OPTIMIZING OVARIAN STIMULATION IN PCOS

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PCOS patients possibly represent the most challenging group for optimization of ovarian stimulation (OS). In these patients, it is of utmost importance to personalize stimulation to prevent OHSS. Yet, it is also common to find poor or sub-optimal response when starting with low dose hormonal injections in step-up protocols. Thus, tailoring stimulation is important.

However, beyond OHSS prevention, it is also common to find poor quality embryos following OS in PCOS patients. It has been proposed that the deranged internal hormonal milieu in these patients may be responsible for this finding. Thus, it may be important to correct and optimize the internal endocrinologic status in PCOS patients to achieve the best possible results with OS.

It has been shown that LH levels are often raised in these patients and that patients with elevated starting LH levels demonstrate poorer outcomes. Optimal balance between FSH and LH, at the correct times within the menstrual cycle, are thought to be important for optimal ovarian function and oocyte quality. Yet, standard flexible antagonist protocols induce pituitary suppression only from day 5 or 6 of stimulation. Thus, we hypothesized that correcting elevated serum LH levels from the start of ovarian stimulation may be beneficial in PCOS patients undergoing OS and designed a study to test this concept.

We performed a retrospective cohort study to compare laboratory and clinical outcomes in IVF between standard flexible day 5/day 6 versus day 1 GnRH antagonist protocol in PCOS patients.

Our data indicates significantly superior oocyte yield and top-quality embryo proportion in patients with antagonist from day 1. Cumulative clinical pregnancy rates also tended to be superior in this group.

Our findings indicate that administration of GnRH antagonists from day 1 of stimulation in PCOS patients undergoing IVF may lead to superior results.

INCREASING ACCESS TO FERTILITY TREATMENT AND IVF IN LMICs

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The prevalence of infertility has been shown to be higher in low-middle income countries (LMICs), and often highest in regions with the highest fertility rates. This is known as a 'demographic paradox', and results from certain regions being burdened with higher reproductive tract infections and poorer overall health status, as well as reduced access to care, whether for infertility or contraception. However, patients in such demographically disadvantaged areas have equal right to reproductive healthcare and reproductive autonomy as their counterparts in the developed world. Hence, it is essential that gynecologists, infertility and ART specialists, policymakers and politicians engage with the problem of increasing access to fertility treatment in LMICs.

There are an estimated 27.5 million couples in India grappling with infertility. Many of them cannot afford even a single cycle of private sector IVF which, in terms of purchasing power parity converted to US Dollars, costs 51.6% of the average annual GDP per capita, and 166% of the average annual income- the highest in the world. This situation assumes even more significance in the context of India's total fertility rate (TFR) dropping below replacement levels for the first time, which have long-term implications for future workforce diminution and its resultant economic repercussions. More importantly, India's commitment to sustainable development goal (SDG) 3.7- ensuring universal access to sexual and reproductive healthcare by 2030- cannot be honored unless we remove barriers to fertility care for much of its population.

We report the opportunities, challenges, and pitfalls faced during our experience of setting up India's 1st completely funded, completely free IVF unit within a government medical college and hospital, leveraging a public-private-partnership between GDIFR, amongst India's pioneer IVF institutes; and the Government of West Bengal run IPGMER & SSKM Hospital, West Bengal's premier medical college and research institute.

We present data here on the first year of delivering free IVF to poor patients of West Bengal, achieving acceptable success rates at no cost to the patient.
The model that we have successfully established could be an exciting blueprint for more such programs in India and other LMICs.

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