Portal Hypertensive Colopathy

Thesis

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Degree in Tropical Medicine

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ALT: Alanine transaminase

ANG II : Angiotensin II

ANP : Atrial natriuretic peptide

AST: Aspartate transaminase

AT 1: Angiotensin receptor 1

AV: Atrioventricular

CO2 : Carbon dioxide

CO: Carbon monoxide

C GMP: Cyclic Guanosine Monocyclase

CNS : Central nervous system

CSPH : Clinically significant portal hypertension

C.T. : Computerized tomography

DNA : Deoxy ribonucleic acid

EDRF: Endothelin derived growth factor

EIS: Endoscopic injection sclerotherapy

ET: Endothelins

EUS : Endoscopic ultrasound

EVL: Endoscopic variceal ligation

FHVP: Free hepatic venous pressure

GFR: Glomerular filtration rate

HCV : Hepatitis C virus

HGF: Hepatocyte growth factor

HSC: Hepatic stellate cells.

HT : Hydroxytryptamine

HVPG : Hepatic venous pressure gradient

IGF: Insulin like growth factor

IMN: Isosorbide mononitrate

IV: Intravenous

LGV: Left gastric vein.

LPS: Lipopolysaccharide

L/ min.: Litre/ minute

MRA: Magnetic resonance angiography

M RNA: Messenger ribonucleic acid

NIEC: North Italian endoscopic Club

N/e NOS: Neuronal /endothelial nitric oxide synthase.

NO : Nitric oxide

PDGF : Platelet Derived Growth Factor

PF: Portal fibroblast/ platelet factor

PHC: Portal hypertensive colopathy

PHG: Portal hypertensive gastropathy

PHT: Portal hypertension

PSS: Portosystemic shunts

P.V.: Portal vein.

RCTs: Randomized controlled trials

SMV: Superior mesnteric vein

S.V.: Splenic vein

TGF: Transforming growth factor

TIMPs : Ttissue inhibitor metalloproteins

TIPS : Transjugular intrahepatic portosystemic shunts

TPA : Tissue plasminogen activator

UPA : Uroplasminogen activator

VEGF: Vascular endothelial growth factor

WHVP: Wedged hepatic venous pressure

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Abstract

Aim: In patients with liver cirrhosis and portal hypertention, portal hypertensive colopathy is thought to be an important cause of lower gastrointestinal hemorrhage. In this study, we evaluated the prevalence of colonic mucosal changes in patients with liver cirrhosis and its clinical significance. **Methods:** We evaluated the colonoscopic findings of 40 patients with liver cirrhosis and portal hypertension. All patients underwent upper GIT endoscopy to detect the presence of esophageal varices, cardiac varices, and congestive gastropathy, as well as a full colonoscopy to detect changes in colonic mucosa with endoscopic biopsy from the rectum and sigmoid as well as from areas with lesions excluding angiodysplastic area. **Results:** Colonic lesions were found in 29 patients (72.5%), including hemorrhoids in 17 patients (42.5%), diffuse hyperaemic colonic mucosa in 16 patients (40%), angiodysplastic lesions in 13 patients (32.5%) and rectal varices in 7patients (17.5%). Bleeding per rectum was detected in 8 patients (20%), significant correlation between rectal bleeding and the presence of hemorrhoids, rectal varices and severity of colopathy has been found in this study. histopathological changes were detected in 34 patients (85%). Significant correlation between presence of colonoscopic lesions and histopathological changes were demonstrated by this study. The prevalence of portal hypertensive colopathy increased with worsening Child-Pugh class and with the presence of esophageal varices. Angiodysplastic lesions but not portal hypertensive colopathy was statistically correlated with platelet count.

Key words: Portal hypertension - Colopathy

Introduction

Portal hypertension is a frequent complication of chronic liver disease, detected not only in schistosomiasis but also in cirrhosis of any etiology ***(Ito et al., 1995).***

Various vascular abnormalities have been observed in the mucosa of upper gastrointestinal tract of cirrhotic patients, including gastroesophageal varices and gastric antral vascular ectasia. These vascular lesions account for most of the upper gastrointestinal bleeding in cirrhotic patients **(Gostout et al., 1993 and Viggiano et al., 1992).**

Other parts of the GI mucosa such as the duodenum and jejunum ***(Gupta et al.,1996 and Misra et al.,1997)*** and the colon (portal hypertensive colopathy) ***(Bini et al.,2000 and Misra et al.,2003)*** have also been noted to be affected because of portal hypertension. There are reports of bleeding from mucosal lesions in the colon, anorectal and colonic varices. ***(Misra et al.,2002).*** Thus, it appears that the entire GI tract that drained by the portal venous system is affected in patients with portal hypertension (portal hypertensive intestinal vasculopathy) ***(Misra et al., 1996).***

In patients with portal hypertension, colonic mucosal erythema and ectasia, colorectal varices and hemorrhoids have been described**.** All these