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JACC April 5, 2011

Volume 57, Issue 14



SAFETY OF TRANSRADIAL CARDIAC CATHETERIZATION IN PATIENTS WITH END-STAGE LIVER DISEASE

i2 Poster Contributions

Ernest N. Morial Convention Center, Hall F

Tuesday, April 05, 2011, 9:30 a.m.-10:45 a.m.

Session Title: Vascular Access, Closure Devices, Complications

Abstract Category: 24. Vascular Access, Closure Devices and Complications

Session-Poster Board Number: 2518-537

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Background: Patients with end-stage liver disease (ESLD) are at increased bleeding risk due to coagulopathy and thrombocytopenia. Pre-transplant workup frequently requires cardiac catheterization. Transradial access is associated with less bleeding than femoral access. This study sought to investigate the safety of transradial cardiac catheterization in patients with ESLD.

Methods: Consecutive patients with ESLD who underwent cardiac catheterization via transradial access between 2/08 and 7/10 were included in this study. The primary outcome measure was major bleeding defined as a decrease in hemoglobin of more than 3 g/dL or need for transfusion of 2 or more units of packed red blood cells within 72 hours of the procedure.

Results: A total 81 patients were enrolled in the study. The mean age 59 ± 8 years and 58% were male. The primary outcome measure occurred in 9 patients (11.1%). However, only 3 (3.7%) patients had met criteria by a drop in hemoglobin of 3 g/dL in the post-procedural period. Furthermore, only 1 patient was noted to have bleeding at the radial site, which ceased shortly after transfusion of 1 unit of single-donor platelets. The mean difference between pre- and post-procedural hemoglobin was $0.59 \pm \text{SD } 0.85$ ($p < 0.0001$). Of note, all transfusions except for one were given for severe chronic anemia rather than direct bleeding complications attributable to transradial catheterization. The one case with bleeding was related to femoral venous access. There were no other procedural complications observed. There were no cases of hypovolemic shock. Four patients expired (4.9%) prior to discharge, however none were attributable to complications of catheterization.

Conclusions: Although 11.1% of patients met the primary outcome measure, the majority met criteria via transfusion requirements, and not necessarily bleeding at the access site. Despite coagulopathy and thrombocytopenia, with proper procedural technique transradial cardiac catheterization may be performed safely in patients with ESLD.