Original Research Paper Biochemistry

MONOCYTE WITH NO PARAOXONASE 2 LACTONASE ACTIVITY. RUNNING HEAD- PON 2 LACTONASE ACTIVITY IN MYOCARDIAL INFARCTION.

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Case Description

For estimation of monocytic paraoxonase 2 (PON 2) lactonase activity, a junior resident doctor collected blood from a myocardial infarction patient and a healthy control. He processed the sample immediately after blood collection and separated monocyte by a separating media and prepared monocyte lysate and performed PON 2 lactonase activity estimation.(1,2) But no PON 2 lactonase activity was seen in both samples.

Questions

1. Does monocytes have no PON 2 lactonase activity?
2. Is something wrong with the reagent preparation?
3. Is method or substrate used for PON 2 lactonase estimation not correct?

Answers

A senior resident doctor performed above test again after collection of fresh blood from same patient and control. He found PON 2 lactonase activity in myocardial infarction patient and control were 3.1 Unit/mg of protein and 3.8 Unit/mg of protein respectively. On further inquiry, junior resident doctor revealed that he had collected sample in EDTA bulb, not in heparin bulb. For paraoxonase activity, optimum concentration of calcium is must.(3) So calcium might be chelated by EDTA and hence activity was not seen in blood samples collected in EDTA bulb.

References:

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