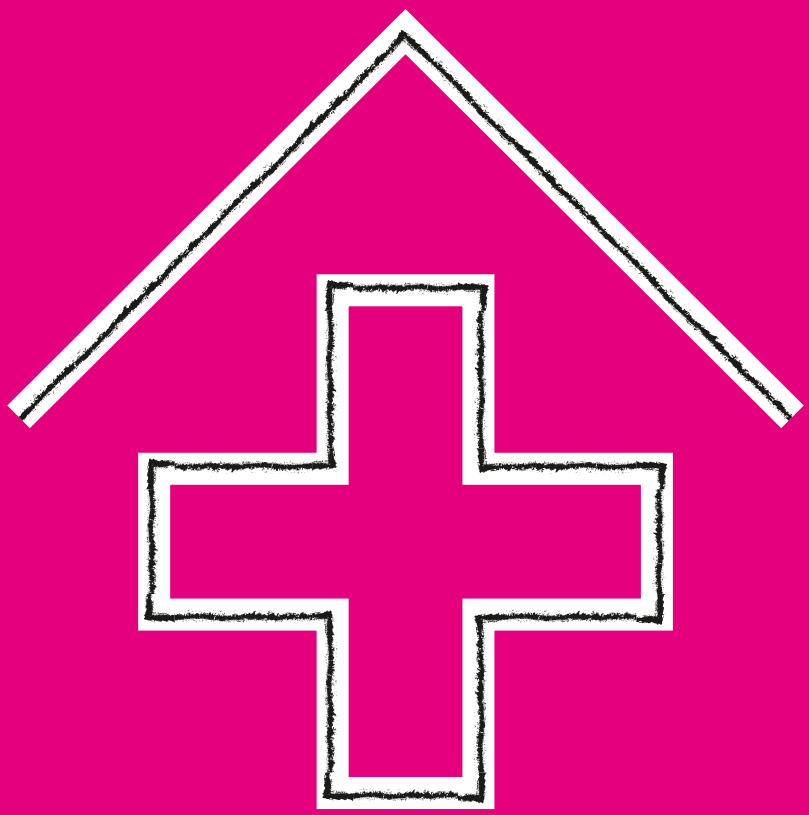
SCIENCE

LOLA VS LACTULOSE TO IMPROVE HEPATIC ENCEPHALOPATHY AND REDUCE HOSPITAL STAY



Abdo-Francis JM, et al. Rev Gastroenterol Mex. 2010;75(2):135-141.

Hepa-Merz®
L-ornithine-L-aspartate

THE NEED TO IMPROVE HE AND REDUCE HOSPITAL STAY

Introduction

Cirrhosis is the sixth leading cause of death in Mexico, and is among the top 10 causes of hospitalization there:

- For patients, longer hospital stays can increase risk of infection, incur higher costs, and interfere with home and work responsibilities
- Hepatic encephalopathy (HE) is a common complication in patients with cirrhosis and a constant cause of hospitalization

Study

Objective

Evaluate the effect of two HE treatments in reducing the number of hospital bed days, time to disease remission, and cost of treatment.

Design

Three-year, retrospective, observational study of 80 HE patients with liver cirrhosis and encephalopathy grades II to IV at the Hospital General de México.

Patient population

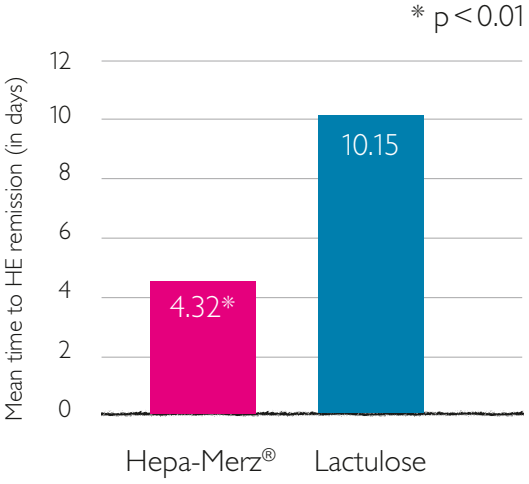
- The causes of cirrhosis were alcohol consumption (n = 58), chronic hepatitis C (n = 8), idiopathy (n = 11), chronic hepatitis B virus infection (n = 2), and primary biliary cirrhosis (n = 1)
- Treatment groups were balanced in regard to patient population size and causes of cirrhosis

Treatment

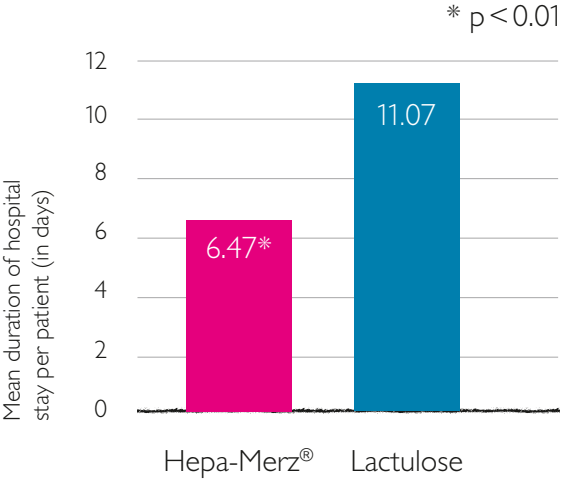
Patients were treated with Hepa-Merz® Granules (3 g orally every 8 hours) or Hepa-Merz® Infusion (10 g intravenously every 8 hours), or with lactulose (20 g orally or by nasogastric tube every 8 hours)

SIGNIFICANT BENEFITS OF HEPA-MERZ® OVER LACTULOSE

Treatment with Hepa-Merz® resulted in shorter recovery time vs lactulose



Patients treated with Hepa-Merz® had significantly shorter hospital stays vs patients taking lactulose



65% of patients given Hepa-Merz® were released from the hospital within one week vs 20% given lactulose (p = 0.004)

Treatment with Hepa-Merz® incurred fewer hospitalization costs vs lactulose

Hepa-Merz®	Lactulose
$79,200 (US Dollars)	$132,900 (US Dollars)

The Hepa-Merz® group had a **40%** lower cumulative treatment cost

Hepa-Merz® resulted in lower per-patient treatment costs compared with lactulose

Hepa-Merz®	Lactulose
$1,980 (US Dollars)	$3,322 (US Dollars)

The Hepa-Merz® group had a **40%** lower per-patient treatment cost

No serious adverse events were recorded with either drug, although there was a higher incidence of diarrhea and softer stool in patients who received lactulose.

Hepa-Merz®
L-ornithine-L-aspartate

Conclusion

The study illustrated that treatment with Hepa-Merz®
had significant benefits for patients, including shorter time to disease remission,
fewer days spent in the hospital, and reduced treatment costs.

Hepa-Merz® Prescribing Information

Hepa-Merz® Granules. Active substance: L-ornithine-L-aspartate. **Composition:** One sachet with 5 g of Granules contains: **Active substance:** 3 g L-ornithine-L-aspartate. **Excipients:** citric acid, saccharin sodium, sodium cyclamate, povidone 25, fructose, flavorings, orange yellow S (E110). Note for diabetics: One sachet of Hepa-Merz® Granules contains 1.13 g of fructose (corresponds to approx. 0.11 BU). **Therapeutic indications:** Treatment of concomitant disease and sequelae due to impaired detoxification activity (e.g. in cirrhosis of the liver) with the symptoms of latent and manifest hepatic encephalopathy. **Contraindications:** Absolute: Hypersensitivity to L-ornithine-L-aspartate, orange yellow S or any of the other excipients. Severely impaired renal function (renal insufficiency). A serum creatinine value over 3 mg/100 ml can be used as a guideline value. Relative: Pregnancy and lactation: No clinical data are available relating to intake of Hepa-Merz® Granules during pregnancy. No exhaustive animal studies have been performed for L-ornithine-L-aspartate, to investigate its toxicity in relation to reproduction. Administration of Hepa-Merz® Granules during pregnancy should therefore be avoided. If, however, treatment with Hepa-Merz® Granules is considered necessary, careful consideration should be given to the benefit versus risk ratio. It is not known whether L-ornithine-L-aspartate is excreted into the breast milk. Administration of Hepa-Merz® Granules should therefore be avoided during lactation. If, however, treatment with Hepa-Merz® Granules is considered necessary, careful consideration should be given to the benefit versus risk ratio. **Undesirable effects:** Uncommon (≥ 1/1000 to < 1/100): Nausea, vomiting, stomach ache, flatulence, diarrhea. Very rare (< 1/10000): Pain in the limbs. These undesirable effects are usually transient and do not require withdrawal of the medicine. Orange yellow S (E110) can trigger allergic reactions. **Warnings:** Hepa-Merz® Granules contain fructose. Patients with rare hereditary problems of fructose intolerance should not take this medicine. **Further precautions:** As a result of the disease, the ability to drive and operate machinery may be impaired during treatment with L-ornithine-L-aspartate.

Hepa-Merz® Infusion concentrate. Active substance: L-ornithine-L-aspartate. **Composition:** One ampoule of 10 ml contains: **Active substance:** 5 g L-ornithine-L-aspartate. **Excipients:** Water for injections. **Therapeutic indications:** Latent and manifest hepatic encephalopathy. **Contraindications:** Absolute: Hypersensitivity to L-ornithine-L-aspartate. Severe renal impairment (renal failure). A serum creatinine level in excess of 3 mg/100 ml can be taken as a guide. Relative: Pregnancy and lactation: There are no clinical data available on the use of Hepa-Merz® Infusion concentrate in pregnancy. L-ornithine-L-aspartate has been investigated for reproduction toxicity only to a limited extent in experimental animal studies. The administration of Hepa-Merz® Infusion concentrate in pregnancy should therefore be avoided. If treatment with Hepa-Merz® is nevertheless thought to be necessary, the benefits and risks should be carefully assessed. It is not known whether L-ornithine-L-aspartate passes into breast milk. Administration of Hepa-Merz® should therefore be avoided during lactation. If treatment with Hepa-Merz® is nevertheless thought to be necessary, the benefits and risks should be carefully assessed. **Undesirable effects:** Uncommon (≥ 1/1000 to < 1/100): Nausea. Rare (≥ 1/10000 to < 1/1000): vomiting. Frequency not known (frequency cannot be estimated from the available data): hypersensitivity, anaphylactic reaction. Generally however, the gastrointestinal symptoms are transient, and do not necessitate discontinuation of treatment. They disappear on reduction of the dose or the infusion rate. **Further precautions:** Hepa-Merz® concentrate for solution for infusion can be mixed with the usual infusion solutions. So far no peculiarities have been observed with regard to miscibility. However, the ampoules should be admixed to the infusion solution only immediately before application. At high doses of Hepa-Merz® Infusion concentrate, serum and urine urea levels should be monitored. If liver function is substantially impaired, the infusion rate must be adjusted to the individual patient in order to prevent nausea and vomiting. Depending on the underlying disease, the ability to drive and operate machines may also be impaired on treatment with L-ornithine-L-aspartate. Hepa-Merz® Infusion concentrate must not be injected into an artery. Status: January 2013. Merz Pharmaceuticals GmbH, 60048 Frankfurt.

Reference: Abdo-Francis JM, Pérez-Hernández JL, Hinojosa-Ruiz A, Hernández-Vásquez JR. Rev Gastroenterol Mex. 2010;75(2):135-141.

For more information, visit **www.merz.com**