

IUI wastage value at the time of insemination and its relation to pregnancy outcome

Kannappan Palaniappan, Fairuza Munirah

Sunway Fertility Centre, Sunway Medical Centre, Selangor, Malaysia

ABSTRACT

Introduction: Intrauterine insemination (IUI) is a non-invasive method that improves pregnancy chances as it increases gamete density near the site of fertilization. Wastage of sperm during the procedure has been documented. Gradient technique is a standard practice to process semen sample prior to IUI treatment. This study is performed to investigate the wastage value of semen prepared through this technique and to reemphasize that there is a significant wastage value during sperm preparation and to assess if it impacts the pregnancy rate. **Methods:** Database during period of 2015 to 2019 at Sunway Fertility Centre were reviewed retrospectively. Data collected include sperm concentration, motility and morphology. This was categorized into 8 different groups Normozoospermia (N), Oligozoospermia (O), Asthenozoospermia (A), Teratozoospermia (T), Oligoasthenozoospermia (OA), Oligoteratozoospermia (OT), Oligoasthenoteratozoospermia (OATS), and Asthenoteratozoospermia (AT). IUI preparation method used was density gradient centrifugation (DGC). Wastage value was calculated and pregnancy rates were compared between these groups. **Results:** Wastage value among all groups were in range of 79-80%. In comparison, pregnancy rates were dramatically higher in group with normal semen parameters (66.1%) with wastage value of 79%, followed by group (A) and group (T) with 19.4% and 4.8% pregnancy rates. **Conclusions:** Our data shows that the wastage value during IUI preparation method (DGC) is in accordance to WHO standard and plays no role as a predicting factor in pregnancy outcome. Based on the results, normal semen parameters yield higher post-wash TMSC despite high wastage value, and this determines the success of IUI procedure.

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Progesterone support for pregnancy

Shahreen S¹, Nasreen Z²

¹Department of Obstetrics and Gynaecology, Watfort General Hospital, London, United Kingdom, ²Department of Obstetrics and Gynaecology, Z H Sikder Medical College Hospital, Dhaka, Bangladesh

ABSTRACT

Background: Recurrent miscarriage and preterm birth are distressing for women and contributed significantly to the perinatal mortality. Our aim is to analyse whether progesterone could reduce recurrent miscarriage, threaten miscarriage or reduces PTB. **Method:** Cochrane Pregnancy and Childbirth's Trials Register, Clinical Trials, WHO International Clinical Trials Registry, Nice Guidelines, Meta-analysis and RCT were searched for relevant trials. Two review authors assessed the trials and extracted the data and graded the body of evidence. **Result:** NICE guideline recommends progesterone to prevent early miscarriage. Optimum and Progress study did not show any significant improvement with progesterone either for miscarriage or Preterm Birth (PTB). Meta-analysis of 10 RCT showed progesterone in first trimester reduced risk for pregnancy loss. Vaginal progesterone for pregnant people with mid-trimester cervical shortening (≤ 25 mm before 24 weeks) reduces the PTB. Progress study & Cochrane Database Syst Systemic review (2018) suggested that progestogens are probably effective in the treatment of threatened miscarriage but may have little or no effect on PTB. PROLONG study for 17-hydroxyprogesterone acetate or OPPTIMUM study for vaginal progesterone did not demonstrate any efficacy of progesterone. PRISM trial showed 3% greater live birth with progesterone and benefit was greater for women with 3 or more previous miscarriages and current pregnancy bleeding. **Conclusions:** Analysis of recent meta-analysis favours the use of progesterone to support pregnancy. But the optimum dose, type, route, nature, duration, and starting time are not evaluated, so these need to be assessed by double-blind RCT for better understanding of progesterone support in pregnancy.