

P-082 Effect of semen hyper viscosity (SHV) on blastocyst formation rate and implantation rate

A. Suthar¹, N. Sharma², V. Mishra³, R. Aggarwal³, H. Sheth², K. Patel²

¹IKDRC -IVF UNIT, IKDRC HOSPITAL, ahmedabad, India ;

²IKDRC Hospital - IVF Unit, Embryology, ahmedabad, India ;

³IKDRC Hospital - IVF Unit, obs and gynae, ahmedabad, India

Study question: Does semen hyper viscosity effects blastocyst formation rate

Summary answer: Hyper viscosity of semen sample later results in poor blastocyst formation rate and lower implantation rate.

What is known already: Normal range of semen hyper viscosity ranges between 12-29%.Highly viscous semen samples impairs the physical and chemical characteristics of seminal fluid and due to which seminal oxidative damage increases which further increases the ROS and reduces the sperm motility there are some factors that can affect the seminal viscosity out of which one is Male accessory gland infection, Hypo function of prostate seminal vesicles and varicoceles. SHV create hindrance in semen preparation.

Study design, size, duration: Retrospective study was conducted from June 2019 to Oct 2020 at IVF unit IKDRC hospital.

Participants/materials, setting, methods: 142 patients were enrolled from June 2019 to Oct 2020 in IVF unit IKDRC hospital and divided into two groups. Group A (n=83) patients with hyper semen viscosity and Group B (n =69) patients with normal semen viscosity, inclusion and exclusion criteria's were same for both the groups, only patient with normozoospermia were taken. Semen analysis was done by using WHO manual 2010.

Main results and the role of chance: In group A with hyper semen viscosity fertilization rate was (49.2% vs. 70% p= <0.001) vs in group B with normal semen viscosity which is significantly higher in group B, Blastocyst formation rate (18.4% vs 35% p=<0.01) and implantation rate (9.4% vs 20% p=<0.005) both are significantly higher in group B . Which implies fertilization rate , blastocyst formation rate and implantation rate is significantly lower in patients with semen hyper viscosity.

Limitations, reasons for caution: Larger randomized control studies are needed to strengthen these results.

Wider implications of the findings: Our study demonstrates that patients having higher semen viscosity have poor blastocyst formation rate and implantation rate due to oxidative stress.

Trial registration number: not applicable