

## عنوان مقاله:

Protective effects of propolis on ischemia-reperfusion injury in a rat testicular torsion and detorsion model

## محل انتشار:

گفتمان پژوهش دامپزشکی، دوره 14، شماره 7 (سال: 1402)

تعداد صفحات اصل مقاله: 7

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## خلاصه مقاله:

The torsion model of testis in a rat was adopted for evaluation of possible effects of propolis (Prop) on ischemia-reperfusion (IS/REP) injury. The healthy male Wistar rats (totally ۲۴ animals) were randomized into four groups ( $n = ۶$ ) and animals experienced bilateral testicular torsions as follows: In sham group just, laparotomy was performed and in IS group, animals experienced a ۳ hr period testicular IS. In IS/REP group, a ۳ hr period of IS followed by a ۳ hr period of testicular REP for left testis and a one-week testicular REP for right testis were done. In this group animals were gavaged by ۱.۰۰ mL normal saline ۱ hr before the onset of IS. In IS/REP/ Prop group, the same procedures for IS/REP animals were followed as well as gavage of ۱.۰۰ mL Prop extract solution ۱ hr before the onset of IS. Analyses of biochemistry, histology, inflammatory biomarkers and sperm parameters were carried out. In IS/REP/Prop group, nitric oxide synthase malondialdehyde, myeloperoxidase and  $\lambda$ -hydroxy-۲ deoxyguanine in IS/REP/Prop group were significantly decreased and, superoxide dismutase, total glutathione, glutathione peroxidase, glutathione reductase and glutathione S-transferase were significantly increased compared to the other animals. In IS/REP/Prop group, seminiferous tubules (with normal spermatogenesis) showed all stages of spermatogenic cells with plentiful spermatozoa. Tubular deterioration and atrophy and spermatogenic cell loss in were seen in a limited extent. The mean concentrations of Interleukin-۱ beta and tumor necrosis factor alpha in IS/REP/Prop were significantly decreased. Sperm quality was significantly improved by Prop in IS/REP/Prop group. It was concluded that Prop could be supportive in diminishing IS/REP injury in testicular tissue exposed to ischemia

## کلمات کلیدی:

ISCHEMIA-REPERFUSION, Propolis, Rat, RT-PCR, Testis

## لینک ثابت مقاله در پایگاه سیویلیکا:

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