Gynecology and Reproductive Endocrinology

Lutealphasedeficiency in IVF and natural conception: New findings and solutions

JanTesarik

MARGenClinic, Spain

Abstract

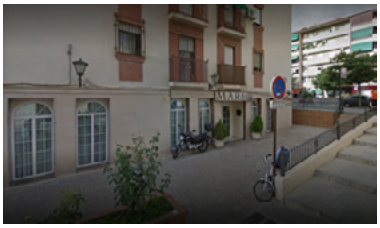
Lutealphasedeficiency (LPD)wasfirstdescribed, as a primary cause of infertility, byGeorgeannaSeegar Jones in the 1940s, whileworking at the Johns Hopkins Hospital and University in Baltimore (Maryland), wellbeforeachieveing, togetherwithherhusband, Howard W. Jones, thefirst US babybornafter in vitro fertilisation (IVF) in Norfolk (Virginia), in 1979. Laterstudieshaveshownthatthetechniquesusedforovarianstimulation and oocyterecoveryfor IVF can aggravatetherisk of LPD. Thisisparticularlythe case of theovarianstimulationprotocolsusinggonadotropinreleasing hormone (GnRH) antagonisttopreventprematureovulation, followedbyovulationtriggeringwith a GnRHagonist. Theseprotocols can efficientlyprevent thedevelopment of severeovarianhyperstimulationsyndrome (OHSS) in women at risk. Ontheotherhand, theGnRHantagonist-controlled and GnRHagonistinducedcyclesresult in a significantimpairment of the corpus luteum (CL) function, resulting in LPD withsubsequentembryoimplantationfailureorearlypregnancyloss. However, recent data haveshownthatsomewomen are particularlypronetothedevelopment of LPD, withanytype of theovarianstimulationprotocolused, and even in natural ovulatorycycles. Consequently, theserumprogesteroneconcentrationshould be controlledrepeatedly, beginningwiththeday of embryo transfer, and theneveryweek, evenbeforeknowingifpregnancy has occurred. Thisisparticularlyimportant in oocytedonationtreatmentcycleswhereCLisusuallyabsent, unlessthetreatmentisperformed in a natural cycle. IfCLispresent, it'sfunction can be improvedbydailyadministration of GnRHagonistduring 2 weeksafterfertilisation. Ifnot (most of cycleswiththe transfer of thepatient'sownfrozenembryos and freshorfrozenembryosresultingfromoocytedonation), LPD has to be correctedby individual dosing of progesterone, appliedby vaginal, oral, transdermal, intramuscular orsubcutaneousroutes. In patientswithunexplainedinfertility, lutealphaseserumprogesteroneconcentrationshould be determined and correctedbyexternalprogesteroneadministration, ifnecesssary, thusavoidingtherecourseto IVF in many cases.

Biography

JanTesarikgraduated in Medicine and SurgeryfromPragueuniversity (in CzechRepublic). He earnedhis medicine and surgerydoctoratefromPragueUniversity. He specialized in reproduction medicine fromPragueUniversity. He isscientificadvisory in EylauLaboratory, in Paris (France).

Publications

1. Can thenegativeeffects of vitrificationonoocytedevelopmentalcompetence be mitigated?, Reproductivebiomedicine online 41(2), DOI: 10.1016/j.rbmo.2020.05.011
2. After corona: thereislifeafterthepandemic, Reproductivebiomedicine online 40(6), DOI: 10.1016/j.rbmo.2020.04.002
3. Management of anxiety and painperception in womenundergoing office hysteroscopy: a systematicreview, Archives of Gynecology and Obstetrics 301(4), DOI: 10.1007/s00404-020-05460-2



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