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Poster Presentations

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Effects of plasma-rich in growth factors on cryopreservation of human sperm

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Background: Sperm cryopreservation has been used worldwide in infertility clinics. During freezing process, sperm cell is exposed to oxidative stress that results in damage to membrane integrity, sperm viability, sperm motility and DNA structure. In order to protect sperm cell, many strategies have been proposed.
Objective: In this study, we evaluated the effect of plasma rich in growth factors (PRGF) on sperm parameters during sperm freeze-thaw process.
Materials and Methods: Twenty normozoospermic semen samples were included in this study. All semen samples were processed with direct swim-up. All sperm parameters including sperm motility, viability, acrosome reaction, DNA denaturation and fragmentation and chromatin packaging were evaluated before freezing. After that each sample was divided in two groups: control and 1% PRGF. We used rapid freezing technique to freeze all samples. After thawing all sperm parameters were evaluated again and compared to before freezing.
Results: After thawing, all sperm parameters were significantly decreased compared to before freezing. PRGF supplementation was able to improve all sperm parameters compared to control group. Therefore supplementation of freeze-thaw medium with 1% PRGF could significantly improve all sperm parameters including sperm motility, sperm, normal morphology, acrosome integrity, DNA denaturation and fragmentation and chromatin packaging.
Conclusion: According to this study, we conclude that supplementation of freeze-thaw medium with 1% PRGF could significantly improve all sperm parameters including sperm motility, viability, normal morphology, acrosome integrity, DNA denaturation and fragmentation and chromatin packaging.

Key words: *PRGF, Platelet, Growth factor.*