However, is this true? We have believed that PCA was just as management-intensive as epidural analgesia and that anesthesiologists were the ideal providers of PCA because of their knowledge of pain physiology and their command of the analgesic armamentarium, including the utilization of parenteral opioids and the treatment of their side effects and complications.[3] Our impression of PCA management intensity was confirmed by a pilot study: We noted that PCA has just as many side effects and requires just as many ward nurse and acute pain service interventions as does epidural analgesia.‡ In addition, the common assumption that PCA possesses less risk than epidural analgesia is unwarranted: There is no evidence that respiratory depression, the most dangerous side effect of opioid administration, occurs less often with PCA relative to epidural administration.[4]

No one questions the need for anesthesiologists to manage epidural analgesia, but if PCA is equally problematic and equally management-intensive, anesthesiologists should likewise be reimbursed for this service. And in the case of postoperative epidural analgesia, how much of the overall benefit is derived exclusively from the epidural infusion *per se,* and how much is the result of other undefined aspects of twice-a-day acute pain service rounds? We do not believe that we are unnecessarily fixated on dollars: The decision of the HCFA not to reimburse anesthesiologists for postoperative PCA pain management has impeded optimal postoperative pain management—anesthesiologists are the optimal providers of PCA, and yet it is realistic to assume that, if they are not reimbursed for this service, they are unlikely to assume its burden. Our department has decided to continue to manage all PCA, including postoperative, because we are convinced that this is what is best for our patients and because our group practice situation allows us to do so with minimal individual financial repercussion. For a variety of reasons, however, many other anesthesiology departments have not been so inclined. For optimal postoperative PCA management, HCFA Medicare reimbursement policies should support the recently published U.S. Department of Health and Human Services acute pain management guidelines, which state that, "in all cases, responsibility for [acute pain management] should be assigned to those most knowledgeable, experienced, interested, and available to deal with the patients' needs in a timely fashion."§

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Pharyngeal Packs Can Cause Massive Swelling of the Tongue after Neurosurgical Procedures

To the Editor:—Massive swelling of the tongue has been reported after neurosurgical procedures.[1–4] Mechanical obstruction of venous and lymphatic drainage of the tongue due to prolonged flexion of the neck and use of an oral airway and tracheal tube has been suggested as a possible cause of massive swelling of the tongue. Recently, we managed a patient who underwent tracheotomy and removal of

intracranial tumor while in the supine position and who had massive postoperative swelling of the tongue requiring partial glossectomy for treatment.

The patient was a 28-yr-old, 60-kg man whose presenting complaints were headache, ophthalmalgia, and anosmia. Subsequent examination, including computed tomography, magnetic resonance imaging, and angiography, revealed an upper nasal cavity tumor extending into the frontal cranial fossa. His medical history was unremarkable. He was scheduled for resection of intracranial tumor, and the bifrontal transbasal and the transmaxillary approaches with tracheotomy were planned. He was premedicated with 0.5 mg atropine and 20 mg famotidine intramuscularly. Anesthesia was induced with 300 mg thiopental and 8 mg vecuronium, and the trachea was atraumatically intubated with an 8.0-mm ID Mallinckrodt tube. Anesthesia was maintained with nitrous oxide in oxygen, isoflurane, and fentanyl. Tracheotomy was performed, and the tracheal tube was gently removed. No mechanical trauma of the tongue or pharynx was noted. The head was secured within a Mayfield three-point head-holder, and the body was placed in the supine position with a natural neck position. Pharyngeal packs with eight pieces of gauze were placed to prevent the entry of blood, secretion, and antiseptic solution into the stomach and trachea. The nasal and oral cavities were sterilized using povidone-iodine. Nothing was done *via* the intraoral route for surgery, and therefore anything like a mouth gag was not used. Surgery lasted for 11 h, and the intracranial tumor was totally resected. Anesthesia was uneventful. At the conclusion of surgery, pharyngeal packs, which were soaked with blood and secretions, were removed. The patient's tongue was noted to be slightly larger than normal but was not protruding from his mouth. The patient was transferred to the intensive care unit. Over the next 2 h, his tongue swelled markedly and came to protrude from his mouth. Methylprednisolone (250 mg) was given intravenously. He was sedated, and his lungs were mechanically ventilated. Over the next 7 days, the patient's tongue continued to swell, and large quantities of mucous secretion were discharged from the oral cavity. A portion of the tongue became necrotic (fig. 1). Over the next 12 days, although the swelling of the tongue receded slowly, mucous secretion continued to be discharged, and the necrotic portion of the tongue enlarged. On the 20th day after operation, partial glossectomy was performed. Although meningitis and pneumonia developed during the postoperative period, 8 months after the first operation, he was discharged with no neurologic deficits other than anosmia.

Because the neck was not flexed and no tracheal tube was present during operation in this case, the cause of massive swelling of tongue was considered to be mechanical obstruction of venous and lymphatic drainage by pharyngeal packs during prolonged surgery. Usually we placed pharyngeal packs with two or three pieces of gauze during transphenoidal and transmaxillary approach. However, because tracheotomy was performed, and the orotracheal tube was removed in the present case, additional pieces of gauze were placed in the pharynx. In addition, blood and secretion drainage into pharyngeal packs might promote obstruction of venous and lymphatic drainage of the tongue. The possibility of this serious complication should be kept in mind when pharyngeal packs are used.

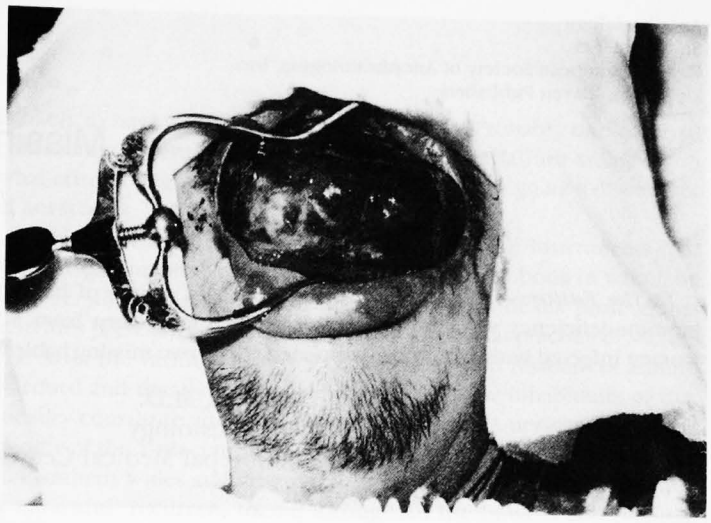

Fig. 1. Markedly swollen tongue protruding from mouth on the 7th postoperative day.

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