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The effects of glutathione on malondialdehyde expression and seminiferous tubule damage in experimental testicular torsion—detorsion in Wistar rats

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Abstract *Introduction:* Testicular damage caused by ischemia reperfusion injury can be determined by malondialdehyde (MDA) expression and grading of the histopathological damage to seminiferous tubules. The aim of this study was to investigate the effect of Tationil Glutathione administration on testicular damage following experimental torsion and detorsion.
Methods: Eighteen Wistar albino rats, 5.5—6 months old and weighing 250—300 g, were divided into three equal groups. In the first group (T), torsion was created by rotating the left testis 720° in a clockwise direction and maintained for 4 h. In the T/D group, after 4 h of torsion, detorsion was performed and maintained for 3 h. In the T/D-GLUT group, we injected 25 mg iv gluthatione before performing detorsion (onset time of agent is ±5 min).
Results: The lowest malondialdehyde (MDA) expression was observed in the T/D-GLUT rats ($P < 0.05$). Grading of the histopathological damage to seminiferous tubules showed the damage to be worst in T/D and least in T/D-GLUT rats ($P < 0.05$).
Conclusion: Tationil Glutathione inhibits formation of reactive oxygen species in testicular tissue during ischemia and reperfusion injury caused by experimental torsion and detorsion in Wistar rats.

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