

Homocysteine levels in Indian women with Polycystic Ovary Syndrome

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In a recent issue of Journal of Clinical and Diagnostic Research, we read with great interest the published article by Maleedhu et al., entitled with "Status of Homocysteine in Polycystic Ovary Syndrome (PCOS)" [1]. This study is important because it provides scientific information on this clinically relevant condition. They have discussed that hyperhomocysteinemia may have more pronounced risk in human reproductive physiology. However, there are some points that need to be clarified.

First, they have shown that mean serum homocysteine levels were significant higher in PCOS cases than in normal cases and controls. The increase was more pronounced with increase in BMI and waist. However, the blood homocysteine levels are affected by several dietary factors such as vitamin B6, B12 and folic acid, and impaired renal function [2-4]. Authors did not explain this status. But, the possible reason of high serum homocysteine levels may be dietary deficiency of vitamin B6, B12 and folic acid. Authors only measured serum homocysteine levels. However, they did not measure other factors including vitamin B6, B12 and folic acid.

Second, the 5,10-methylenetetrahydrofolate reductase (MTHFR) is an important enzyme involved in folate and homocysteine metabolism [2,5]. Additionally, the reason for higher homocysteine levels observed in women with PCOS maybe due to MTHFR mutations. Authors did not examine the mutations in the MTHFR gene.

Third, higher blood homocysteine levels are associated with older age, and life style factors including smoking, heavy coffee consumption, and exercise status, and serum lipid levels [4].

CONCLUSION

These data could provide the readers of the journal clearer information to evaluate the status of homocysteine in women with PCOS.

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In our article, Serum homocysteine levels are elevated with increase in BMI and waist. The role of B6, B12, folic acid and MTHFR mutations may also cause elevated homocysteine levels but we couldn't estimate them due to cost factor. We have also compared lipid parameters with homocysteine levels which I will publish in the next article, and in our exclusion criteria we excluded alcohol consumption and impaired renal function, regarding age factor we have taken only the reproductive age group.

We are planning to continue our work on the role of B6, B12, folic acid and MTHFR mutations in PCOS cases. Definitely it will give much more information regarding homocysteine levels in PCOS.

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