

Tracheostomy tubes

Tracheostomy tubes

- Most modern tracheostomy tubes are made of plastic (Figure 52.46). Tubes of various sizes with varying curves, angles, cuffs, inner tubes and speaking valves are available. After a newly fashioned tracheostomy is created, a cuffed tube is used initially to protect the airway from secretions or bleeding. - This may be changed after 3–4 days to a non-cuffed tube. The pressure within the tube cuff should be carefully monitored and should be low enough so as not to occlude circulation in the mucosal capillaries, which promotes scar tissue formation and subglottic stenosis. When in position, the tube should be retained by double tapes threaded through the flanges and passed around the patient's neck. It is important that the patient's head is flexed when the tapes are tied, otherwise they may become slack when the patient is moved from the position of extension, thereby resulting in a possible displacement of the tube if the patient coughs. Alternatively , the flanges of the - plastic tube may be stitched directly to the underlying neck skin. A removable inner tube, which is easily cleaned, should always be used to prevent lumen occlusion by thickened, dried secretions from the trachea. All forms of tracheostomy and cricothyroidotomy bypass the upper airway and have the following advantages: /uni25CF the anatomical dead space is reduced by approximately 50%; /uni25CF the work of breathing is reduced; /uni25CF alveolar ventilation is increased; /uni25CF the level of sedation needed for patient comfort is decreased and, unlike endotracheal intubation, the patient may be able to talk and eat with a tube in place. However, there are several disadvantages: /uni25CF loss of heat and moisture exchange in the upper respiratory tract; /uni25CF desiccation of tracheal epithelium, loss of ciliated cells and metaplasia; /uni25CF the presence of a foreign body in the trachea stimulates production of mucus; where no cilia are present, the mucociliary stream is therefore impeded; /uni25CF the increased mucus is more viscid and thick crusts may form and block the tube; /uni25CF although many patients with a tracheostomy can feed satisfactorily , there is some splinting of the larynx, which may prevent normal swallowing and lead to aspiration; this aspiration may be silent. Postoperative treatment is designed to counteract these effects and frequent suction and humidification are most important. A trolley must be placed by the bed containing a tracheal dilator, duplicate tubes and introducers, retractors and dressings. Oxygen is at hand and, in the initial period, a nurse must be in constant attendance. Humidification will render the secretions less viscid and a sucker with a catheter attached should be on hand to keep the tracheobronchial tree free from secretions. Tracheostomy: postoperative management /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF

Figure 52.46 Modern plastic tracheostomy tube with the introducer, low-pressure cuff and inner cannula. Suction – efficient, sterile and as often as required Humidification (with or without oxygen) A warm, well-ventilated room Position of the tube and patient Spare tube, introducer,

tapes, tracheal dilator Change of tube, inner tube, possible speaking valve Physiotherapy Initiation of local decannulation protocols where indicated

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