CLAIMS:

1. Apparatus for use in establishing an artificial airway in a patient, the apparatus comprising a tube for introduction into the patient's trachea for passage of gases to and from the patient's lungs, an inflatable seal disposed on the tube to provide, on inflating a seal between the tube and the trachea of the patient when the device is in use, the seal thereby defining a lung-side portion of the apparatus and a mouth-side portion of the apparatus the apparatus further comprising means to facilitate removal of fluid from the said mouth-side portion of the apparatus.

2. Apparatus according to claim 1, the fluid removal means comprising a plurality of ports in a wall of the tube on the mouth-side portion, each port opening into a conduit, the conduit being in fluid communication with an aperture located to be outside of the patient when the apparatus is in use, the arrangement being such that suction applied to the aperture causes fluid to pass into each port, along the conduit and out of the aperture.

3. Apparatus according to claim 2, wherein the ports are circumferentially spaced around the tube.

4. Apparatus according to claim 3, wherein the ports are longitudinally spaced on the tube.

5. Apparatus according to any of claims 2 to 4, wherein the or each conduit is formed integrally in the wall of the tube.

6. Apparatus according to claim 3 or claim 4, there being a single aperture in fluid communication with every port via a single conduit.

7. Apparatus according to claim 3 or claim 4, there being two

apertures, a first aperture communicating with a first group of ports via a first conduit, and a second aperture communicating with a second group of ports via a second conduit.

8. Apparatus according to any of claims 2 to 7, the or each conduit including on its inner surface a material adapted to reduce friction, reduce adhesion of material, and reduce or inhibit microbiological growth.

9. Apparatus according to claim 8, wherein said materials are selected from parylene and hydrogel-derived materials.

10. Apparatus according to any of claims 2 to 9, further comprising valve means disposed to limit fluid flow direction in the or each conduit.

11. Apparatus according to any of claims 2 to 10, each port having means to substantially prevent blockage by ingress of tissue.

12. Apparatus according to claim 11, the blockage prevention means comprising one or more protrusion from said tube wall adjacent each port.

13. Apparatus according to any preceding claim, the tube defining a first zone and a second zone, at least a portion of the first zone having a first outer diameter, the second zone having a second outer diameter, the first outer diameter being smaller than the second outer diameter, the first zone being adjacent to the second zone and the first and second zones being configured for insertion into the patient's trachea, the inflatable seal comprising a cuff attached to the tube such as to extend over at least a portion of the first zone.

14. Apparatus according to claim 13, wherein the cuff is characterised by an unstretched diameter smaller than the said first outer diameter.

15. Apparatus according to claim 13 or claim 14, the cuff and/or the tube comprising silicone.

16. Apparatus according to any preceding claim, in the form of an endotracheal tube.

17. Apparatus according to any of claim 1 to 15, in the form of a tracheostomy tube.

18. A method of providing an artificial airway in a patient, the method comprising the step of applying apparatus according to any preceding claim to the patient.

19. A method according to claim 18, further including the step of applying such to an aperture of the apparatus for removal of fluid from the mouth-side of the apparatus via the ports and conduit.

20. A method according to claim 19, when performed with the apparatus of claim 7, further including the step of passing a fluid into the apparatus via an aperture/conduit/port and removing the fluid and entrained matter via the other.

CLAIMS:

1. Apparatus for use in establishing an artificial airway in a patient, the apparatus comprising:

a tube for introduction into the patient's trachea for passage of gases to and from the patient's lungs;

an inflatable seal disposed on the tube to provide, when inflated, a seal between the tube and the trachea of the patient when the device is in use, the seal thereby defining a lung-side portion of the apparatus and a mouth-side portion of the apparatus; and

a plurality of ports integrally formed in a wall of the tube on the mouth-side portion to facilitate removal of fluid from the mouth-side portion of the apparatus, the ports being circumferentially spaced around the tube, each port opening into a conduit,

wherein each conduit is formed integrally in the wall of the tube, each conduit being in fluid communication with a single aperture located outside of the patient when the apparatus is in use such that suction applied to the single aperture causes fluid to pass into each port, along each conduit and out of the aperture.

2. Apparatus according to claim 1, wherein the ports are longitudinally spaced on the tube.

3. Apparatus according claim 2, each conduit including on its inner surface a material adapted to reduce friction, reduce adhesion of material passing through the conduit, and reduce or inhibit microbiological growth.

4. Apparatus according to claim 3, wherein said material is selected from the set consisting of parylene and hydrogel-derived materials.

5. Apparatus according to claim 2, further comprising a valve disposed to limit fluid flow direction in each conduit.

6. Apparatus according to claim 2, wherein each port further comprises at least one protrusion or upstand to prevent blockage by ingress of tissue.

7. Apparatus according to claim 6, wherein the at least one protrusion or upstand extends from the wall of the tube adjacent to each port.

8. Apparatus according to claim 1, the tube defining a first zone and a second zone, at least a portion of the first zone having a first outer diameter, the second zone having a second outer diameter, the first outer diameter being smaller than the second outer diameter, the first zone being adjacent to the second zone and the first and second zones being configured for insertion into the patient's trachea, the inflatable seal comprising a cuff attached to the tube such as to extend over at least a portion of the first zone.

9. Apparatus according to claim 8, wherein the cuff is characterized by an unstretched diameter smaller than the first outer diameter.

10. Apparatus according to claim 8, the cuff and/or the tube comprising silicone.

11. Apparatus according to claim 1, wherein the tube comprises an endotracheal tube.

12. Apparatus according to claim 1, wherein the tube comprises a tracheostomy tube.