Fortis Escorts
HEART INSTITUTE

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DISCHARGE SUMMARY

PATIENT NAME: SIDHANT JAIN	**AGE: 8 YEARS, 11 MONTHS & 2 DAYS, SEX: M**
REGN: NO: 12403697	**IPD NO: 79696/23/1201**
DATE OF ADMISSION: 08/05/2023	**DATE OF DISCHARGE: 16/05/2023**
CONSULTANT: DR. K. S. IYER / DR. NEERAJ AWASTHY	

DISCHARGE DIAGNOSIS

- Congenital heart disease
- **Large secundum atrial septal defect (1x1cm) with, antero-inferior to coronary sinus (left to right shunt)**
- **Right atrium - Dilated, Pink in color**
- **Failure to thrive**
- **Failure to thrive (< 3rd Percentile); Z score – 2 to – 3 SD**

OPERATIVE PROCEDURE

Dacron patch closure of atrial septal defect done on 12/05/2023

RESUME OF HISTORY

Sidhant Jain is a 8 years old male child (date of birth: 10/06/2014) from Etawah who is a case of congenital heart disease. He is 1st in birth order and is a product of full term normal vaginal delivery with average birth weight. Maternal age is currently 31 years.

He had history of failure to thrive for which he was shown to pediatrician. During evaluation, cardiac murmur was detected. Echo was done which revealed Congenital heart disease – atrial septal defect. He was advised surgical management. He was refereed to Dr. K. S. Iyer at FEHI, New Delhi.

He was seen at FEHI, New Delhi on 10/04/2023. His saturation at that time was 100% with weight of 21.5 Kg and Height 129 cm. Echo was done which revealed on 10/04/2023 revealed situs solitus, levocardia, D-loop, normal systemic and pulmonary venous drainage, large fossa ovalis atrial septal defect (20 X 26mm) with adequate rims (left to right shunt), laminar inflow, trace tricuspid regurgitation max PG 30mmHg, intact interventricular septum, laminar outflow, tricuspid aortic valve, confluent and adequate branch Pulmonary arteries, laminar flow in arch, no Coarctation of

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aorta, no Patent ductus arteriosus, no left superior vena cava, normal biventricular function, dilated right atrium and right ventricle, RVIDd 3.3 (Z score +2.9), LVIDd 3.1 (Z score -1.7), LVIDs 2.5 (Z score 0.8).

He was advised surgical management.

Now he is admitted at FEHI, New Delhi for further evaluation and management. On admission, his saturation was 98%.

In view of his diagnosis, symptomatic status, echo findings he was advised early high risk surgery after detailed counselling of family members regarding possibility of prolonged stay as well as long term issues.

Weight on admission 20.9 kg, Height on admission 124 cm, Weight on discharge 19.2 kg

His Weight on admission 20.9 kg. Failure to thrive (< 3rd Percentile); Z score – 2 to – 3 SD

His blood Group O positive

Baby and his Mother SARS-COV-2 RNA was done which was negative.

All blood and urine culture were sterile.

INVESTIGATION:

ECHO

Done on 10/04/2023 revealed situs solitus, levocardia, D-loop, normal systemic and pulmonary venous drainage, large fossa ovalis atrial septal defect (20 X 26mm) with adequate rims (left to right shunt), laminar inflow, trace tricuspid regurgitation max PG 30mmHg, intact interventricular septum, laminar outflow, tricuspid aortic valve, confluent and adequate branch Pulmonary arteries, laminar flow in arch, no Coarctation of aorta, no Patent ductus arteriosus, no left superior vena cava, normal biventricular function, dilated right atrium and right ventricle, RVIDd 3.3 (Z score +2.9), LVIDd 3.1 (Z score -1.7), LVIDs 2.5 (Z score 0.8)

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POST OP ECHO

Epicardial Echo done on 12/05/2023 revealed ASD patch in-situ, no residual shunt, no MR and no TR. LVEF:40 - 45%

Done on 12/05/2023 (06:00 PM) revealed atrial septal defect patch in situ, no residual shunt, laminar inflow, laminar outflow, LVEF 45-50%, no pleural or pericardial collection

Done on 13/05/2023 revealed atrial septal defect patch in situ, no residual shunt, laminar inflow and outflow, LVEF 45-50%, no collection

Done on 15/05/2023 revealed atrial septal defect patch in situ, no residual shunt, laminar inflow, trace tricuspid regurgitation, trace mitral regurgitation, laminar outflow, laminar flow in arch, no Coarctation of aorta, LVEF 50%, RVFAC 40%, no collection

ABDOMINAL USG

Done on 09/05/2023 revealed Liver shows homogeneous normal echopattern. Hepatic veins appear prominent - possibly to due congestion. Intrahepatic biliary radicles not dilated. Portal vein measures 7mm in diameter (normal). Gall bladder shows normal anechoic pattern. G.B. wall thickness is normal CBD is normal in caliber. Pancreas appears normal in size & echogenicity. Spleen is normal in size & echogenicity (Span – 6.1cm). Both kidneys are normal in location, size, shape & echotexture. Cortical thickness & corticomedullary differentiation are well maintained. No dilatation of pelvicalyceal system seen. - Right kidney measures – 7.4cm x 2.4cm. - Left kidney measures – 7.3cm x 3.0cm. Urinary bladder is partially filled. No calculi / filling defect seen. No ascites seen.

COURSE DURING STAY IN HOSPITAL (INCLUDING OPERATIVE PROCEDURE AND DATES)

Dacron patch closure of atrial septal defect done on 12/05/2023

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REMARKS: Diagnosis: - Acyanotic congenital heart disease with increased pulmonary blood flow. Large fossa ovalis Atrial septal defect. All valves-Normal. No clot, vegetations, PE. LV Function-Normal. Normal Sinus Rhythm. Operation: - Dacron patch closure of atrial septal defect. Operative Findings: Situs – solitus, levocardia, AV-VA concordance, thymus – present, innominate – present, adequate size, pericardium – normal, no pericardial effusion, systemic venous drainage, pulmonary venous drainage – normal, Patent ductus arteriosus – absent, left superior vena cava – absent, Main pulmonary artery – normal, coronaries – normal, right atrium - Dilated, Pink in color, interatrial septum – Large secundum atrial septal defect (1x1cm) with, antero-inferior to coronary sinus, interventricular septum – intact, tricuspid valve – normal, mitral valve – normal , no cleft, right ventricle– normal. Procedure: - Routine induction of general anaesthesia and placement of monitoring lines. Supine position placed. Antibiotic given. WHO checklist confirmed. Median sternotomy and thymus divided. Pericardial cradle created with silk suture. Aortic purse string taken with Ethibond 3-0, Systemic heparinization (300 U/kg). Bicaval purse string with prolene suture. On aortobicaval cannulation, ACT>480s, went on Cardiopulmonary bypass & cooled to 34°C. Both cavae looped. Cardioplegia purse string taken and cannula inserted. Aorta cross-clamped and heart arrested in diastole with cold blood cardioplegia delivered antegrade through the aortic root, and topical ice-cold saline. Both Cavae snared. Oblique right atriotomy parallel to the AV groove. Intra op findings noted. atrial septal defect closed with Dacron patch using 5-0 prolene continuous suture after deairing the LA. Right atriotomy was closed with 5-0 prolene. Rewarming, caval desnaring, and deairing done. Cross clamp removed after de-airing. Heart picked up in normal sinus rhythm. Epicardial pacing wires (1 atrial and 1 ventricular) placed. Weaned off Cardiopulmonary bypass on Dobutamine 2.5mcg/kg/min and eventually tapered. Drains placed (Pericardial 20F straight, 24F mediastinal directed into right pleura) Hemostasis secured. Protamine given followed by decannulation. Counts tallied. Pericardium approximated over RV, RA and Aorta. Left pleura intact and right pleura open. Routine sternal closure over drains with steel no 2 followed by skin closure with prolene 3-0

His post-operative course was smooth.

He was ventilated with adequate analgesia and sedation for 4 hours and extubated on 0 POD to oxygen by mask. He had initial chest drainage (310ml).

Post extubation chest x-ray revealed bilateral mild patchy atelectasis. This was managed with chest physiotherapy, nebulization and suctioning.

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He was shifted to ward on 1st POD. He was weaned from oxygen to air by 2nd POD.

Inotropes were not required.

Decongestive therapy was given in the form of lasix (boluses) and aldactone.

There were no post-operative arrhythmias.

Pacing wire was removed on 3rd POD.

He had no fever or leucocytosis. His TLC was 8,450/cmm and platelets 1.82 lacs/cmm on 0 POD. All cultures till date are negative. Antibiotics were not required. He was clinically well and apyrexial all through. His predischarge TLC was 8,930/cmm and platelets were 1.87 lacs/cmm.

His pre-operative renal function showed (S. creatinine 0.56 mg/dl, Blood urea nitrogen 11 mg/dl)

His post-operative renal function showed (S. creatinine 0.44 mg/dl, Blood urea nitrogen 0 mg/dl) on 0 POD

His pre-discharge renal function showed (S. creatinine 0.50 mg/dl, Blood urea nitrogen 11 mg/dl)

His pre-operative liver functions showed (SGOT/SGPT = 24/12 IU/L, S. bilirubin total 0.41 mg/dl, direct 0.13 mg/dl, Total protein 7.4 g/dl, S. Albumin 4.9 g/dl, S. Globulin 2.5 g/dl Alkaline phosphatase 150 U/L, S. Gamma Glutamyl Transferase (GGT) 17 U/L and LDH 229 U/L).

He had mildly deranged liver functions on 1st POD (SGOT/SGPT = 37/12 IU/L, S. bilirubin total 1.42 mg/dl & direct 0.42 mg/dl and S. Albumin 4.8 g/dl). This was managed with avoidance of hepatotoxic drug and continued preload optimization, inotropy and after load reduction. His liver function test gradually improved. His other organ parameters were normal all through.

His predischarge liver function test are SGOT/SGPT = 24/09 IU/L, S. bilirubin total 0.75 mg/dl, direct 0.58 mg/dl, Total protein 8.2 g/dl, S. Albumin 5.1 g/dl, S. Globulin 3.1 g/dl Alkaline phosphatase 130 U/L, S. Gamma Glutamyl Transferase (GGT) 18 U/L and LDH 287 U/L).

Thyroid function test done on 12/05/2023 which revealed T3 3.43 pg/ml (normal range – 2.53 – 5.22 pg/ml), T4 1.73 ng/dl (normal range 0.97 - 1.67 ng/dl), TSH 2.810 µIU/ml (normal range – 0.600 – 4.840 µIU/ml).

Gavage feeds were started on 0 POD. Oral feeds were commenced on 1st POD.

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CONDITION AT DISCHARGE

His general condition at the time of discharge was satisfactory. Incision line healed by primary union. No sternal instability. HR 110/min, normal sinus rhythm. Chest x-ray revealed bilateral clear lung fields. Saturation in air is 100%. **His predischarge x-ray done on 15/05/2023**

In view of congenital heart disease in this patient his mother is advised to undergo fetal echo at 18 weeks of gestation in future planned pregnancies.

In view of advanced maternal age, the mother had been advised to do chorionic villus sampling or amniocentesis early in any future pregnancy to exclude Down's syndrome and she has also been advised a detailed congenital anomaly scan in next pregnancy.

Other future siblings are advised detailed cardiology review.

PLAN FOR CONTINUED CARE:

DIET : Normal diet as advised

Normal vaccination (After 6 weeks from date of surgery)

ACTIVITY: Symptoms limited.

FOLLOW UP:

Long term cardiology follow- up in view of:-
1. Large atrial septal defect closure
2. Trace tricuspid regurgitation
3. Trace mitral regurgitation

Repeat Echo after 9 - 12 months after telephonic appointment

Repeat Thyroid function test after 3 – 4 months

PROPHYLAXIS :

Infective endocarditis prophylaxis prior to any invasive procedure

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MEDICATION:

- Syp. Paracetamol 300 mg PO 6 hourly x one week
- Tab. Pantoprazole 20 mg PO twice daily x one week
- Syp. Shelcal 5 ml PO twice daily x 3 months

- **Tab. Lasix 20 mg PO once daily x one week and then**
- **Tab. Lasix 20 mg PO alternate days x one week and then stop**

- **Tab. Aldactone 25 mg PO once daily x one week and then**
- **Tab. Aldactone 25 mg PO alternate days x one week and then stop**

- **All medications will be continued till next review except the medicines against which particular advice has been given.**

Review at FEHI, New Delhi after 9 – 12 months after telephonic appointment
In between Ongoing review with Pediatrician

Sutures to be removed on 26/05/2023; Till then wash below waist with free flowing water

4th hrly temperature charting - Bring own your thermometer

- **Frequent hand washing every 2 hours**
- **Daily bath after suture removal with soap and water from 27/05/2023**

Telephonic review with Dr. Parvathi Iyer (Mob. No. 9810640050) / Dr. K. S. IYER (Mob No. 9810025815) if any problems like fever, poor feeding, fast breathing

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