



Current Issue

Browse Issues

Search



About this Journal

Instruction to Authors

Online Submission

Subscription

Contact Us



RSS Feed

Acta Medica Iranica

2009;47(4) : 367-372

NADPH Diaphorase staining of the corpus cavernosum in cholestatic rats: Role of nitric oxide and opioid systems

Corresponding Author:

Sadeghipour H

Abstract:

Background: Relaxation of the corpus cavernosum plays an important role in penile erection. Previous studies have suggested that nitric oxide (NO) appears to be the most important relaxant involved in the erection process. The aim of the present study was to evaluate the effect of cholestasis in nNOS and eNOS activity of corpus cavernosum.

Methods: forty-two adult male Sprague-Dawley rats were divided equally into seven groups: control, sham operated, 2-, 7-, and 14-day bile duct-ligated animals, 7-day bile duct-ligated chronically treated with L-NAME (3mg/kg/day, i.p.) and 7-day bile duct-ligated animals chronically treated with Naltrexone (20 mg/kg/day, i.p.). The animals in each group were killed and the cavernosal tissues analyzed histologically by light and transmission electron microscopy, with NOS activity detected on NANC nerves and endothelium using an NADPH-diaphorase staining technique.

Results: our results showed that NADPH diaphorase staining in corporal NANC nerves and endothelium of sham-operated and control group had equal intensity. The staining was more intense in 2-day cholestatic rats than in control group, the staining intensity increased in 7-, and 14-day groups too. There were no significant differences between control group and 7-day cholestatic rats that had been treated chronically with L-NAME or Naltrexone.

Conclusions: These results state that in corpus cavernosum of cholestatic rats there is a time-dependent increase in NOS activity of the corporal NANC nerves and endothelium. inhibition of nitric oxide and endogenous opioids by L-NAME or Naltrexone during cholestasis may play a key role in preventing the adverse effects of cholestasis.

Keywords: Cholestasis, erection, nitric oxide, opioids, naltrexone, corpus cavernosum,

Keywords:

Cholestasis . erection . nitric oxide . opioids . naltrexone . corpus cavernosum

TUMS ID: 12006

Full Text HTML Full Text PDF 570 kB

top ▲

[Home](#) - [About](#) - [Contact Us](#)

TUMS E. Journals 2004-2009
Central Library & Documents Center
Tehran University of Medical Sciences

Best view with Internet Explorer 6 or Later at 1024*768 Resolutions