

World Hypertension Congress 2013

Dünya Hipertansiyon Kongresi 2013

Hypertension affects more than 1.5 billion people worldwide. The World Health Organization (WHO) recognized hypertension as the number one cause of preventable deaths. While significant efforts are made in most of the Western countries to contain the prevalence and incidence of hypertension, the problem is actually on the incline in the developing countries (1).

The objectives of the World Hypertension League (WHL) are to promote the detection, control and prevention of arterial hypertension in populations. The WHL is a federation of leagues, societies, and other national bodies devoted to this goal. The thrust of the WHL's action is in liaison with the member organizations, promoting the exchange of information among them, and offering internationally applicable methods and programs for hypertension control. Bringing together and stimulating organizations committed to the control of hypertension is the goal and raison d'être of the WHL. The WHL is a division of the International Society of Hypertension (ISH), and is in official relations with the WHO.

The WHL hosts the World Hypertension Congress (WHC) to raise the public awareness and to engage the policy makers to address hypertension prevention and control at the national, regional and community level. In our continuing efforts, the WHL jointly with the Association of Hypertension Control (AHC) is pleased to host the World Hypertension Congress 2013 in İstanbul, Turkey, June 27- 30.

WHC2013 is very important for two reasons in particular for İstanbul: joint meetings with other countries hypertension societies during the congress and public awareness day of WHC.

WHC2013 is supported by many hypertension societies of different countries and civil societies. During the congress, many countries are designing joint meetings to collaborate and cooperate against hypertension.

One whole day is for public awareness in a parallel hall during the main sessions for health professionals are continuing their scientific program. On 29 June 2013, public will attend to the public seminars, workshops. Public will have a chance to learn from professionals that how they can prevent hypertension.

Our aim is to create the awareness of hypertension in Turkey with the basic messages as follow:

- √ Watch your weight
- √ Make healthy food choices
- √ Live an active life

WHC2013 web page (www.whc2013.org) is ready and abstract submission is opened (<http://www.whc2013.org/abstracts>).

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The difficulties during transcatheter aortic valve implantation and appropriate precautions

Transkateter aort valve implantasyonunda karşılaştığımız zorluklar ve uygun yaklaşımlar

Transcatheter aortic valve implantation (TAVI) was first applied in humans in 2002 by Cribier et al. (1) Ever since it became an effective treatment option for patients who have severe aortic stenosis with high surgical risk or contraindications to the standard surgery.

TAVI was performed in 48 high-risk (EuroSCORE 24.83±9.48) patients from October 2010 to July 2012 at our institution. The Edwards SAPIEN (n: 39) and the Medtronic CoreValve (n: 9) prostheses were implanted by transfemoral (n:46) or transapical (n: 1) and subclavian (n: 1) access (28 males and 20 females, mean age 77.40±6.16 years). The hemodynamic parameters and functional capacities of the patients improved and our success rate was parallel to the other institutions (2).

In one of our patients, who had a bilateral aorta-iliac vascular graft, a transfemoral TAVI was successfully performed through the left femoral artery and the left graft. An Amplatz super stiff guide wire used to support the valve system further and to straighten the arterial tortuosity for this and the other patients who had similar iliac artery tortuosity. In another patient with bilateral iliac artery stenosis, transfemoral TAVI was successful following percutaneous balloon dilatation (3). TAVI still can be applied successfully together with peripheral arterial percutaneous intervention. Since the presence of concomitant peripheral artery disease also increases the procedural risk of TAVI, a combined strategy to treat both entities needs to be carefully considered. A female patient with Heyde Syndrome, in which gastrointestinal (GIS) bleeding is common due to GIS angiodysplasia, had Edwards SAPIEN valve placed and thus, both the aortic stenosis and GIS bleedings were treated by this intervention.

TAVI is an alternative therapy in patients with severe aortic stenosis (AS) and high surgical risk (4). Despite continuous improvements in operators' expertise and device technology, complications associated with TAVI are not uncommon. Pericardial effusion and tamponade developed in one of our patients four hours following the procedure. This complication was attributed to the placement of temporary pacemaker. It was sufficiently treated by pericardiocentesis. Left main coronary artery occlusion was caused by a plaque shift from native valve during the implantation of an Edwards SAPIEN valve in one of our female patients (5). This complication was immediately recognized and a stent was implanted. The best way to avoid this extremely serious complication is to perform a preliminary multislice CT scan measurement of the distance from the aortic annulus to the coronary ostia, which should be greater than 8 mm. Coronary artery cannulation is the main problem in such complication. In one of our patients, Edwards SAPIEN prosthetic valve dislocated to the left ventricular outflow tract with hemodynamic collapse four hours following the implantation and the valve embolized into the left ventricle (LV) during resuscitation. During the implantation of Edwards SAPIEN prosthesis, the fluoroscopic angle in which three of the valves are situated on the same plane should be used. Approximately two-thirds of the stent should be positioned below the plane of the leaflet insertion for optimal positioning prior to balloon inflation. The surgical repair was successful. A multidisciplinary team with surgical backup should be ready during the TAVI.

TAVI is becoming a more frequent procedure in the country. Overall, 350 cases have been performed so far. The indication for implanting this device should be assessed carefully by the cardiac surgeons and car-

diologists. Aortic valve replacement has proven efficacy and should always be the first treatment option; TAVI should be considered only in patients with high risk.

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A challenging case of transcatheter aortic valve implantation under left main coronary artery protection

Sol ana koroner arter koruması altında yapılan zorlu bir transkateter aort kapak implantasyon vakası

For patients presenting with severe aortic stenosis having high risk for surgery transcatheter aortic valve implantation (TAVI) is an alternative therapy. TAVI is associated with major complications including, valve embolization, stroke, perforation, coronary obstruction, atrioventricular block (1-5). Herein we presented a case of aortic stenosis that had a small distance of coronary to annulus, treated successfully with transfemoral TAVI under left main coronary artery (LMCA) protection.

An 85-year-old man with severe symptomatic aortic stenosis presented with dyspnea and angina despite medical treatment. The patient had high risk for surgery. Computed tomography demonstrated moderate tortuosity of iliac arteries. The annulus diameter was measured 23mm at transesophageal echocardiography. The annulus to LMCA ostial distance was measured 10 mm on aortography (Fig. 1A). Thus transfemoral TAVI with 26 mm Edwards Sapien XT valve was planned after informed consent was taken. The transient pacemaker was implanted through left femoral vein to apex of right ventricle. A 6F sheath was introduced to the left and right common femoral arteries under fluoroscopy. A pigtail catheter was introduced to the ascending aorta through left femoral artery. The transient pacemaker was implanted to the right ventricular apex. A Judkins right-4 catheter was introduced to the ascending aorta over a regular 0.38 guide wire from right common femoral artery. The guide wire was exchanged with a 0.035 Amplatz extra stiff guide wire than 6F sheath was exchanged with E-sheath. The calcified left coronary cusp partially obstructed the left main coronary ostium during the aortic balloon valvuloplasty without hemodynamic compromise (Fig. 1B, Video 1. See corresponding video/movie images at www.anakarder.com). Because of the risk of LMCA obstruction a 7F catheter was introduced to the left common femoral artery than LMCA was engaged with a 7F Judkins left 4 guiding catheter. The floppy coronary wire was advanced through the LMCA to the left anterior descending coronary artery (LAD) and a 3.0x15 mm coronary balloon was crossed to the LAD over the guide wire (Fig. 2A, Video 2. See corresponding video/movie images at www.anakarder.com). Then guiding catheter was disengaged 1 cm above from LMCA ostium. The valve was successfully implanted (Fig. 2B, Video 3. See corresponding video/movie images at www.anakarder.com). Control angiography showed patent LMCA thus the guide wire and balloon was removed (Fig. 2C, Video 4. See corresponding video/movie images at www.anakarder.com). Control aortography revealed successfully implanted aortic bioprosthetic valve with patent coronary arteries (Fig. 2D).

Left main coronary artery obstruction is a life treating complication of TAVI, associated with inappropriately high positioning of valve, embolization of atheroma, calcium, thrombus, narrow sinus of Valsalva, bulky leaflet calcifications, and low-lying coronary ostia (1-5). It is crucial to assess these factors before the procedure. Also aortography during the balloon valvuloplasty is important to determine this complication. During balloon aortoplasty bulky leaflets may transiently occlude the LMCA ostium. This patient had enough coronary ostia to annulus diameter. During the balloon angioplasty, the LMCA ostium was transiently narrowed without hemodynamic compromise. Hence, the implantation of the valve was conducted under the protection of LMCA.

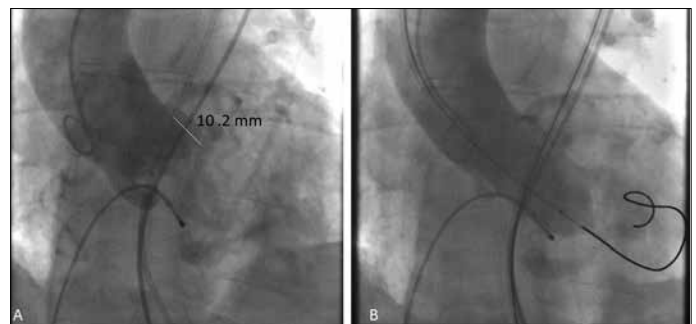


Figure 1. A) The annulus to left main coronary artery ostia distance was measured 10mm on aortography. B) The calcified left coronary cusp partially obstructed the left main coronary ostium during the aortic balloon valvuloplasty