abnormality in heart conduct system. The patient in this case is a 15-year-old male with 17 mm perimembranous ventricular septal defect (VPSD) accompanied with critical pulmonary valve stenosis (PS) and II II auriculo-ventricular block (AVB). Having denied prophylactic permanent pacemaker implantation and open chest operation repair, this patient later was performed percutaneous balloon pulmonary valvuloplasty (PBPV) and subsequently transcatheter closure of VSD with a special designed 24 mm modified Amplatz perimembranous VSD occluder without obvious residual intracardiac shunting and residual pulmonary valve stenosis (after 2nd stage PBPV). Transient complete heart block and junctional escape rhythm were developed one day after procedure and recovered 7 days later. During 4-year follow-up, no sequel was revealed by regular and ambulatory ECG monitoring. Placement of device confirmed satisfactory and no residual intracardiac shunting or heart valves regurgitation was detected echocardiographically. We deduced that the II II AVB might be congenital and stable in this case. In our opinion, transcatheter closure of large VSD (>15 mm) and/or obviously ECG abnormality in heart conduct system appears to be an alternative option for carefully selected patients who are not willing to undergo surgical repairs. However, prognosis should be strictly evaluated by long time and multi-centre follow-up.

**e0539  B-TYPE NATRIURETIC PEPTIDE ON PREVENTING OF CONTRAST-INDUCED NEPHROPATHY IN PATIENTS WITH HEART FAILURE UNDERGOING PRIMARY PERCUTANEOUS CORONARY INTERVENTION**

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**Background** Contrast-induced nephropathy (CIN) is one of the leading causes of hospital-acquired renal failure and increase in the mortality and length of hospital stay after percutaneous coronary intervention (PCI).

**Purpose** To evaluate the protective effect of B-type natriuretic peptide (BNP) on CIN in patients with heart failure undergoing PCI.

**Material and methods** In the prospective, placebo-controlled, randomised trial, 149 consecutive acute myocardial infarction (AMI) patients with heart failure undergoing primary PCI received recombinant human BNP or placebo from the time of admission to 24 h after PCI. Serum creatinine (Scr) levels were measured to evaluate the protective effect of rhBNP on renal function. Estimated glomerular filtration rate (eGFR) was calculated by simplified modification of diet in renal disease study equation. CIN was defined as a postprocedure peak increase in serum creatinine (Scr) of >0.5 mg/dL or >25% from baseline.

**Results** The baseline characteristics, including baseline demographics and clinical characteristics and angiographic and procedural features, were similar between the two groups. The Scr significantly increased after PCI, with the peak value at the 48th hour, and then began to decrease. Repeated measure ANOVA showed that the Scr after PCI was lower in the BNP group than that in the control group (F=5.066, p=0.026). At 24, 48 (the peak value), and 72 h and 7 days after PCI the Scr was lower in the BNP group than that in the control group. At 7 days after PCI, the Scr showed a lower trend to the baseline level in the BNP group (26.42±15.02 vs 90.89±17.64 μmol/L, p=0.120), while it failed to do so in the control group (26.63±17.26 vs 90.44±15.37 μmol/L, p<0.001). The eGFR significantly decreased after PCI, with the lowest value at 48 h, and then it began to increase. The eGFR after PCI was higher in the BNP group than that in the control group (F=5.851, p=0.017). At 7 days, eGFR showed a trend towards higher than the baseline level in the BNP group (75.52±12.34 vs 73.42±14.86, p=0.120), while it failed to do so in the control group. At 48 and 72 h and 7 days after PCI, the eGFR in the BNP group was significantly higher than that in the control group. The occurrence of CIN was significantly lower in the rhBNP group than that in the control group (12 vs 24 cases, p=0.024).

**Conclusion** Periprocedural use of BNP could further promote the recovery of renal function and decrease the occurrence of CIN compared with routine treatment alone in patients with heart failure undergoing primary PCI.
e0539 B-type natriuretic peptide on preventing of contrast-induced nephropathy in patients with heart failure undergoing primary percutaneous coronary intervention

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