

## ... while ibuprofen reduces mortality in hypothermic sepsis

Ibuprofen significantly reduces mortality rates in patients with hypothermic sepsis, report researchers from the US-based Ibuprofen in Sepsis Study Group.<sup>1</sup>

They analysed data from a subgroup of 44 hypothermic patients who participated in an earlier study in which they were randomised to receive IV ibuprofen 10 mg/kg (to a maximum of 800mg) every 6 hours for 8 doses (n = 24), or placebo.\*

Ibuprofen, compared with placebo, recipients had greater numbers of failure-free days for all major organ systems. A greater number of days alive and free of all organ failures, alive and out of the intensive care unit, and alive and off the ventilator were seen in ibuprofen, compared with placebo, recipients. In addition, mortality was significantly lower in ibuprofen, compared with placebo, recipients (54 vs 90%, respectively).

Baseline levels of tumour necrosis factor- $\alpha$  (TNF- $\alpha$ ) and interleukin-6 (IL-6) were significantly higher in hypothermic patients compared with patients with febrile sepsis from the original study; this pattern was also seen at 20 hours. A trend towards decreasing levels of TNF- $\alpha$  and IL-6 was seen in ibuprofen, compared with placebo, recipients.

### Clinical role?

The researchers say that the question of '*whether ibuprofen should be used routinely in hypothermic septic patients cannot be answered*'. They say that confirmation of the mortality benefit from a prospective study is needed, but as such a trial may not be undertaken and ibuprofen was well tolerated in the above-mentioned study, '*in light of the grave prognosis of hypothermic septic patients, ibuprofen should be seriously considered in this setting*'.

Dr Raymond Fletcher from the University of South Alabama College of Medicine, Mobile, Alabama, US, says that the data from the above-mentioned study suggest that '*ibuprofen treatment significantly benefited the patients who were more seriously ill*'.<sup>2</sup> He points out that the effect of ibuprofen on survival in patients with hypothermic sepsis appears '*dramatic*'.

Dr Fletcher says that the improvements in survival and pathophysiology suggest that there may be a role for ibuprofen in the treatment of patients with hypothermic sepsis.

\* See *Inpharma* 1081: 15, 5 Apr 1997; 800458476

1. Arons MM, et al. Effects of ibuprofen on the physiology and survival of hypothermic sepsis. *Critical Care Medicine* 27: 699-707, Apr 1999

2. Fletcher JR. The effects of ibuprofen on eicosanoid synthesis in sepsis. *Critical Care Medicine* 27: 669-670, Apr 1999

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