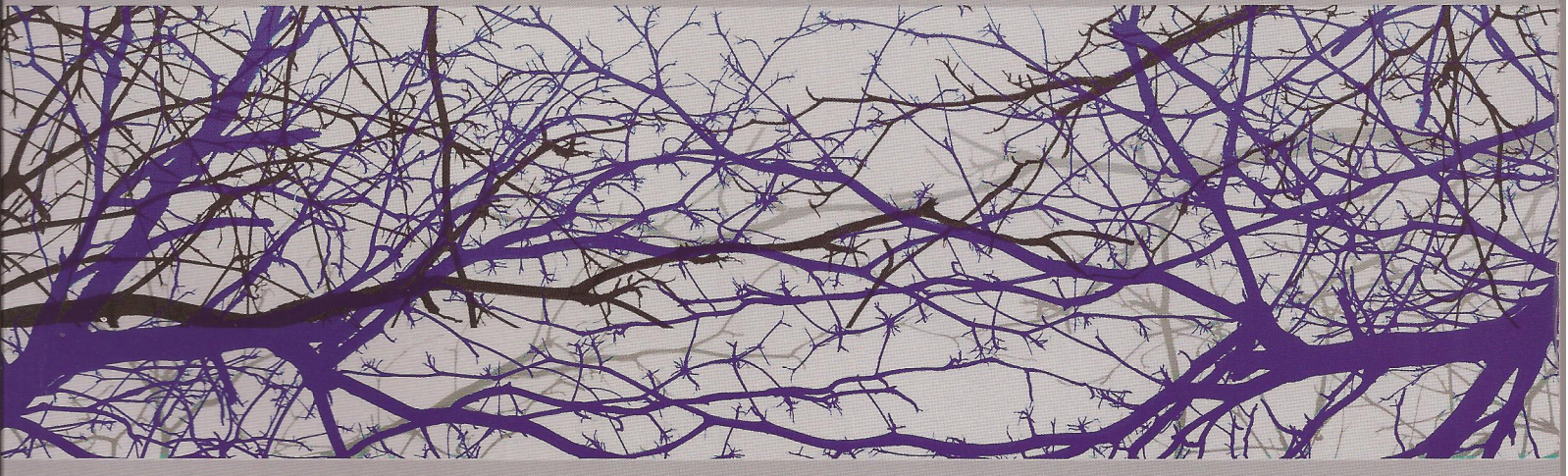
volume 24 • number 1S • November 2016

VASCULAR



Official Journal of The International Society for Vascular Surgery

ISSN: 1708-5381 | vas.sagepub.com

Result: A series of 20 patients (14 men, mean age 52 years) were treated between June 2008 and January 2016. The pathologies were aneurysmal disease (thoracoabdominal aortic aneurysms) (9, 45%), aortic dissection (thoracoabdominal aortic dissection) (8, 40%) or true/false aneurysm formation after Takayasu's arteritis (3, 15%). Hybrid procedure (14, 70%) and total endovascular procedure (6, 30%) were performed. The mean follow-up was 23.5 months (range 1–72). The technical success was 100%. Stent grafts were implanted in the entire or part of the thoracoabdominal aorta. The overall mortality rate was 10% (2/20). The permanent paraplegia and bypass graft occlusion rate was 0%. The overall morbidity was 30% with two endoleaks (2/11, 18.2%).
Conclusion: Hybrid procedures can minimize surgical invasiveness and it is safe and reliable, total endovascular repair is an entire minimal procedure but depends on improvement of stent-graft, both techniques are feasible with acceptable morbidity and mortality.

Variability of origin of the supra-aortic trunks from the aortic arch

G. Nano[1,2], D. Mazzaccaro[1], M. Sciarrini[2], S. Stegher[1] and G. Malacrida[1]
[1]First Unit of Vascular Surgery, IRCCS Policlinico San Donato, San Donato Milanese, Milan, Italy
[2]University of Milan, Milan, Italy

Aim: To assess if the anatomic variability of the supra-aortic trunks (SAT: brachio-cephalic trunk, BCT; left common carotid artery, LCCA; left subclavian artery, LSA) emerging from the aortic arch in terms of mutual distances starting from the aortic valve (AV), ostial diameters, and clockface orientation from the sagittal aortic axis follows a Gaussian pattern.
Methods: Measurements of 252 Computed tomography angiograms of the aortic arch and SAT in three groups of patients (84 without any pathology of the aortic arch, group A; 84 with either dilatation or dissection of the aortic arch, group B; 84 with either dilatation or dissection of the descending thoracic aorta below the LSA, group C) were retrospectively collected and analyzed using JMP®5.1.2. The Shapiro-Wilk test was used to assess normality of each distribution.
Results: The ostial diameters of the SAT followed a Gaussian distribution in all groups. In group A, only BCT-AV and LCCA-LSA distances were "normal", being in 95% of cases between 60.5–75.8 mm and 12.2–18 mm respectively. In both groups B and C, the distance BCT-AV and the onset angle of both LCCA and LSA were "normal" (95% confidence intervals: 65.1–86.2 mm, −1.8°−19.1° and −8.7°−11.9° respectively in group B; 67.8–86.7 mm, −9.6°−14.1° and −8.4°−9.4° respectively in group C). BCT-AV distance and BCT angle were lower in group A if compared to group B ($P < .001$ and $P = .008$ respectively) and C ($P < .001$ and $P = .04$ respectively). Irrespectively of the group, all SAT mutual distances and ostial diameters were significantly related to the aortic diameters, being greater for increasing aortic diameters. Neither BCT angle nor LSA angle were related to the aortic diameters, while LCCA angle was inversely correlated.
Conclusion: A huge variability was recorded in the origin of the SAT from the aortic arch in terms of mutual distances and clockwise orientation, both in healthy and in diseased patients.

Endovascular repair of isolated aberrant right subclavian artery injury. Reporting of 2 cases

Spyridon Monastiriotis
Stony Brook Medicine, Stony Brook, New York

Abstract: An aberrant right subclavian artery (ARSA) is present in 0.5–2.0% of population. In case of trauma involving the chest or the neck this anatomic variant poses extra challenge in recognition and treatment of an arterial injury. Usually an ARSA injury is associated with blunt traumatic aortic injury. An isolated ARSA traumatic injury is extremely rare therefore there are no reported cases in the literature describing its management using endovascular techniques. We report 2 cases of traumatic injury to the ARSA associated with pseudoaneursym formation distal to the vessel takeoff from the aortic arch. The first patient acquired the arterial injury after penetrating gunshot wound to the base of the neck while the second patient had a blunt injury mechanism associated with a high speed motor vehicle accident. Both patients were treated successfully with a covered stent placement in the ARSA via femoral access. None of the patients developed neurological symptomatology compatible with posterior circulation ischemia. We conclude that endovascular repair using a covered stent is a valuable option with high technical success and low risk for neurologic complications.