

## Recurrent miscarriage and male factor infertility: diagnostic and therapeutic implications. A narrative review

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**Introduction** Recurrent miscarriage is defined as 2 or more failed clinical pregnancies, typically known as repeated pregnancy loss, occurring before 20 gestational weeks, and further categorized into primary and secondary types. It represents a common and distressing condition to deal with in the field of reproductive medicine, usually affecting <5% of couples, with up to 50% of cases lacking a clearly defined aetiology. The epidemiology also varies depending on maternal age. Remarkably, the situation significantly afflicts expecting parents, whereas maternal factors, such as age and previous pregnancy loss rate, are commonly reported as risk factors. Although previously underestimated, existing evidence suggests the male factor is a possible cause of recurrent pregnancy loss.

**Material and methods** A non-systematic literature review was conducted in the PubMed and Scopus databases for articles written in English investigating the possible association of the male factor in recurrent pregnancy loss. The eligible studies were synthesized in a narrative review format upon discussion and consensus among the authors after being previously independently assessed and selected.

**Results** Lifestyle, obesity, genetic predisposition, chromosomal anomalies, endocrine dysfunction, anatomical abnormalities, immunological factors, infections, and oxidative stress can result in poor embryo development and recurrent miscarriage. Although professional organizations currently recognize male gender as a possible risk factor, specific recommendations on the diagnostic and therapeutic field are still lacking, and the condition necessitates a high level of suspicion and case-by-case management.

**Conclusions** In this review, we delve deeper into the contribution of the male factor in the concept of recurrent miscarriage.

**Key Words:** recurrent miscarriage <> recurrent pregnancy loss <> infertility <> male factor

## INTRODUCTION

Miscarriage is an unfortunate loss during the intra-uterine stage with significant legal, psychological,

spiritual, and health-related aspects for the expecting parents [1]. It may occur in up to 20% of known pregnancies and is considered the most common gynaecological complication, and a frequent cause of at-