

## **ABSTRACT**

**TITLE:** “THE IMPACT OF AUTOANTIBODIES SPECIFICALLY AFFECTING THE REPRODUCTIVE SYSTEM ON IN VITRO FERTILIZATION TREATMENT AND OUTCOME: A SYSTEMATIC REVIEW”

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### **INTRODUCTION:**

Autoantibodies (AAs) may exert a negative impact on the reproductive system. The main categories include anti-sperm antibodies (ASA) in sperm being related to male infertility, as well as anti-gonadotropin antibodies (AGA), anti-endometrial antibodies (AEA), and anti-laminin-1 (aLN1) antibodies in the follicular fluid, related to female infertility (1-9). This systematic review aims to concur on how the aforementioned AAs may jeopardize the success of in vitro fertilization (IVF) cycles.

### **MATERIALS AND METHODS:**

A systematic search of the literature was conducted in the databases of PubMed/Medline, Embase, and Cochrane Central Library, limited to English articles published in peer-reviewed

journals, from 2006 up to December 2018. The initial search yielded 598 studies. These were thoroughly screened and then eliminated accordingly. Strictly relevant articles based on inclusion criteria were approved. The final eligible studies were qualitatively analyzed.

#### **RESULTS:**

Nine studies were identified affecting the reproductive system, from which four included ASA (1-4), while three involved AEA (5-7), one AGA (8), and one aLN1 (9) in the follicular fluid of patients presenting with endometriosis. Albeit the included studies were presented with high heterogeneity, the majority of the respective AAs were not negatively associated with IVF cycles outcome. However, in the case of AEA associations with lower clinical pregnancy rates, along with higher miscarriage rates were observed.

#### **DISCUSSION AND CONCLUSIONS:**

The quality level of the available evidence remains low, and thus conducting well-designed prospective studies is imperative to examine the true impact to AAs on IVF outcome

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