Anti-Mullerian Hormone (AMH) as a Novel Marker for Ovarian Function: A Review

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Journal Information

Aim and Scope

Bali Med. J. is published by Sanglah General Hospital in collaboration with Indonesian Physician Forum and Indonesia College of Surgeons, Bali-Indonesia. Bali Med. J. is an open access, peer-reviewed journal aiming to communicate high-quality research articles, reviews, and general articles in the field of and Bali Med. J. publishes articles which encompass all aspects of basic research, clinical studies related to the field of medical sciences. The Journal aims to bridge and integrate the intellectually, methodologically, and substantively diverse community of medical scholars, and to encourage a vigorous dialogue between medical scholars and practitioners. The Journal welcomes contributions which promote the exchange of ideas and rational discourse between practicing educators and medical researchers all over the world.

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About Sanglah General Hospital

Sanglah General Hospital was built in 1958 and inaugurated on December 30, 1959, with a capacity of 150 beds. In 1962, the hospital started collaboration with the Faculty of Udayana University as a teaching hospital. In 1978, it became the teaching hospital at type B and Referral Hospital for Bali, NTB, and Lombok. As with other hospitals, Sanglah Hospital has a vision as to the intended direction, become eminent in the field of Hospital Care, Education, and Research of the National and International level. In realizing this vision in providing services, Sanglah always strive with every effort to maintain excellence to satisfy the people who need the service. Moreover, Sanglah Hospital is a major referral hospital for the region of Bali, NTB and Lombok. Besides Sanglah also always emphasizes the empowerment of its resources to be able to produce a superior education and research in the fields of medicine, surgery, and pediatrics.
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ABSTRACT

Background: Anti-Mullerian Hormone (AMH) is a homodimeric glycoprotein linked by disulfide bonds which belongs to the Transforming Growth Factor (TGF) beta superfamily. AMH is produced by gonadal tissue namely testicular Sertoli cells and ovarian granulosa cells especially pre-antral and antral follicles. AMH involved in embryonic sexual differentiation in male, while it has an inhibitory effect on primordial follicle recruitment and responsiveness of the growing follicles to FSH, in female. Current studies show promising clinical utilities of AMH measurement in predicting ovarian function.

Objective: This review aims to explore further about the physiology of AMH and its role as a novel marker for ovarian function.

Methods: Literature of all years until 2018 were collected from several electronic database and manual search and included in this review.

Results: AMH level reflected ovarian follicular reserve, an important indicator in infertility treatment (assisted reproduction techniques) and a sensitive marker for ovarian aging. AMH is also a valuable tool in diagnosis and recognition of recurrence granulosa cell tumors, and a marker of ovarian dysfunction particularly polycystic ovary syndrome. A low circulating AMH level is observed in obesity and male with fertility problems.

Conclusion: AMH level can be used as primary or supplementary markers to aid in the diagnosis and treatment of several reproductive related conditions in males and females. A set of guidelines about...