

TITLE

THE IMPACT OF ANTI-PHOSPHOLIPID AND ANTI-NUCLEAR ANTIBODIES ON IVF TREATMENT AND OUTCOME: A SYSTEMATIC REVIEW

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Introduction: During implantation two immunologically and genetically distinct tissues are challenged towards establishing a successful communication. Current bibliography indicates several autoimmune factors to have been associated with implantation failure outcomes. The levels of antiphospholipid antibodies (APL), and antinuclear antibodies (ANA) appear to be significantly increased in women diagnosed with unexplained infertility. Herein a systematic review attempts to provide a comprehensive analysis on the possible associations of autoantibodies in regards to a successful IVF cycle.

Materials and Methods: A systematic search of the literature was performed in Pubmed/Medline, Embase, and Cochrane Central databases on the 1 December 2018, from 2006 until that date.

Results: Fifteen studies were identified including anti-Phospholipid antibodies and IVF outcome. Most of the included studies were of prospective nature, while three of retrospective, one case report, and two case series were included. The presence of APL does not appear to influence neither live-birth nor clinical pregnancy rates. Seven studies were considered suitable for inclusion in this systematic review as in all of them the possible effect of ANAs in IVF/ICSI outcome was investigated. ANAs presence is associated with lower clinical pregnancy and live-birth rates following IVF/ICSI cycles.

Discussion and Conclusions: In summary, while the effects of autoantibodies have been researched for several decades, hitherto their effect on IVF cycle outcomes fails to be fully elucidated. According

to the literature search performed for this systematic review APLs do not seem to affect IVF/ICSI outcomes whereas the presence of ANAs may be a detrimental factor towards the success of an IVF/ICSI cycle.