

Variceal embolization via periumbilical vein in portal vein thrombosis with variceal hemorrhage

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Anticoagulations are commonly indicated in cirrhotic patients with portal vein thrombosis. However, the safety of anticoagulation in patients with variceal hemorrhage complicating portal vein thrombosis. This report describes a case of variceal embolization via periumbilical vein as prophylactic therapy of variceal hemorrhage during anticoagulation therapy. A 59-year-old woman presented to our clinic with hematemesis and melena. Urgent esophagogastroduodenoscopy(EGD) revealed esophageal varices with stigmata of recent hemorrhage. The stigmata of esophageal varices were treated with endoscopic variceal ligation. Abdominal computed tomography(CT) to identify the cause of esophageal varices demonstrated thrombosis of the main and both intra-hepatic portal vein with cirrhosis. To reduce the risk of esophageal variceal hemorrhage during anticoagulation therapy, the patient underwent variceal embolization via recanalized paraumbilical vein. The periumbilical vein was punctured, and a 5-Fr sheath and intracranial support catheter was inserted into the left gastric vein through the periumbilical vein and main portal vein. Venography was performed to demonstrate esophageal varices, and varices were embolized by coil. Abdominal CT and EGD performed after the variceal embolization revealed that obliteration of esophageal varices and resolved varices. The patient received anticoagulation therapy for 3 months and the follow up CT demonstrated regression of portal vein thrombosis. Patients involved portal vein thrombosis with variceal bleeding could be considered variceal embolization via periumbilical vein as the prophylaxis of variceal bleeding during anticoagulation therapy.



Adjuvant Gemcitabine versus 5-FU/Leucovorin based on hENT1 expression of Resected Pancreatic Cancer

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Background/Aims: The human equilibrative nucleoside transporter (hENT1) is a major transporter responsible for gemcitabine uptake into cells. High expression of hENT1 was associated with better disease-free survival and overall survival in pancreatic adenocarcinoma patients who receive adjuvant gemcitabine therapy in cohort studies. However, the role of hENT1 as a predictive biomarker in prospective study has not been elucidated. Here, we examined overall survival (OS) and recurrence free survival (RFS) in patient who receive adjuvant chemotherapy based on hENT1 expression. **Methods:** We enrolled 44 patients who received curative surgery (R0 or R1) for pancreatic cancer at Seoul National University Bundang Hospital from 2015 to 2017. Based on hENT1 immunostaining, patients were assigned in high ($\geq 50\%$) vs. low ($<50\%$) hENT1 group. High hENT1 group received gemcitabine (1,000mg/m² intravenous infusion given day 1, 8, 15) every 4 weeks for 6 cycles ($n=18$) and low hENT1 group received 5-FU plus leucovorin (5-FU 425mg/m² intravenous infusion given day 1-5 days, leucovorin 20mg/m² given day 1) ($n=26$). Primary endpoint was recurrence free survival. **Results:** The median follow-up period was 15.9 months. Overall survival (OS) was 97.4% at 12 months and 86.4% at 24 months. Recurrence free survival (RFS) was 76.8% at 12 months and 64.2% at 24 months. Although it is preliminary data, it showed better OS and RFS compared with previous study (Neoptolemos JP et al., JAMA, 2010) (OS 61.3% at 12 months and 30.7% at 24 months; RFS 58.7% at 12 months and 30.1% at 24 months). **Conclusion:** Adjuvant chemotherapy based on hENT1 expression results in improved OS and RFS in resected pancreatic cancer. The results suggest the usefulness of hENT1 immunostaining in deciding adjuvant chemotherapy regimen of pancreatic cancer. (ClinicalTrials.gov number, NCT02486497)

