



Decision Making in INFERTILITY

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Foreword
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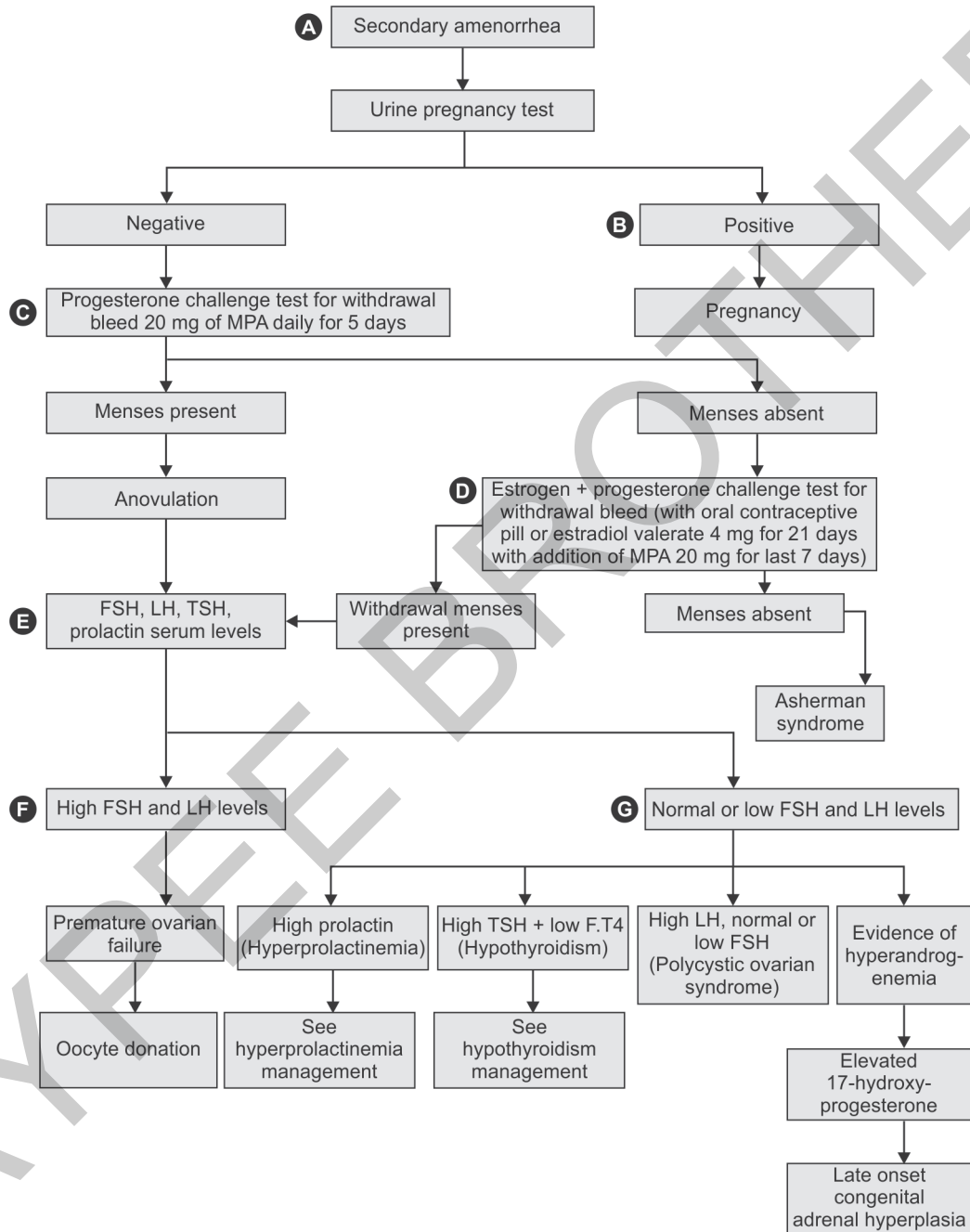
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Secondary Amenorrhea

Kundan Ingale

- A. Amenorrhea is defined as the absence of menses in a woman of reproductive age. It is classified as primary and secondary amenorrhea.
- B. *Secondary amenorrhea*: Women who have experienced menstruation once or more in their lifetime and are experiencing amenorrhea for more than 3 months. In a patient of secondary amenorrhea, foremost advise her for urine pregnancy rate to rule out pregnancy.
- C. If urine pregnancy test (UPT) is negative, she is asked to take progesterone supplement (20 mg of medroxyprogesterone acetate) for 5 days to confirm withdrawal bleeding. If withdrawal bleeding is seen then amenorrhea is due to anovulation.
- D. If there is no withdrawal bleeding and endometrial thickness is thin, ask her to take cyclical estrogen and progesterone for 28 days. If there is no menses following hormone replacement therapy, then the cause of amenorrhea is most likely endometrial disease like Asherman syndrome for which hysteroscopy should be done.
- E. If there is withdrawal bleeding after either progesterone or estrogen-progesterone, she is advised to undergo hormonal assays like follicle-stimulating hormone (FSH), luteinizing hormone (LH), thyroid-stimulating hormone (TSH) and prolactin (PRL).
- F. If FSH and LH are high, (FSH > 25 IU/mL, LH > 25 IU/mL) quiet likely that she has premature ovarian failure.
- G. If FSH is normal or low but LH is high and on ultrasonography (USG), there is presence of multiple antral follicles (>12 in each ovary) with she is diagnosed to have anovulation due to polycystic ovarian syndrome. Look for signs of hyperandrogenemia too. If serum TSH is high and serum-free T4 is low, she has most likely amenorrhea due to hypothyroidism. Ovulatory dysfunction is found in both, hypothyroidism as well as hyperthyroidism. Hyperprolactinemia is diagnosed if serum prolactin level is more than 26 ng/mL. High prolactin affects estrogen and testosterone. If prolactin levels are more than 100 ng/mL, rule out pituitary macroadenoma by MRI brain. If there are signs of hyperandrogenemia with normal FSH and LH, check for 17-hydroxyprogesterone, which is elevated in late onset adrenal hyperplasia.



(FSH: follicle-stimulating hormone; LH: luteinizing hormone; TSH: thyroid-stimulating hormone; MPA: medroxyprogesterone acetate)

Decision Making in INFERTILITY

Salient Features

- Unique format of algorithm-based management in infertility
- Chapters are extremely relevant to routine practice and cover all the aspects of infertility from basics to advanced
- Step-by-step management of each condition from diagnosis to treatment makes it a must for a quick reference in all scenarios
- Simple dialect and clear-cut therapy options mentioned in the book makes it favorable for use by everyone practicing infertility.

Apoorva Pallam Reddy is the Medical Director, Phoenix Speciality Clinic, Bengaluru, Karnataka, India. She graduated from the prestigious JJM Medical College, Davangere, Karnataka and received her Masters from VIMS and RC, Bengaluru. She has been trained internationally at Keck School of Medicine, Los Angeles, USA, during under graduation as a part of international student program, trained in reproductive medicine with the world renowned, Vrije University Brussels (VUB) and in Gyne-Endoscopy at the Kiel School of Endoscopy, Germany. She has delivered over 100 lectures at various national and international forums, co-edited a book on polycystic ovary syndrome (PCOS) and contributed several chapters in reputed publications. Her keen interest in knowledge transfer has made her successfully organize state conference—APCOG 2017, Fertility-Regional ISAR, and many live surgical workshops. Her areas of special interest include PCOS and recurrent pregnancy loss.

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Dr Rajeev Agarwal and Dr Apoorva Pallam Reddy are the Co-founders and Directors of Online Infertility training academy "International Fertility Academy" that offers infertility training for Gynecologists through both online and offline modules (www.internationalfertilityacademy.com). To connect with the editors regarding any queries on the book, please drop in an email on internationalfertilityacademy@gmail.com

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