rise or carbon dioxide on capnography. A #5 LMA (LMA North America, San Diego, CA, USA) was quickly placed without difficulty as a bridge to successful intubation on a subsequent attempt. The procedure and recovery from anesthesia were uneventful. The patient admitted postoperatively that during water jet cleansing of his nostrils, he noted fluid coming out of skin dehiscence on his forehead, but that it had 'scabbed over' recently. Although it was theoretically possible that plugging the 'blowhole' on the patient's forehead may have allowed mask ventilation, the LMA proved an ideal emergent airway adjunct, allowing positive pressure ventilation with the sealed cuff at the level of the glottis.

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Continuous low-dose diclofenac infusion for fever control in patients with acute neurological lesions

To the Editor:

The optimal treatment of fever in acute neurological patients is still a matter of debate. Several methods are reported, but may be unsuccessful or associated with hemodynamic instability.[1,2]

We examined the effect of a continuous infusion of low doses of diclofenac (DCF) on bladder temperature and cerebral and systemic hemodynamics. After approval from the Institutional Review Board 18 consecutive, febrile patients (bladder temperature ≥ 38.3°C)[3] with acute neurological lesions (Glasgow Coma Scale ≤ 7) were studied prospectively.

In the presence of fever lasting more than four hours, a continuous low-dose DCF infusion (0.04 $mg \cdot kg \cdot hr^{-1}$) was administered for at least 24 hr.[4] Initially, 500 mL of sodium chloride 0.9% were infused in four hours. Infusion rate of vasopressors was kept constant.

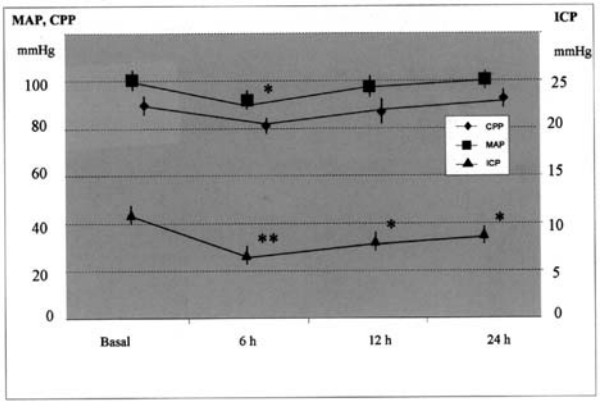

FIGURE Mean arterial pressure (MAP), cerebral perfusion pressure (CPP) and intracranial pressure (ICP) before, and at 6 hr, 12 hr, 24 hr after the beginning of the infusion. $*P < 0.05$; $**P < 0.01$. Statistically significant differences with baseline are reported. Means ± SEM are shown.

Results are presented as mean ± standard error. ANOVA for repeated measures and Newman-Keuls test for post-hoc comparisons between groups were used for statistical analysis.

At baseline, temperature was 38.6 ± 0.1°C. In all but two patients, DCF was able to reduce the bladder temperature below 38.3°C; the decrease in temperature was statistically significant at 6 hr, 12 hr and 24 hr ($P < 0.0001$); ($T_{6\ hr}$ 37.1 ± 0.3°C, $P < 0.001$; $T_{12\ hr}$ 36.8 ± 0.3°C, $P < 0.001$; $T_{24\ hr}$ 36.8 ± 0.3°C, $P < 0.001$). The effects of DCF on mean arterial pressure (MAP), intracranial pressure (ICP) and cerebral perfusion pressure (CPP) are shown (Figure). No impairment in liver and renal function, modification in blood cell count or gastrointestinal bleeding was observed.

DCF was effective in reducing fever in the majority of the cases, without affecting CPP. We observed a high hemodynamic tolerance of DCF, probably due to the low dosage and use of a continuous infusion. Nonetheless, we found a significant reduction of MAP at 6 hr, in association with a decrease of ICP. Although CPP was not reduced, this effect must be kept in mind during the infusion of DCF, and fluid administration may be necessary to maintain hemodynamic stability.

We observed that two patients did not respond to treatment; no infection was apparent in these cases, (positive cultures were found in 14 patients) suggesting that fever caused by a non-infective mechanism might not respond as well to DCF.

In conclusion, we observed that a low-dose DCF infusion was effective in treating fever, without modifications of CPP or systemic side-effects. This treatment may be suggested as an alternative to conventional antipyretic drugs.

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