



# Hemodynamic effects of the early and long-term administration of propranolol in rats with intrahepatic portal hypertension

Submitted by Emmanuel Lemoine on Fri, 07/18/2014 - 09:41

Titre	Hemodynamic effects of the early and long-term administration of propranolol in rats with intrahepatic portal hypertension
Type de publication	Article de revue
Auteur	Fizanne, Lionel [1], Régenet, Nicolas [2], Wang, Jianhua [3], Oberti, Frédéric [4], Moal, Frédéric [5], Roux, Jérôme [6], Gallois, Yves [7], Michalak, Sophie [8], Calès, Paul [9]
Editeur	Springer Verlag
Type	Article scientifique dans une revue à comité de lecture
Année	2008
Langue	Anglais
Date	2008/12/01
Numéro	4
Pagination	457 - 464
Volume	2
Titre de la revue	Hepatology International
ISSN	1936-0533 / 1936-0541
Mots-clés	Bile duct ligation [10], Carbon Tetrachloride [11], Collateral venous circulation [12], Colorectal Surgery [13], Hepatology [14], Propranolol [15], Splenorenal shunt [16], Surgery [17]
Résumé en anglais	<p>Background and aims The aims of this study were to evaluate a preventive effect on collateral venous circulation of long-term administration of propranolol in intrahepatic portal hypertensive rats. Methods Eighty-six Sprague-Dawley rats were allocated to two models of hepatic fibrosis, bile duct-ligated (BDL) induced and carbon tetrachloride (CCl<sub>4</sub>) induced. Each model was divided into two groups: one receiving placebo and the other propranolol (75 mg kg<sup>-1</sup> d<sup>-1</sup>). Mean arterial pressure (MAP), heart rate (HR), portal pressure (PP), cardiac index (CI), vascular systemic resistance, and splenorenal shunt blood flow (SRS-BF) were measured in anesthetized rats. Results In the BDL model, no significant hemodynamic changes were observed in the propranolol group compared with the placebo group. In CCl<sub>4</sub>-induced rats, HR (390 ± 50 vs. 329 ± 51 beats/min, P = .001), CI (44 ± 11 vs. 34 ± 10 ml/min, P = .004), PP (15.4 ± 3.0 vs. 13.4 ± 1.9 mmHg, P = .045), and SRS-BF (1.4 ± 1.1 vs. 1.0 ± 1.0 ml/min, P = .047) were significantly lower in the propranolol group. Conclusions This study showed that propranolol has a significant hemodynamic effect only in the CCl<sub>4</sub> model and suggested a model-dependent effect of propranolol.</p>
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua3524">http://okina.univ-angers.fr/publications/ua3524</a> [18]
DOI	10.1007/s12072-008-9070-5 [19]

## Liens

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- [19] <http://dx.doi.org/10.1007/s12072-008-9070-5>

Publié sur *Okina* (<http://okina.univ-angers.fr>)