

First successful pregnancy following frozen embryo transfer of a blastocyst selected using artificial intelligence (AI): A case report

Lim AYW, Lam WK, Lee CSS

Alpha IVF & Women's Specialists, Petaling Jaya, Selangor, Malaysia

ABSTRACT

Introduction: Recent studies demonstrated that selecting embryos using AI can increase the likelihood of choosing the embryo most likely to result in pregnancy in an unbiased and non-invasive manner. This case report describes the first successful pregnancy (at the time of writing) following the use of an AI-enhanced embryo selection tool. **Case Description:** The patient (35-year-old) who presented with PCOS underwent IVF treatment at Alpha IVF in December 2020. Following PIEZO-ICSI (Japan), the oocytes were cultured in time-lapse Embryoscope for 7 days. Blastocysts with 3BB or better were vitrified for elective FET in view of the risk of OHSS. The final image of each utilized blastocyst obtained was uploaded into the AI browser (Life Whisperer, Australia) and a score was generated for each blastocyst. Forty oocytes were retrieved, of which 32 were inseminated, 31 fertilized and 23 blastocysts were vitrified on Day 5 (21) and Day 6 (2). Gardner's Score/KIDScoreD5/AI Score for all 23 blastocysts were 4AA/9.7/8.9; 5BA/9.6/8.0; 5AA/9.6/9.8; 5AA/9.4/8.4; 4AA/9.5/9.4; 4AA/8.0/9.7; 5AB/7.6/9.7; 5AB/8.1/8.0; 5AA/8.9/8.0; 4AA/7.6/7.3; 5AB/7.4/9.7; 4AB/7.3/9.3; 4AB/6.7/9.4; 5AB/6.3/8.4; 5BB/8.1/7.7; 4BB/7.7/9.7; 4BB/7.6/9.3; 4AB/7.5/9.7; 4BB>C/5.8/8.2; 4BB>C/5.6/9.1; 4AB>C/5.7/9.4; 4BB/2.5/8.5 and 5BB/5.9/9.1 respectively. Instead of selecting blastocyst based on the highest KIDScoreD5, blastocyst with the highest AI Score (9.8) was selected in the same morphological score cohort for elective SBT in February 2021 and resulted in a twin pregnancy at week 8+3 at the time of writing. **Discussion:** This is our first attempt on using AI-enhanced embryo selection. The outcome was a clinical pregnancy.

Primary abdominal pregnancy: A rare presentation

Gan Zhen Yao¹, Sivabala Selvaratnam², Teh Zi Yu¹

¹Hospital Taiping, Perak, Malaysia, ²Hospital Seberang Jaya, Pulau Pinang, Malaysia

ABSTRACT

Introduction: Abdominal pregnancy is a rare diagnosis, constituting only 1% of all ectopic pregnancies. The diagnosis is difficult to establish, leading to staggering percentage of fetomaternal morbidity and mortality, particularly in an acute setting. This case report aims to highlight the importance of high clinical suspicion and the use of transabdominal ultrasonography (TAS) in patients with atypical and vague presentation of abdominal pregnancy especially in secondary medical center in Malaysia. **Case Description:** We report a case of a 32-year-old woman, G2P0+1 presented at 10 weeks of amenorrhea with only a vague complaint of intermittent lower abdominal pain for 1 week, with no per vaginal loss. She had a positive urinary pregnancy test without a prior TAS. Initial assessment by emergency department arrived at a diagnosis of bicornuate uterus. Upon gynaecological team review, the diagnosis was revised to ectopic pregnancy. Vaginal examination revealed an 8-week size uterus with mild tenderness over the Pouch of Douglas (POD). TAS showed an empty uterus with an extrauterine gestational sac containing a viable fetus with crown-rump length of 2.41 cm corresponding to 9 weeks 1 day of gestation. No free fluid was visualized. On laparotomy, diagnosis of primary abdominal pregnancy at the POD was confirmed and she was managed accordingly. **Discussion:** Abdominal pregnancy is no doubt a difficult to establish diagnosis but with a higher detection rate in case of increased awareness complemented by TAS use. A high index of clinical suspicion for abdominal pregnancy is to be kept in all medical practitioner minds due to its various and possible vague presentation.