

## 9<sup>th</sup> Yazd International Congress and Student Award on Reproductive Medicine with 4<sup>th</sup> Congress of Reproductive Genetics

### Poster Presentations

**P-152**

#### **Investigation of the effect of antioxidant systems on the male reproductive system**

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**Background:** The misuse of antioxidants as a sperm disinfectant is reactive to the attack of oxygen species. Sperm are highly dependent on these external sources of enzymes during spermatogenesis and their place in the male reproductive system.

**Objective:** The aim of this study was to evaluate the effect of antioxidant systems on the male reproductive system.

**Materials and Methods:** This study was conducted in 2021 by searching for the keywords of the reproductive system, men, antioxidants and spermatogenesis in reputable databases such as PubMed and google scholar, which finally found 15 articles, of which 15 articles, 10 articles were used.

**Results:** Based on studies from various articles, the results showed that adult sperm are considered inactivated in terms of translation and at least contain

anti-cancer substances or internal antioxidants, during spermatogenesis and their habitat are highly dependent on external sources of enzymes. The reproductive system in men has the most abundant antioxidant enzymes in semen, enzymes belonging to the family of glutathione peroxidase and peroxyroxine. Oxidants participate in the immunological process and by this regulation regulate reactions; they are a highly protected family of thiol-dependent peroxidases. They were inactivated by oxidation. Peroxyroxine 4 and peroxyroxine 6 have been shown to be abundantly expressed in rat epidermal sperm and are highly oxidized after induction by operating systems such as tert-butyl hydroperoxide (tert-BHP). From glutathione peroxidases and peroxyroxines, substituted enzymatic antioxidants such as superoxide dismutase and catalase work to protect and maintain sperm stored in the male reproductive system at the same time.

**Conclusion:** Due to the physiological importance of this defence of collective antioxidants, patients with poor sperm motility parameters usually have a deficiency in the level of their semen plasma antioxidants.

**Key words:** System, Antioxidant, Male reproductive system.