitates grasping the device 10 with one hand and alternating removal of the first strip 54 and second strip 56 before positioning and adhesively attaching the ETT holder 10 to the patient's face.

Referring now to FIG. 9, a side view of the ETT holder 10 is shown. As above, support fixture 18 is attached to the front surface 20 of foam strip 12, with the bottom surface of fixture 18 aligned along the bottom edge 14 of foam strip 12. Protective strip 56 is shown covering the adhesively backed

surface 22 on the rear of foam strip 12. Lip 32 extends up from arcuate surface 60 of support tab 24 forming a channel for receiveably containing the adhesive tape strip 30. In this view, the right tape strip portion 36 is shown extending down from support tab 24. The covering strip 52 is slightly oversized so as to completely cover the downward folding adhesive side of the tape strip 30.

Referring now to the Figures collectively, in operation the ETT holder 10 can be attached to the patient either before or after the ETT 28 is inserted into the patient's mouth and down into the trachea. The preferred manner would be to first insert the ETT 28 into a patient as needed. An attending person, e.g. a doctor, respiratory therapist, or nurse would then remove a first and second covering strip 54, 56 from the back of the foam strip 12. This can be done with a single free hand while the ETT 28 and ETT holder 10 are held tandemly in place by the other hand. As each covering strip 54, 56 is removed, the foam strip 12 can be adhered to the patient's face, positioned along the patient's upper or lower lip and attached at each end to the patient's cheeks. The ETT 28 is then oriented to rest against the arcuate cavity surface 25 on the underside of support tab 24. Still, with only one free hand, the adhesive underside of the tape strip 30 is exposed on both the left and right side portions 34, 36 by alternating the peeling away the protective covering strips 50, 52 via the tabs 51, 53. First one side is exposed and wrapped around the ETT 28. Thereafter, the other side is exposed and wrapped around the ETT 28, as well as the tape that is already in place around the ETT 28.

Accordingly, the ETT 28 is securely held in a predisposed position inside the patient, with minimal discomfort due to the foam strip 12 which adheres to a relatively wide area of the patient's face. The foam strip in conjunction with the support fixture 18 with its support tab 24 together allow for stable attachment of the ETT 28 to the foam strip 12. As such, little localized pinching and binding occurs because the stresses encountered by any relative movement of the ETT 28 are distributed evenly over a wide area of the patient's face. Alternatively, the ETT holder 10 could be attached to the patient before inserting the ETT 28 into the patient's mouth and trachea. The ETT 28 would thereafter be secured to the ETT holder 10 as already described.

The ETT holder 10 of the present invention can be conveniently used by a single operator in order to securely anchor an ETT which is either currently in place, or has yet to be inserted in a patient. While securely positioning the ETT for optimum ventilation of the patient, the device also allows for a certain degree of relative movement of the ETT to facilitate patient comfort, but without comprising patient safety. While the embodied device has been described for use with an ETT inserted into a patient's mouth and down into the patient's trachea, the embodied device can also readily be used to hold other such tubes in place, either in a patient's mouth, or elsewhere. Where an attachment surface exists for the foam strip, a tube can be positioned and held by the support fixture and lipped support tab via the tape strip wrapping means.

It is to be understood that while a certain form of the invention is illustrated, it is not to be limited to the specific form or arrangement of parts herein described and shown. It will be apparent to those skilled in the art that various changes may be made without departing from the scope of the invention and the invention is not to be considered limited to what is shown in the drawings and descriptions.

What is claimed is:

1. An endotracheal tube (ETT) holding apparatus for securely holding an ETT in position inside a patient, said apparatus comprising: