

Simple Nasotracheal Tube Fixation to Prevent Inadvertent Extubation

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In pediatric surgeries, the ability of securing the nasotracheal tube without interfering with surgical access or encountering tube dislodgement is challenging to practitioners. Various methods of endotracheal tube (ETT) fixation have been described, including stitching the ETT, placing a transparent dressing over the face to secure the ETT, and intranasal threading of an infant feeding tube to tie over the ETT.^{1,2} However, recent literature describes the prevalence of accidental extubation in pediatric surgery to be 2.5%.³ We describe a simple technique using a pillowcase to safely secure the nasotracheal tube in its proper fixed position which may also protect the patient from facial burns and skin reactions to adhesive tape.

Following successful placement of the nasotracheal tube, position the opening of the pillowcase beneath the patient's head covering the forehead and eyes until the bridge of the nose (**Figure 1A**). With the pillowcase extended, begin folding 3–4 inch square towards the patient's head and position it snug to the contour of the head extending distally to the bridge of the nose (**Figure 1B**). The pillowcase is secured with cloth tape in the occipital and temporal regions and across the nasotracheal tube, thus securing the apparatus while limiting patient exposure to adhesive tape (**Figure 1C**).

In more than 300 patients, we have not encountered tube dislodgement or interference with the surgical field, especially during pediatric cardiac procedures. We implore practitioners to utilize this technique in specialized situations requiring nasotracheal intubation; in this case, oral fractures, ENT surgery, burn patients, cardiac patients or even adult critical care patients.⁴

Figure 1A. [Top Left] Post nasotracheal intubation

Figure 1B. [Top Right] Wrapping pillow case along patient's head contour

Figure 1C. [Bottom] Final secured apparatus



References

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Disclosures

Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: Informed consent was obtained from all individual participants/legal guardians included in the study.

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