we obtained Institutional Review Board approval requesting permission to "use an approved drug for a non-approved use" prior to initiating the study. The FD&C Act does not limit the way a physician uses an approved drug.<sup>2</sup> In our study we reported that the utilization of epidural buprenorphine reflected an approach to pain therapy that has been previously reported to be efficacious in postoperative patents.<sup>3,4</sup> After systemic administration, 0.3 mg of buprenorphine has been reported to result in a 6-8 h duration of analgesia.<sup>5,6</sup> However, after epidural administration 0.3 mg of buprenorphine was reported to give a mean duration of analgesia of 12-15 hours. We are unaware of any prospective randomized study that compares parenteral buprenorphine with epidural buprenorphine and we are uncertain how Dr. Fox concluded that the epidural administration of buprenorphine was redundant.

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# Succinylcholine and Duchenne's muscular dystrophy

To the Editor:

It is worth stressing that succinylcholine should be avoided in patients with Duchenne's muscular dystrophy (DMD) as mentioned by Larsen *et al.*<sup>1</sup> I believe that hyperkalaemia is responsible for some of the dysrhythmias seen in these patients following succinylcholine.<sup>2</sup> The following brief case history demonstrates this.

A 14-yr-old boy with DMD presented in respiratory failure due to viral pneumonia superimposed on his

TABLE	
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Pre-intubation	Post-intubation	Next day
0.4	0.4	0.4
7.05	7.51	7.47
154	51	46
41	40	34
3.4	4.6	3.6
	Pre-intubation 0.4 7.05 154 41 3.4	Pre-intubation Post-intubation   0.4 0.4   7.05 7.51   154 51   41 40   3.4 4.6

muscle disease. It was decided to ventilate his lungs. Thiopentone 100 mg, atropine 0.6 mg and succinylcholine 50 mg were given to facilitate intubation. Blood gases were taken prior to this, when he was breathing spontaneously and 20 min later during IPPV. There were no dysrhythmias, rise in body temperature or rigidity. The Table shows blood gas and electrolyte results at these times and the next day. The potassium concentration increased from  $3.4 \text{ to } 4.6 \text{ mmol} \cdot \text{L}^{-1}$  and it is possible that had the pH not changed from 7.05 to 7.51, due to the decrease in PCO<sub>2</sub>, it could have been much higher.

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## Oxygénation par trachéostomie

#### To the Editor:

La préoxygénation de patient porteur d'une trachéostomie en ventilation spontaneée peut comporter des problèmes d'adaptation inadéquate entre le circuit anesthésique (15 mm) et la canule trachéale métallique ainsi que des fuites autour de celle-ci.

Une méthode simple et pratique de contourner ces difficultés est l'utilisation d'un masque pédiatrique Rendell-Baker no. 2. En position inversée au niveau du cou (cf. illustration), un tel masque épouse convenablement le pourtour de la trachéostomie. Le contact hermétique qu'il procure permet un contrôle adéquat de la composition des gaz inspirés en respiration spontanée. Nous avons également constaté qu'il était possible de

#### CORRESPONDENCE



FIGURE

contrôler la ventilation du patient anesthésié en utilisant cette méthode.

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