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CATEGORY : VASCULAR INTERVENTION

TITLE

Risk factors for portal vein system thrombosis after partial splenic embolization in cirrhotic patients with hypersplenism

BACKGROUND

Hypersplenism is a common complication in patients with liver cirrhosis. partial splenic artery embolization (PSAE) is a preferred strategy for cirrhotic patients with hypersplenism. The risk factors for PVST have not been clearly identified in cirrhotic patients treated by PSAE until now. Thus, screening high-risk populations for PVST was not recommended in cirrhotic patients receiving PSAE. The aim of the present study was to determine the risk factors for PVST, and to identify high-risk populations in daily practice.

METHODS

Between March 2014 and February 2022, 428 cirrhotic patients with hypersplenism underwent partial splenic artery embolization and from these patients 208 were enrolled and 220 were excluded. Medical records of enrolled patients were collected. Computed tomography (CT) images were reviewed by two blinded, independent radiologists. Statistical analyses were performed by using SPSS.

RESULT

Progressive PVST was observed in 18.75% (39/208) of cirrhotic patients after PSAE. No significant differences in peripheral blood counts, liver function biomarkers, and renal function were observed between the patients with progressive PVST and the patients without progressive PVST. The imaging data showed significant differences in PVST, the diameters of the portal, splenic, and superior mesenteric veins between the progressive PVST group and non-progressive PVST group. Univariate and multivariate analysis demonstrated portal vein thrombosis, spleen infarction percentage, and the diameter of the splenic vein were independent risk factors for progressive PVST. Seventeen of 173 (9.83%) patients showed new PVST. The growth of PVST was observed in 62.86% (22/35) of the patients with pre-existing PVST. Spleen infarction percentage and the diameter of the splenic vein were independent risk factors for new PVST after PSAE.

CONCLUSIONS

The present study demonstrated portal vein thrombosis, spleen infarction percentage, and the diameter of the splenic vein were independent risk factors for PVST after PSAE in cirrhotic patients with hypersplenism.

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