P-0547 – Blockade of mineralocorticoid receptor suppresses hyperuricemia and insulin resistance induced by oral contraceptives

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Background

❖ Oral contraceptives (OCs) are used by over 100 million women around the world to prevent pregnancy, although its negative impact remains unresolved (Tanis et al., 2001).

❖ Its use in women of reproductive age has been associated with insulin resistance (IR).

❖ Therefore, the pathophysiological role of hyperuricemia and IR in OC users holds great clinical and public health relevance.

Aim

❖ We therefore hypothesized that the hyperuricemia and IR induced by OC is through activation of the MR.

Materials and Methods

❖ IR was estimated using homeostatic model assessment (HOMA) whereas plasma uric acid (UA) were measured by standardized enzymatic colorimetric methods using assay kits whereas plasma insulin was estimated by ELISA kit (Raybiotech)

Results

Effect of MR blockade on insulin level (A); IR (B); atherogenic dyslipidemia (C&D); uric acid level (E) in OC-treated Wistar rats

Conclusion

Our findings however showed that MR blockade with Spl improved the alterations in Hyperinsulinemia, IR, impaired glucose tolerance, hyperuricemia and atherogenic dyslipidemia induced by OC. This result demonstrates that estrogen-progestin OC induced hyperuricemia and IR is through activation of the MR.