

ence existed between the steroid and placebo groups, with this difference favouring placebo.<sup>2</sup> Given that the NIH trial was designed and powered to find a benefit in favour of steroids (if one existed), the converse finding of harm was surprising, and must be emphasized as the major observation of the trial.

The possibility that the mortality within the placebo arm was spuriously reduced due to the effect of chance alone exists, should be considered, and then summarily dismissed as irrelevant to the major issue. In a therapeutic trial, the protective caveat to which Dr. Daniel refers should be properly applied to the possibility of falsely attributing benefit to the therapy group due to random variation, rather than vice versa.

The analysis of the original authors and the peer review process of the *New England Journal of Medicine* remain correct: there is no support for routine administration of steroids as treatment in the fibroproliferative phase of ARDS. Clinician discretion remains appropriate as always.

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## Lumbar tattoos and lumbar epidural analgesia: unresolved controversies

To the Editor:

In recent years body tattooing in unconventional sites has gained increasing popularity amongst young women.<sup>1</sup> Although the potential hazards of neuraxial procedures in patients with lumbar tattoos remain controversial<sup>1–3</sup> it may be prudent to avoid a hollow needle insertion due to possible tissue entrapment in its bore as the needle passes to the deeper structures through a tattoo. In their letter to the editor regarding lumbar tattoos and lumbar puncture Kluger *et al.*<sup>3</sup> state: “To date, however no, complication related to tattoo puncture during epidural anesthesia has been reported”. However, in 2004, Kuczkowski reported a

34-yr-old, healthy female at term who was in labour and requested labour analgesia.<sup>1</sup> Preanesthetic evaluation of her back revealed colourful tattoos covering her entire lumbar area. An epidural block was performed in a standard manner (one attempt at the L2–3 interspace) with an 18G Tuohy needle. Several hours after an uneventful delivery, the patient reported tenderness and burning in the lumbar area where the epidural catheter had been sited. There was tenderness localized at the L 2–3 interspace; however, due to the presence of a tattoo in this area no skin redness (irritation) could be determined. The neurological examination was normal and her symptoms resolved over the next 24 hr. The author speculated that a pigment-containing tissue core from a tattoo seemed a possible cause of deeper lumbar tissues irritation.

In another paper published in 2004 Vasold *et al.*<sup>4</sup> provided *in vitro* evidence that the tattoo colorants - industrial pigments, which have never been intended (and produced) by the chemical industry to be used in humans for ornamental purposes (but rather to stain consumer goods) may contain hazardous compounds (toxic and/or carcinogenic substances such as 2-methyl-5-nitroaniline, 2-5-dichloraniline and 4-nitro-toluene). Moreover, in 2005 Jack *et al.*<sup>5</sup> reported a case of axillary lymphadenopathy 30 years after a decorative tattoo, clinically mimicking metastatic melanoma. These new findings, which may not be known to many clinicians and their patients, may have implications for anesthesiologists performing labour epidural analgesia in patients with lumbar tattoos.

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an axillary lymph node simulating metastatic malignant melanoma. *Int Semin Surg Oncol* 2005; 1: 28.

### Reply:

We thank Dr. Kuczkowski for his interest in our letter. However, we disagree with several of his arguments regarding the clinical implications of lumbar tattoos and neuraxial anesthesia. The link between acute symptoms occurring after epidural catheter siting through a lumbar tattoo, and potential spinal irritation due to pigments,<sup>1</sup> are somewhat speculative. The described symptoms may occur in association with any epidural procedure. Several carcinogenic aromatic amines have indeed been detected in tattoo inks.<sup>A</sup> However, Dr. Kuczkowski provided somewhat incomplete data. Vasold et al.<sup>2</sup> found hazardous compounds in two pigments which were initially absent, but resulted from a photo-decomposition reaction after laser therapy.<sup>2</sup> All related evidence is from *in vitro* data. Little is known about the concentration of pigments and byproducts which exist *in vivo* in the tattooed skin, and it is unclear whether or not such compounds embedded in the skin are biologically active.<sup>3</sup>

Finally, tattoo pigments may migrate into regional draining lymph nodes and mimic a metastatic melanoma because of local black discoloration. This benign physiological process had unanticipated consequences in our management of a tattooed patient with melanoma. However, we do not consider this to be a true "complication" of tattooing, and this observation was unrelated to the management of this particular case.

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### *An airway exchange catheter contributing to airway obstruction*

To the Editor:

We report the case of a 51-yr-old female, weight 126 kg, who was scheduled for a diagnostic panendoscopy to investigate a lesion occupying approximately 60% of her subglottic diameter that had caused progressive shortness of breath, hoarseness, and inspiratory stridor. Her past medical history included hypertension, obesity, and obstructive sleep apnea. Examination revealed a large neck circumference with normal range of motion and a Mallampati class II airway.

In the operating room, her trachea was intubated with a size 5 MLT® tube (Mallinckrodt Inc., St. Louis, MO, USA) after induction of general anesthesia using propofol, fentanyl and rocuronium. Anesthesia was maintained with propofol and remifentanyl infusions and intermittent doses of rocuronium. Surgical examination revealed the subglottic mass to extend from 1 cm below the level of the true vocal cords to the level of the first tracheal ring. At the end of surgery, residual neuromuscular blockade was reversed, and tracheal extubation was performed over a Cook airway exchange catheter (AEC, 11 F, 83 cm, Cook Critical Care, Bloomington, IN, USA). Following extubation, her respiratory rate increased to 29 breaths·min<sup>-1</sup> despite adequate motor strength. The patient was placed on oxygen 5 L·min<sup>-1</sup> via nasal cannula, resulting in an arterial oxygen saturation of 95%. On arrival in the postanesthesia care unit, the patient complained of shortness of breath, and inspiratory stridor was noted. Racemic epinephrine aerosol was initiated, as well as the inhalation of a mixture of helium 70% / oxygen 30% (Heliox). The tachypnea did not improve following the treatment, and her heart rate and blood pressure increased progressively. Her oxygen saturation decreased to 87%, and a decision was made to reintubate the trachea. A size 5 MLT® tube was railroaded over the AEC without difficulty and its position was confirmed clinically and by capnography. However, attempts to remove the AEC through the MLT® tube were met with resistance, despite prior lubrication of the MLT® tube. Since the AEC was

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