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Is monomeric CRP a marker for development of CRP in patients with MDD?

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Introduction: The C-reactive protein (CRP) is an acute phase reactant and a strong inflammatory biomarker. The concentration of CRP increases 1000 fold markedly within 24-72 hour in response to inflammatory events, tissue damage and infections. Therefore the CRP is a well renowned bio-inflammatory marker as an important strong independent predictive tool of cardiovascular disease. The CRP in nature is a pentamer and can dissociate into a monomeric form. Recent studies have proven that mCRP is a stronger pro-inflammatory protein than the pCRP.

Materials and Methods: The mCRP in-house ELISA was developed using the clone 3H12 and validated in the patients with different inflammatory diseases. The mCRP and pCRP were measured using ELISA in 9 age and sex matched pairs of patients with major depression and healthy controls.

Results: The mCRP levels were higher in patients than controls ($p=0.05$) whereas no significant difference was observed in pCRP. This difference was lost when BMI was controlled since patients have higher BMI. Moreover, mCRP levels showed significant association with triglyceride levels in the controls but not in the patients.

Conclusion: Our findings raised a question as to whether the mCRP levels can be early predictor in development of metabolic syndrome in the patients.

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