

AN EFFECTIVE AND SAFE STRATEGY TO TARGET NORMOTHERMIA IN NEUROCRITICAL PATIENTS.

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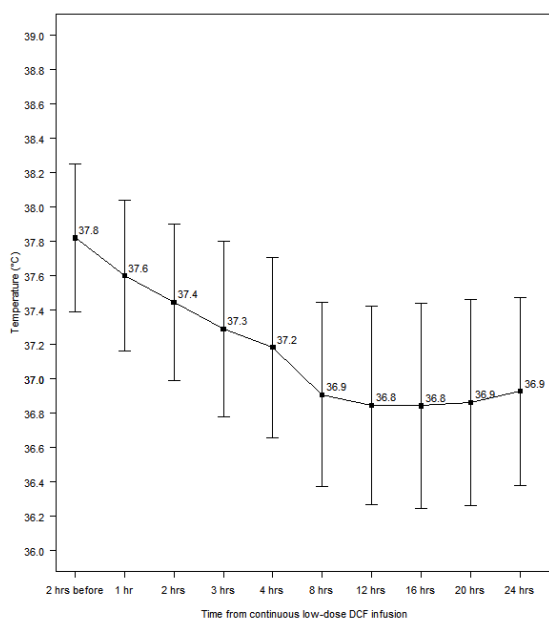
Introduction: Fever is common in patients admitted to Neurointensive Care Units (NeuroICUs) for acute cerebral injury and it can lead to secondary brain damage. NSAIDs could be an effective strategy to target normothermia but concerns still exist about their efficacy and safety.

Objective: To test the safety and efficacy of low-dose continuous Diclofenac (DCF) infusion in a cohort of brain-injured patients.

Methods: We retrospectively analyzed data prospectively collected from the brain-injured patients admitted from 2010 to 2014 to our NeuroICU (ICU length of stay ≥ 72 h) with continuous recording of internal temperature and cerebral and hemodynamic parameters. The patients were classified in DCF (DCF infusion, 75mg/24h) and CTRL (treated with alternative methods to maintain normothermia). We examined the data regarding the fever burden and the incidence of side effects (renal complications and intracranial bleeding) in the two groups.

Results: We included 239 DCF and 138 CTRL patients. DCF infusion progressively reduced the temperature from a mean 37,8°C to 36,9°C at 24h (Figure). During the infusion, only 3% of patients experienced fever (temp $>38,3^\circ$) for $\leq 3\%$ of their ICU stay. Mean arterial, intracranial and cerebral perfusion pressure did not change during the infusion, even if an increased dosage of vasopressor was required in a subgroup. The incidence of renal complications and of intracranial bleeding after DCF was not different between DCF and CTRL group (Table).

Conclusion: DCF continuous infusion is a safe and effective way to maintain normothermia in brain-injured patients.



	DCF (n=239)	CTRL (n=138)	P
BLEEDING EVOLUTION			0.28
As expected	71 (67%)	26 (60%)	
Not expected	33 (31%)	14 (33%)	
New bleeding	2 (2%)	3 (7%)	
CREATININE (mg/dl)			0.94
Day 0	0.7 ± 0.5	0.9 ± 1.1	
Day 3	0.7 ± 0.4	0.8 ± 1.0	
Day 7	0.7 ± 0.3	0.8 ± 1.0	
URINARY VOLUME (ml/day)			0.11
Day 0	2787 ± 1284	2954 ± 1510	
Day 3	3145 ± 1148	3025 ± 1281	
Day 7	3012 ± 1071	2992 ± 1310	