EJV-SCV junction in occasional patients can lead to acute angulation and kinking of a PAC with difficulty and errors in monitoring.

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Spontaneous Rupture of the Tympanic Membrane Occurring in the Absence of Middle Ear Disease

To the Editor—The recent clinical report by Perreault et al.1 described tympanic membrane rupture after anesthesia with nitrous oxide 66–70% in oxygen. In their case, at least two factors predisposed the patient to this complication: 1) a history of middle ear disease with a flaccid, scarred tympanic membrane,2 and 2) eustachian tube obstruction. Other reported cases3,4 of spontaneous rupture of the tympanic membrane also occurred in patients with associated middle ear disease. Recently, a 41-year-old woman without any history of middle ear problems sustained a rupture of her left tympanic membrane during or immediately after receiving nitrous oxide 70% for 71 min as part of a “balanced” anesthetic technique with alfentanil 0.8 μg·kg⁻¹·min⁻¹ (loading dose equaled 80 μg/kg) and metocurine 16 mg, following a standard rapid-sequence induction with thiopental 2 mg/kg and succinylcholine 1.5 mg/kg, all given intravenously. The patient was positioned in a
modified jacknife position for repair of a rectovaginal fistula, and her head was turned to the right with the left ear positioned on a towel. On arrival in the recovery room, a small amount of blood was noted in her left external canal. Examination by an otolaryngologist revealed a linear laceration of her tympanic membrane. Subsequent audiologic and tympanometric evaluations revealed normal hearing acuity without evidence of tympanic membrane or eustachian tube dysfunction.

It would seem likely that this patient may have had transient obstruction of her left eustachian tube develop as a result of her head position during surgery. Other possible contributing factors were the endotracheal tube position and the effect of the towel blocking the external canal during the case. It is important to be aware of the possibility of spontaneous rupture of the tympanic membrane when nitrous oxide is used even in the absence of any predisposing middle ear disease.

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