

## PERIPHERAL BLOOD MONOCYTE MODIFICATIONS FOLLOWING MYOCARDIAL INFARCTION IN RATS CONSUMING WHITE WINE

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**Introduction:** After myocardial infarction (MI), CD44 is critical for healing and left ventricle remodelling. Monocyte CD44 antigen is hyaluronan ligand. Hyaluronan is responsible for extracellular matrix structural maintenance and inflammation regulation. CD11b<sup>+</sup> monocytes have a role in slowing down angiogenesis and stimulation of inflammation after MI. The aim of this study was to estimate the effect of wine consumption at CD44 and CD11b monocyte expression after MI. In addition, CD15s glycoantigen, known as CD44 and CD11 branch, was determined.

**Materials and Methods:** CD44, CD11b and CD15s positive monocytes in peripheral blood were measured by flow cytometry 24h after MI in male Sprague–Dawley rats (n=9) that consumed white wine for 4 weeks, and compared with control (C), water drinking (C6h and C24h after MI) and sham group.

**Results:** Relative to C24h group, wine-consuming rats differed as follows: percentages of CD15s+CD11b<sup>+</sup> monocyte and large monocyte subpopulations were decreased, % of CD44<sup>+</sup> monocytes was increased; expression of CD44 per one cell was two and five fold increased at CD11b<sup>+</sup> monocytes and large monocytes, respectively; CD44 was increased at CD15s+CD11b<sup>-</sup> monocytes; CD11b was decreased at CD15s+CD44<sup>+</sup> monocytes. In comparison to wine-consuming rats, C6h group showed additional significant difference in the increase of % of CD44<sup>+</sup> monocytes and CD44 expression at CD11b<sup>+</sup> and CD15s+CD11b<sup>-</sup> monocytes and CD11b<sup>+</sup> large monocytes.

**Conclusions:** Considering that CD44<sup>+</sup> monocytes favour left ventricle remodelling and CD11b<sup>+</sup> monocytes slow down angiogenesis and can promote injurious inflammation, our findings could indicate beneficial effects of wine pre-treatment on cardiac inflammatory response to MI.

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