

## Evaluation of oxidativestress indicesof the liver of the cows infected with *Dicrocoeliumdendriticum* Parasite and its relation with the severity of parasitic infection

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**Background:** The aim of this study was to investigate the oxidative indicators of cow livers infected with *Dicrocoeliumdendriticum* and its relation with the severity of parasitic infection.

**Methods:** During January to March2018, nineteen liver of cows infected with *Dicrocoeliumdendriticum* and fifteen healthy liver cows without any macroscopic lesions were collected from the Mashhad industrial slaughterhouse.To evaluate oxidative stress indices four tissue samples were taken from each liver.Samples stored in a freezer at a temperature of -20°C. Oxidative stress indices including malondialdehyde, glutathione reductase and total antioxidant capacity were measured by FRAP method in homogenized tissue livers. Then, the liver tissues were sent to the parasitology laboratory to measure the parasitic infection severity

**Results:** According to the results, the GSH level in the infected group was significantly lower than the healthy group, but in the FRAP and MDA tests there were no significant differences between the healthy and infected groups. The severity of parasitic infection varied from 48 to 1656. In this study there was no correlation between oxidative stress indices and the severity of parasitic infection.

**Conclusion:** According to the results it seems that liver damage caused by oxidative stress is not so effective on liver damage caused by *Dicrocoeliumdendriticum*. In general, as the *Dicrocoeliumdendriticum* does not have liver migration, damageto the liver parenchymaarelow.It seems that histopathological lesions of the parasite are because of its mechanical trauma and toxic productions of trematode.

**Keywords:** *Dicrocoeliumdendriticum*, oxidative stress,cow liver, Parasite severity