

## Kompleksna aortna patologija sa dodatcima (AVR, MVrep, TVrep, Karotido-subklavijski bajpas)

### Complex case of aortic disease with some extras (AVR, MVrep, TVrep, Carotidosubclavian bypass)

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**Uvod:** Ekstenzivna aortalna patologija s pratećim valvularnim bolestima je izazov za kirurga. Pažljivo i detaljno planiranje procedura te temeljita preoperativna dijagnostika su esencijalni za krajnji ishod.<sup>1,2</sup>

**Prikaz slučaja:** Prezentiramo slučaj 45-godišnjeg muškarca koji je pod kontrolama kardiologa od ranog djetinjstva te je u devetoj godini života operiran zbog koarktacije aorte. Pod kliničkom slikom kroničnog srčanog zatajavanja hospitaliziran je u hitnoj službi. MSCT angiografijom verificirana je aneurizma descendentne aorte 88 mm x 85 mm uz stenozu luka proksimalno od lijeve arterije subklavije do 22 mm. Ehokardiografski EF 40%, LA 5,1 cm, Lvd 6,2 cm, LVs 5 cm, sklerotična bikuspidna aortalna valvula, PPG 41mmHg, MPG 29 mmHg, area 1,2 cm<sup>2</sup>, AR 2+, MR3+, VC 6 mm, TR u tragu. Planiran je elektivan zahvat. Pod direktnom kontrolom oka postavljen je E-vita open plus stent graft (JO TEC GmbH, Germany, Hechingen) dijametra 24 mm, luk aorte zamijenjen mobilnim dijelom E-vita open plus stent-grafta te su supraaortalne grane reimplantirane koristeći "island" tehniku u cirkulacijskom arestu (55 min) s bilateralnom anterogradnom cerebralnom perfuzijom uz umjerenu hipotermiju (28°C). Učini se i zamjena aortalnog zaliska (Carbomedics Mechanical 21), anuloplastika mitralnog zaliska s umetanjem prstena (Carpentier Edwards Physio II ring 30 mm) i anuloplastika trikuspidnog zaliska s umetanjem prstena (Edwards MC3 Tricuspid Annuloplasty System 30 mm). Lijevo karotido-subklavijalano premoštenje učinjeno je radi kreiranja bolje landing zone E-vita open plus stent grafta (zona II).

Pacijent se dobro oporavio nakon operacije te je postoperativni UZV srca pokazao urednu funkciju zalistaka te odličnu poziciju stent grafta s kompletnim isključenjem aneurizme iz cirkulacije. Pacijent je otpušten kući sedam dana nakon operacije te je bez komplikacija nakon dosadašnjeg praćenja od tri mjeseca.

**Zaključak:** Detaljno planiranje ekstenzivnog i zahtjevnog kardiokirurškog zahvata može utjecati na uspješan ishod.

#### LITERATURE

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**Introduction:** Extensive aortic pathology with concomitant valvular disease is a challenge for the surgeon. Careful and detailed planning of procedures and thorough preoperative diagnostics are essential for the outcome.<sup>1,2</sup>

**Case report:** We present a case of a 45-year-old male who is under cardiologist control since early childhood and was operated due to aortic coarctation at the age of nine. He presented to the emergency room with chronic heart failure symptoms. MSCT angiography showed aneurysm of descending aorta 88mm x 85mm and stenosis of the arch proximal to the left subclavian artery up to 22 mm. Transthoracic/transoesophageal echocardiography revealed EF 40%, LA 5.1 cm, Lvd 6.2 cm, LVs 5 cm, aortic valve bicuspid, sclerotic PPG 41 mmHg, MPG 29 mmHg, area 1.2 cm<sup>2</sup> AR 2+, MR 3+ VC 6mm, TR trace. Elective surgery was planned. Under direct visualization a size 24 E-vita open plus stent graft (JO TEC GmbH, Germany, Hechingen) was deployed, aortic arch was replaced with the vascular part of the E-vita open plus, and supraaortic branches were reimplanted using the island technique in circulatory arrest (55 min) with bilateral antegrade cerebral perfusion and moderate hypothermia (28°C). Aortic valve replacement (Carbomedics Mechanical 21), mitral valve repair (Carpentier Edwards Physio II ring 30 mm), tricuspid valve repair (Edwards MC3 Tricuspid Annuloplasty System 30 mm) were done respectively. Left carotido-subclavian bypass was performed to ensure better landing zone for the Evita open plus stent graft (zone II).

The patient recovered well from surgery and postoperative ECHO has shown normal function of valves with perfect position of the stent graft with complete exclusion of the aneurysm from circulation. The patient was discharged home seven days after surgery, and was without complications after three months follow up.

**Conclusion:** Detailed planning of extensive cardiac surgery procedure can predict successful outcome.