Methods: We present a case of a 4 years old girl who underwent two stage procedures to correct Fontan Pathology. Left Glenn shunt as first stage then fenestrated Fontan with common atrioventricular valve repair as a second stage. The patient had uneventful post operative recovery and discharge home. However, she was re-admitted few days after discharge with high fever and manifestation of respiratory chest infection. On investigation she was proven to be H1N1 positive. The patient respiratory condition deteriorated dramatically within 48 h. She developed acute respiratory failure which required mechanical respiratory support. She also developed a severe heart failure which required significant chemical ion tropic support. Despite all the above measures, the patient condition continue to deteriorate and the Decision was taken to insert the extracorporeal membrane oxygenation (ECMO), as a bridge for respiratory failure recovery. The ECMO cannulation were Veno-Venous. femoral vein as input flow and internal jugular as output flow connected to pediatric oxygenator D905. The ECMO cannula sides and even from the mouth.

Results: The patients were assessed daily for the respiratory and haemodynamic recovery. Chest X-ray were performed daily to check for any parenchymal infiltrate recovery and the patient became H1N1 negative after 10 days. We were able to start weaning from the respiratory support after 23 days and to be weaned from the mechanical ventilation after one month. Patient however, required aggressive dietary and physiotherapy to help her regain her strength.

Conclusion: Diligence, persistence and luck were the essence of this case. Early diagnosis and respiratory support may have helped in saving this child.

Tracks: Cardiac Perfusion.

doi:10.1016/j.jsha.2010.02.354

SHA 78. Coarctation plus VSD one or two stage repair?
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Objectives: One versus two stages surgical management of coarctation with ventricular septal (Coarct/VSD) defect is still controversial. Each algorithm has merits and disadvantages. We sought to look at the results in our institution, analyzing in each group the mean age, intensive care stay, complications and the total hospital stay.

Methods: Between 1999 and 2008, 73 patients were admitted to our hospital with the diagnosis of Coarct/VSD. This cohort was analyzed retrospectively and divided in two groups; Group one: 23/73 underwent single stage repair (SS) using selective cannulation for the common trunk with mild to moderate hypothermia without circulatory arrest; Group two 50/73 had double stage (DS), 15 underwent two stage repair in the same admission while 35 had the repair in two separate admissions.

Results: The mortality is 0% for both groups, The mean inotropic support (per hour) SS 176 h, vs. DS (126.5 two admissions and 81.5 one admission), for ventilation support (per hour) for the SS 263, for the DS (One admission 86, two admission 156). The mean stay in ICU for SS is 13.5 days, while for DS is (16 days after Coarc. repair and 13.5 after VSD closure). The mean hospital stay for SS was 18 days while for DS was 25 days. Group three, 2/23 lost follow-up. The total 21 patients followed up by echo. About 8/21 had spontaneous closure of the VSD, 13/21 the VSD became smaller but did not close completely.

Conclusion: There is no substantial difference in the outcome among the two groups. We believe that this entity can to undergo one stage repair with excellent outcome.

Tracks: Cardiovascular Surgery.

doi:10.1016/j.jsha.2010.02.355

SHA 79. Fontan operation to fenestrate or not fenestrate
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Objectives: Fontan is the final surgical stage repair for the single ventricle congenital heart defect. Despite the known advantages of the extracardiac conduit fenestration of the conduit is becoming of questionable. The purpose of the study is to evaluate the patient outcome between the fenestrated (FN) and the none fenestrated (NF) group.

Methods: We retrospectively reviewed 53 patients that underwent Fontan operation between 2002 and 2009. The median age at operation was 6.5 years for the FN vs. 5 years for the NF, 25 were fenestrated (FN) and 27 none fenestrated (NF); All were extracardiac Fontan with Gortex tube between 18 and 20 mm.

Results: The was no mortality in either groups, the post operative ICU stay was 6.5 days vs. NF 5.5 days. The postoperative inotropic support per hour FN 71 h/NF 29 h, the ventilator support were for the FN 59 h/NF 23 h while the postoperative complications were chylothoraxy FN(5)/NF (2) all resolved by medical treatment, two patients required longer chest drainage due to recurrent chylothorax another two had diaphragm paralysis not requiring any surgical intervention.

Conclusion: Our results showed that there is a trend towards longer ventilation, longer inotropic support and longer hospital stay in the fenestrated group, however, there were no significant difference in the outcome between the groups. Further studies are required to further examine this surgical notion.

Tracks: Cardiovascular Surgery.

doi:10.1016/j.jsha.2010.02.356