



Oral Presentation



تهران ۴-۲ بهمن ماه ۱۳۹۳ / مرکز همایش های ابوریحان دانشگاه شهید بهشتی

The role of metabolic syndrome in infertility

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Introduction: Metabolic syndromes include of a complex of metabolic conditions, such as hypertriglyceridemia, hyper low density lipoproteins (LDL), hypo high density lipoproteins (HDL), insulin resistance, abnormal glucose tolerance and hypertension, which in combination with genetic vulnerability and abdominal obesity—are risk factors for type 2 diabetes, vascular inflammation, atherosclerosis, and renal, liver and heart disease. One of the defects in metabolic syndrome and its associated diseases is excess cellular oxidative stress (mediated by reactive oxygen and nitrogen species (ROS) and oxidative damage to mitochondrial components, resulting in reduced efficiency of the electron transport chain. This review discuss about the role metabolic syndrome in infertility

Material and Methods: This article presents result of a systematic review about the role of metabolic syndrome in infertility .

Results: These Studies rely on gene expression have showed that the transcript expression of mitochondrial biogenesis such as NRF-1 , PGC-1 β and PGC-1 α downregulated in muscle patient with metabolic syndrome. Genes representing subunits of the respiratory complex I were downregulated in metabolic disease such as PCOS. Our studies suggested that downregulation of OXPHOS genes in patient with PCOS, an important role in impaired oxidative metabolism and the risk of type 2 diabetes in these patients.

Conclusion: Our studies demonstrated that reduce expression of genes involved in mitochondrial oxidative metabolism could be result in infertility that play a role in metabolic abnormalities.

Key word: mitochondria, metabolic syndrome, infertility