

34.Effects of ligustrazine on hepatic oxygenation in isolated perfused rat liver.

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The effects of ligustrazine on hepatic oxygenation in the isolated rat liver were investigated during prolonged perfusion and following the injection of norepinephrine. After injection of erythrocytes into the perfusate, the hemoglobin spectra in the liver were measured by Erlangen microlightguide spectroscopy, and the hemoglobin oxygenation (HbO₂) in the liver was calculated on the basis of the Kubelka-Munk theory. During artificial perfusion, the HbO₂ value was decreased from 59.3 +/- 6.4% (after one hour's perfusion) to 25.5 +/- 19.5% (n = 441; after six hours' perfusion). However, when ligustrazine was injected into the perfusate after six hours' perfusion, the HbO₂ values recovered to 56.4 +/- 9.7% (n = 441). After injection of norepinephrine, HbO₂ in the liver decreased from 48.8 +/- 10.4% to 25.2 +/- 18.4% (n = 961), while subsequent administration of ligustrazine caused a recovery to 62.9 +/- 6.0% (n = 961). Our results suggested that ligustrazine is a powerful hepatic vasodilator for improving hepatic oxygenation.

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