Impact of the previous intake of non-steroidal anti-inflammatory drugs in bacteraemic patients

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Background: Only few studies examined the impact of NSAIDs in bacterial infections, which seems to be associated with a prolonged course of infection and complications, especially in pneumonia. As bacteremia is a sign of hematogenous spread, we studied the impact of NSAIDs in bacterial infection.

Materials/methods: Monocentric prospective ongoing study which started in October 2016, among patients with bacteremia hospitalized in Infectious diseases. Patients with neurologic impairment and pressure sore infection were excluded due to usual delay for medical consultation.

Patients were divided into 2 groups depending on the use of NSAIDs. We collected Charlson and qSOFA scores, microorganisms, duration of antibiotics, complications, need of surgery, outcomes, length of stay (LOS) and disability.

Results: Overall 108 patients were screened and 77 were included, including 23 in the NSAIDs group and 54 in the non-NSAIDs group. Mean age (62 +/- 17 yo), qSOFA (0) and duration of symptoms until admission (13.2 vs 10.4d; p=0.61) were comparable, meanwhile Charlson score was significantly higher in the non-NSAIDs group (2.5 vs 4.5; p<0.001).

In the NSAIDs group, there was significantly more gram-positive bacteria (n=18) (S. aureus (n=14), Streptococcus (n=4)) than in the non-NSAIDs group (n=22); (p=0.003). However, Enterobacteriaceae (n=4) vs (n=21) were comparable (p=0.11).

Interestingly endocarditis were higher in the NSAIDs group (54% vs 22%; p=0.006), also with more complications (including local and septic emboli (87% vs 43%, p<0.001). In addition, mean CRP was therefore higher in the NSAIDs group (227 vs 146 mg/L; p= 0.003). However, there was no difference for the need of surgery or drainage (p=0.80) or duration of treatment (30.3 vs 25.7d, p=0.3) but also LOS (25.1 vs 37d; p=0.42).

Favorable outcomes at D90 were comparable (100% vs 85%) with a trend to more disability at the end of follow-up consultation for the NSAIDs group (54% vs 24%; p=0.06).

Conclusions: Our preliminary results revealed that NSAIDs might be taken over-the-counter by less comorbid individuals, responsible of more septic complications. However, their use did not impact the outcome possibly because of efficient antimicrobial therapies. It seems careful to advise the monitoring of the use of NSAIDs in patients suspected of being infected.