A multicomponent medication (HE-100) promotes inflammation resolution

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Resolution of inflammation is a normal active biochemical process that enables inflamed tissues to return to homeostasis and is accompanied by a switch in mediators that predominate in exudates. Recently it was shown that Specialized Pro-resolving Mediators (SPMs), derivatives of polyunsaturated fatty acids (PUFAs) metabolism, are essential in this process. In this study we investigated the effects of a multicomponent/multitarget product HE-100 in inflammation resolution using a self-limited zymosan-induced peritonitis model in mice following either a preventive or a therapeutic treatment protocol. Cell populations in inflammatory exudates were characterized by flow cytometry at several time points. Other measurements included the calculation of resolution indices, quantification of cytokines, and quantification of bioactive lipids using LC-MS/MS.
When injected before the induction of peritonitis, HE-100 induced a slight increase in neutrophil recruitment correlating with an increase of PGE2 and LTB4 synthesis, which was rapidly counterbalanced by the recruitment of other cell types and the increased synthesis of LxA4, RvD2, RvD5, PD1 and IL-10. As a result, the resolution interval was shortened by up to 4 hours.
The study results provide evidence that HE-100 promotes inflammation resolution.