INTRODUCTION

- Hyperoside (quercetin 3-O-galactoside) is a flavonoid that has shown to possess prominent antioxidant properties, preventing oxidative damage in several cellular systems.
- Sperm cells are especially vulnerable to the attack of reactive oxygen species (ROS).
- Oxidative stress is a major contributor to the decline in sperm quality and can lead to male infertility.

Our study aims to understand the impact of Hyperoside supplementation on the protection of sperm against oxidative damage.

EXPERIMENTAL DESIGN

- Cytotoxic test
- Semen parameters
- Ferric Reducing Antioxidant Power (FRAP)
- Oxidative Stress biomarkers

RESULTS AND DISCUSSION

1. Cytotoxic test

No cytotoxic effects were detected with the different Hyperoside treatments.

2. Semen parameters

The supplementation of 100 µM HYP appears to improve sperm motility, even in the presence of H₂O₂.

3. FRAP

Antioxidant capacity is significantly increased in conditions with Hyperoside supplementation.

4. Oxidative stress biomarkers

The supplementation of 100 µM HYP appears to protect human sperm against lipid peroxidation.

CONCLUSION

The results suggest that supplementation with 100 µM of Hyperoside appears to protect sperm against loss of motility and lipid peroxidation under oxidative stress conditions.