Review of: "Induction of CD73 prevents death after emergency open aortic surgery for a ruptured abdominal aortic aneurysm: a randomized, double-blind, placebo-controlled study"

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This double-blind multicentric RCT evaluated the impact of intravenous administration of IFN beta-1a on patients suffering from RAAA and undergoing open surgery. The authors should be first congratulated for their effort in conducting RCT in such an extremely challenging cohort of patients. Little is known about the use of other non-surgical adjuncts in lowering postoperative mortality after RAAA repair. Most discussion today among physicians treating such a devastating condition is whether an endovascular or open surgical approach should be used.

Some of the limitations have been nicely outlined by the authors:
The most important drawback is the absence of adequate power and premature study interruption
Preselection of open surgery cohort. Endovascular treatment “per se” is not always the best choice, even in infrarenal AAA. Careful patient selection for an adequate type of surgery is of the utmost importance for patient survival. Authors should have maybe included patients undergoing endovascular treatment, as well.
Another contributing factor is the experience of centre and surgeon performing these procedures. The authors nicely outlined the importance of centralisation in AAA/RAAA treatment, but I imagine that only the minority of included centres in this study fulfill the definition of high volume aortic centre. These important biases are something that future researchers in this field should seriously take into account when conducting such a trial. That is why it is very demanding and challenging to perform adequate RCT in this cohort of patients.
It seems your criteria for patient inclusion are quite stringent. This explains the relatively low 30-day mortality rate of 21%.
More precise reporting of preoperative CT AAA morphology and postoperative complications could be of interest to readers

One of the most interesting findings of this trial is that all patients that had elevated CD73 survived. This represents a very promising result for the potential development of future drugs that might increase the activity of the CD73 molecule. It shows us a very important pathway on which future translational research in the field of vascular medicine should be focused. It seems that this molecule might prevent inflammation that is often encountered with vascular diseases such as atherosclerotic occlusive/aneurysm disease, dissection, thrombosis, etc.
Another interesting fact is the interaction between different, seemingly similar, anti-inflammatory drugs: glucocorticoids and IFN beta-1a. According to the mechanism of action, both drugs should prevent complications caused by systemic

inflammation. They should theoretically speaking, have a synergistic effect. However, it seems that there is a lot we do not understand yet. That is why these kinds of studies are very important and should point us where we should dive more and search for the answers.