

# Non-steroidal anti-inflammatory drugs and risk of heart failure in four European countries: nested case-control study

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## The blanket is too short: how to combine ageing, arterial hypertension and it's treatment with the use (or abuse) of anti-inflammatory drugs for pain relief.

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This report on which I want to comment (1) has the merit of having reminded us of the fact that non-steroidal anti-inflammatory drugs (NSAIDs) may have, in addition to the typical side effects of the class, other effects on the cardiovascular risk profile that can lead to an increase in the risk of hospital admission for heart failure whose precise mechanism has not been investigated. Thus all clinicians are strongly advised to evaluate, before starting any pharmacological therapy, the risk-benefit ratio, to use the lowest effective dose and not to continue the therapy longer than necessary.

Well known facts at least, again, to clinicians. Other merits? The already mentioned one in a previous electronic letter that I quote: “The most important and interesting aspect of this study is the relative risk of the different NSAIDs”(2). So what's missing? Well, the problem is that the authors are, I suppose, mainly epidemiologists; none of them have probably visited elderly patients on multi-drug treatment who are facing a problem of blood pressure control. In such cases to the question whether she/he is taking other medications the answer is often “yes, anti-inflammatory for pain”. Obviously, these are personal experiences without statistical significance, but when we look at the therapy, often, they are taking an ACE inhibitor (ACE-i). Is this a coincidence, or we must remember that some of the most frequent interactions in elderly patients are those between antihypertensive drugs and NSAIDs and, let's call them by their name, COX inhibitors may counteract part of ACE-i efficacy. This fact has been clearly demonstrated in hypertension, coronary artery disease and chronic heart failure, and for these reasons, most guidelines recommend avoiding their use in such patients (3). But let's look at Table 2 of the study. Is it again a coincidence an increased use of ACEi in the cases (42%) if compared to controls (24.6%) and the slightly higher number of hypertensive in cases (21.6%) compared to controls (18.4%)? And what about the achieved target in blood pressure control?

In conclusion, since I am not a statistical reviewer, I deliberately omit the issues that this “millionaire” study raises. On the contrary, I want to underline the difficulty of combining, in an ageing patient, high blood pressure and antihypertensive therapy with anti-inflammatory drugs without the risk of leaving the patient uncovered by shifting a blanket that is too short. In this regard this study will probably be useful in providing

guidance in the choice of the NSAIDs that interferes less with the cardiovascular risk profile. A very last indication for the drug companies, since we are still stuck to cyclooxygenase, with the substantial revenues that are still obtained from anti-inflammatory drugs, why not look at new molecular targets for pain relief?

## References

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