PERCUTANEOUS RECONSTRUCTION OF INTERRUPTED AORTIC ARCH IN ADOLESCENTS AND YOUNG ADULTS
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BACKGROUND
Percutaneous stenting seems to be an attractive & preferred alternative to surgical therapy for treatment of severe aortic coarctation in the adolescents & young adults. However such procedures are challenging. In the last 2 years, five of all patients who were referred to our center as a cases of coarctation of aorta were found to have interrupted aortic arch during cardiac catheterization. The clinical examination & CT-angiogram were suggestive of severe coarctation of the aorta. Cardiac angiography showed an interrupted aortic arch, just distal to the origin of the left subclavian artery with a gap ranging from 5 – 8 mm between the proximal & distal segments.

OBJECTIVE
The efficacy and safety of transcatheter reconstruction of interrupted aortic arch in adolescence and young adult using covered cp stent.

METHODS
Right axillary & femoral arterial access were obtained. Antegrade & retrograde aortograms were done in diagonally apposite projections to analyze the relation between proximal & distal segments. A straight end hole catheter was crossed in the distal segment & another pigtail or straight end hole catheter was firmly engaged in the floor of the proximal segment to perform an angiogram to visualize both segments simultaneously. In some cases BMW 0.014 Fr.x 182 mm guide wire can be crossed from the proximal segment to the distal one, then a guide wire 0.021 Fr. or 0.025 Fr. x 150 mm crossed antegrade to enlarge the hole in the membrane . If this method was unsuccessful , the proximal gap was perforated antegrade by a progress guide wire 0.014 x 182 mm or pilot guide wire 100-150 x 182 mm using proximal & distal aortogram as a road map thereafter there are 2 methods to dilate the tiny hole either by inflating a PTCA balloon 4 x 20 mm (sprinter legenb) up to 16 barr or by sequential dilatation of the hole with an incremental sized-dilators until 12- 14 Fr. Cook sheath crosses to the proximal segment where Z-mid or BIB-balloon mounted covered CP- stent progressed over the Amplatz guide wire 0.035 Frx260 mm was inflated at the site of interrupted segment. After stent inflation, pressures were taken in the proximal & distal segments with post-stenting aortogram showing good anterograde flow without any complications.

RESULTS
All those patients underwent successful procedures with no residual pressure gradient or procedure-related complications after CP- stenting of the interrupted segment. At 6 months follow up, they were asymptomatic & their blood pressure was controlled.

CONCLUSION
Although transcatheter reconstruction of interrupted aortic arch is technically difficult & challenging but it is feasible & associated with high success rate. Different techniques & tricks positively influence the outcome.