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Abstract Topic:- Molecular effects of genetic variation

Abstract Title:- Impact of MTP -493G/T and ABCG2 34G/A Polymorphisms and its expression on PI-treated HIV patients with dyslipidemia

Presenting author name :- Shyamveer Bharati

Presenting author institute:- ICMR-National AIDS Research Institute, Pune

Co-authors name:- Goldi Namdev, Ranjana Choudhari, Shashikala Samant, Meenakshi Bhattacharya, HariOm Singh

Co-authors institute:-ICMR-National AIDS Research Institute, Pune

Aims:-To correlate the MTP -493G/T and ABCG2 34G/A polymorphism with plasma lipid and glucose level

Methods:- we examined genetic variations of MTP -493G/T and ABCG2 34G/A gene in a total of 187 PI treated HIV patients (64 with HIVLD and 123 without HIVLD) and 139 healthy controls using PCR-RFLP and real-time PCR expression analysis.

Results:- ABCG2 34A allele exhibited a reduced the risk for severity of HIVLD ($P = 0.06$, $OR = 0.53$). MTP -493T allele showed a decreased risk for dyslipidemia development ($P = 0.07$, $OR = 0.66$). In patients without HIVLD, the ABCG2 34GA genotype was linked to impaired triglyceride levels with marginal significance ($P = 0.06$, $OR = 2.55$). In patients without HIVLD, MTP -493TT genotype was associated with impaired glucose levels and showed a higher risk for development of dyslipidemia ($P=0.001$, $OR=5.41$).Furthermore, we observed, the expression of the MTP gene was down regulated by 1.22-fold in patients without HIVLD compared to those with HIVLD, while the ABCG2 gene was upregulated by 2.16-fold in patients with HIVLD compared to those without HIVLD.

Conclusions:- In conclusion, MTP -493T allele influences the expression in patients without HIVLD, thus may have role to reduce dyslipidaemia development risk. PI treated HIV patients without HIVLD having ABCG2 34GA genotype with impaired triglyceride levels may assist the risk of dyslipidemia.

Keywords:- HIVLD, Genetic variations, dyslipidemia, MTP, HIV