Objectives:
Congenital aortic valvulopathy is a real challenge for the valve sparing surgery. These valves compared with acquired pathology are very complex, due to structural anomalies of the valve itself and the associated lesions at the sub/supraavalvular levels or the aortic root. The patient’s size (from infant to adult) is also a problem.

In order to delay the time of the valve replacement, our first surgical option in each patient is to spare his aortic native valve.

We report the conservative aortic valve surgery in our congenital heart unit and analyse the differences between patients either children or adults.

Methods:
- Retrospective study: 70 operations performed in 68 patients, during the period 2010-2019.
- Two groups of 52 children (<14 years) and 18 adults (>14 years) were compared.
- Statistical analysis was done with SPSS-15.0.

Results:
Median age in children-group: 1.5 years (IQR 0.2-7.4); in adults-group 28 years (IQR 17.3-39.3)
Previous surgery was more frequent in adults - 39 % compared with children - 23 % (p: 0.19).

Operations
Performed with extracorporeal circulation (ECC), aortic clamp & trans-aortic approach.

Surgical techniques were different in each group (p:0.001):

<table>
<thead>
<tr>
<th></th>
<th>Children</th>
<th>Adults</th>
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</thead>
<tbody>
<tr>
<td>Commissurotomy</td>
<td>11 %</td>
<td>0 %</td>
</tr>
<tr>
<td>Aortic leaflet plasty</td>
<td>35 %</td>
<td>28 %</td>
</tr>
<tr>
<td>Commissurotomy + aortic leaflet plasty</td>
<td>52 %</td>
<td>33 %</td>
</tr>
<tr>
<td>David operation</td>
<td>2 %</td>
<td>39 %</td>
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</tbody>
</table>

Associated surgery was done in 65 % - children and 67 % - adults (p: 0.52).

Mean ECC & aortic clamp times were longer adults respect to children (p:0.03).

<table>
<thead>
<tr>
<th></th>
<th>ECC time (minutes)</th>
<th>Aortic clamp time (minutes)</th>
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</thead>
<tbody>
<tr>
<td>Children</td>
<td>105 ± 47</td>
<td>74 ± 41</td>
</tr>
<tr>
<td>Adults</td>
<td>158 ± 77</td>
<td>132 ± 71</td>
</tr>
</tbody>
</table>

One child with several complications died. Inhospital mortality was 1.9% in children and 0% in adults. We had no late mortality after discharge.
Follow-up was complete, with median of 24 months (IQR: 13-40) - children and 23.5 months (IQR: 9-39) - adults.
Percutaneous reintervention was needed in 6(12 %) - children and 1(5 %) - adult (p: 0.6).
Reoperation was required in 8(15.6 %) - children and 1(5 %) - adult (p: 0.4).
Nowadays the majority of our patients in both groups are asymptomatic, with normofunction of their aortic valve.

Conclusions:
- Aortic valve sparing surgeries in children and adults performed in our congenital cardiovascular unit have good results, with minimal mortality and acceptable reintervention rate.
- Children presents mainly with stenotic aortic valves and adults with a dilated aortic root.