

# Comparison of post-thaw sperm motility with two different cryopreservation media

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## ABSTRACT

**Introduction:** There is an increased demand for sperm cryopreservation in assisted reproductive technologies. It is widely known that sperm cryopreservation results in severe structural and functional damage to sperm membrane, affecting its motility and functions. Therefore, selection of the sperm cryopreservation medium with best cryosurvival rate remains a challenge. **Objectives:** The aim of this study was to compare post-thaw sperm motility between two commonly used sperm cryopreservation media. **Methods:** Seventeen semen samples were analysed according to the fifth edition of World Health Organization criteria. Two equal aliquots from the same neat semen sample were cryopreserved using Fertipro SpermFreeze™ and CryoSperm™ ORIGIO. The post-thaw motility was re-evaluated after leaving the sample for an hour at room temperature. Statistical analysis was done using paired t-test and unpaired t-test. **Results:** The average pre-freeze motility was 46.3%. After thawing, motility for Fertipro SpermFreeze™ and CryoSperm™ ORIGIO dropped to average of 17.1% and 15.7% respectively. These results showed significant decrease of sperm motility using both sperm cryopreservation media ( $p < 0.05$ ). The drop in motility from pre-freeze to post-thaw was 29.1% for Fertipro SpermFreeze™ and 30.6% for CryoSperm™ ORIGIO. However, there was no significant difference ( $p = 0.75$ ). **Conclusions:** The result showed that both cryopreservation media provided similar post-thaw motility. This may be due to both cryopreservation media being constituted with similar compositions but of different concentrations. Sperm motility decreases following freezing-thawing as membrane functions and structure are impaired due to irreversible changes in both membrane fluidity and rigidification. We conclude that frozen samples are advisable only in unavoidable circumstances.

# Delayed diagnosis of advanced abdominal pregnancy with optimal maternal and neonatal outcome

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## ABSTRACT

**Introduction:** Abdominal pregnancy is a rare form of ectopic pregnancy with hazardous maternal morbidities which increases with advancing gestation. Despite advancement in ultrasound technology, this variant of ectopic pregnancy is still being missed. **Case Description:** We present a case of 39-year-old Orang Asli, Gravida 6 Para 4 at 35 weeks of gestation with two previous caesarean sections, referred to our centre for suspicion of placenta accreta spectrum. Ultrasound findings showed a non-gravid uterus measuring 12 cm x 8 cm x 4 cm with endometrial thickness of 10 mm. Extrauterine gestational sac with viable fetus corresponding to gestational age with estimated weight of 2,200 g. Fetal liquor and dopplers were normal. The placental mass appears to be attached to the right posterolateral uterine wall and was not in continuity with abdominal wall anteriorly and liver superiorly. Right uterine vessel plexus appears tortuous with turbulent flow within. Magnetic resonance imaging was arranged to facilitate surgical planning and preparation. Exploratory laparotomy was performed. Intraoperatively, uterus, bilateral fallopian tubes and left ovary appears normal. Right ovary was not visualized. Gestational sac with viable fetus arising from the right adnexal complex with placental attachment to right mesosalpinx was seen. Laparotomy was completed without maternal morbidity. Histopathological examination reported most likely placental implantation site is mesosalpinx or broad ligament. **Discussion:** The diagnosis and management of an advanced abdominal pregnancy still poses challenges to obstetricians, even in the era of increased access to advanced diagnostic imaging modalities. High index of suspicion and planned surgical intervention is essential to improve maternal and fetal outcome.