The Effect Of Platelet-Rich Plasma On Sperm Quality İn Different Sperm Vitrification Protocols.

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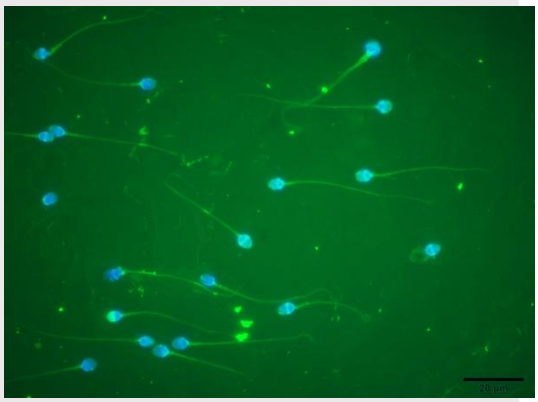

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THESIS ABSTRACT

In this study, it was aimed to determine the effect of incubation in platelet-rich plasma (PRP) before freezing on sperm viability, motility and fertilization potential after thawing in sperm cryopreservation applied within the scope of reproductive potential preservation approaches.
Study groups were formed as fresh ejaculate in ejaculate samples taken from normozoospermic men, fresh ejaculate incubated in PRP, groups that did not contain cryoprotectant and that were vitrified in two different solutions containing cryoprotectant.The groups undergoing vitrification were evaluated in two subgroups.One group was incubated in autologous PRP solution before freezing, while PRP was not applied to the other group.After thawing, acrosomal reaction analysis was performed to assess sperm viability, motility and morphology, and potential to fertilize the oocyte.When the results of the study were evaluated, it was observed that incubation of fresh ejaculate with PRP did not change routine sperm parameters, while sperm viability and motility decreased in vitrification protocol using cryopreservation solutions with or without cryoprotectants.It was found that incubation in PRP before freezing did not change the routine sperm parameters in vitrification application with cryoprotectant-free solutions and with cryoprotectant-containing solutions, and ARIC scores, which are acrosomal reaction analysis criteria, were not significantly different between the groups.
It was concluded that the clinical efficacy of high ARIC scores obtained in vitrified samples with solutions without cryoprotectant in the acrosomal reaction analysis is controversial, and that further comprehensive studies are needed to show the effectiveness of PRP in sperm vitrification in clinical practice, comparing PRP applications with high samples and different concentrations.

APPLICATION AREAS OF THE THESIS RESULTS

In conclusion, incubation of sperm in PRP before vitrification did not have a positive effect on sperm parameters in order to improve the viability, motility and functional oocyte fertilization potential of cells after thawing in sperm vitrification. Vitrification with solutions containing cryoprotectant is an application that should be preferred in sperm vitrification, although its toxic effects are known. Due to the conflicting data in the literature, there is a need for new studies evaluating the effect of the effectiveness of different concentration values on the functional capacity of sperm in PRP applications where there are highly variable data in terms of concentration values.