Bleeding Risk and Major adverse Events in Patients with Cancer on Oral Anticoagulation Therapy

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**Background:** Malignancy is a well-established hypercoagulable state that predisposes to thromboembolisms. However, the efficacy of oral anticoagulation therapy (OAT) might be influenced by the type, treatment, and duration of cancer in atrial fibrillation (AF) patients with newly diagnosed malignancies.

**Objective:** To evaluate the thromboembolic and bleeding events, in patients with cancer and a history of AF according to whether or not they received OAT.

**Methods:** In 2,168 consecutive non-valvular AF patients with newly diagnosed malignancies, we analyzed the composite endpoints including major adverse cardiac events (MACEs) and major bleeding.

**Results:** The CHA2DS2-VASc and HAS-BLED score were higher in patients with OAT (OAT+, n = 1,182) than without (OAT-, n = 936). During a follow up period of 3.9±2.8 years, 142 (12%) and 88 (9%) patients had MACEs in the OAT+ and OAT- groups, respectively (p = 0.055). The incidence of major bleeding (11% vs. 8%, p = 0.023) and composite endpoints (21% vs. 16%, p = 0.002) was significantly higher in the OAT+ than OAT- group. OAT increased the adjusted hazard ratio (relative risk 1.241, 95% CI 1.01 to 1.53, p = 0.04) for composite endpoints. During the year after the cancer diagnosis, the optimal INR level was achieved in only 288 (24%) patients, and the annual incidence of MACEs and major bleeding was 34.7% and 29.2%, respectively. OAT+ significantly increased MACEs in stomach and renal cancer (all p < 0.05).

**Conclusions:** In AF patients with newly diagnosed malignancies, OAT did not improve the composite endpoint including MACEs and major bleeding during the first year of a cancer diagnosis because of an INR variability. Therefore, careful and meticulous control of the INR is needed in these patients. Moreover, OAT might fail to prevent MACEs in specific types of cancers.

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Mid-term Results of Endovascular Treatment for TASC type D Aorto-iliac CTO Lesions

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**Background:** Endovascular treatment for TASC type D aorto-iliac chronic total occlusion (CTO) lesions is the challenging treatment modality for treating intermittent claudication or critical limb ischemia. We report the clinical and patency results of stent placement for TASC type D aorto-iliac CTO.

**Methods:** This was the observational study between Jul. 2006 and Nov. 2013. Total 40 patients (34 male and 6 female; 69 years of a mean age; 58 limbs) treated with stent placement were analyzed retrospectively. This study was composed of patients with TASC type D aorto-iliac CTO that had more than 10 cm in the lesion length. Demographics, clinical presentation, classification, comorbidity, ankle-brachial index (ABI) before and after treatment, technical success, patency, restenosis, and complications between groups were recorded at follow-up.

**Results:** Study group consisted of 40 patients with 58 treated limbs. The number of patients with claudication and critical limb ischemia were 35. Many patients (27, 67.5%) had diabetes, and over three-fourth of patients (31, 77.5%) were current smoker. Technical success rate was 94.8% (55/58 limbs). No periprocedural complications had occurred at study group. Three type approach methods were tried. Contralateral approach was used 82.8% (48/58 limbs), Both contralateral and ipsilateral approach was used 12.1% (7/58 limbs). When contralateral approach had failed, left brachial approach was adopted in 7 limbs. The technical success rate of brachial approach was 100% (7/7). Mean procedural time was 136.9±50.7 minutes Mean amount of contrast media was 223.9±87.7 mL. Lesion length of CTO was 114.4±17.7 mm. During hospital stay, 6 patients had anemia need blood transfusion, and contrast induced nephropathy occurred in 2 patients. The mean duration of follow up was 13.2 month. ABI increased from 0.5±0.25 to 0.9±0.13. An angiographic follow up was done on 6-9 months for 83.7% of all patients (31/37). The primary patency was 94.5% (52/55) and 100% of secondary patency. A restenosis rate was 15.2% (7/46 limbs), Target lesion revascularization was 5.5% (3/55).

**Conclusions:** Our results suggest that endovascular treatment for TASC type D aorto-iliac CTO lesions is a good and safe treatment modality.