Invited critical review

AMH: An ovarian reserve biomarker in assisted reproduction☆

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Article history:
Received 8 May 2014
Received in revised form 18 July 2014
Accepted 23 July 2014
Available online 30 July 2014

Keywords:
Anti-Müllerian hormone
Infertility
Ovarian reserve
Human reproduction

Abstract

Ovarian reserve tests provide knowledge of a possible response to controlled ovarian hyperstimulation in patients undergoing assisted reproduction treatment, allowing management and alteration of treatment protocol with the appropriate dose of gonadotrophin. Several parameters have been used as predictors of ovarian response. The basal FSH serum level on the third day of the menstrual cycle seemed to be the best predictor, but with significant intra-individual variability from one cycle to another. Thus, the anti-Müllerian hormone (AMH) emerges as a new ovarian test marker. AMH is produced exclusively in the gonads, by the granulosa cells, and plays an important role in folliculogenesis, acting on the modulation of follicular recruitment in the granulosa cells in order to limit the number of recruited oocytes and to regulate the number of growing follicles and their selection for ovulation. It has been suggested that AMH is strongly associated with oocyte yield after ovarian stimulation and could therefore be capable of predicting the ovarian response and the quality of oocytes and embryos. In this review, we discuss the role of AMH in assisted reproduction outcomes.

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