Fortis Escorts
HEART INSTITUTE

Escorts Heart Institute and
Research Centre Ltd.
Okhla Road, New Delhi-110 025 (India)
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DISCHARGE SUMMARY

PATIENT NAME: KRISHA GUPTA	AGE: 1 YEARS, 3 MONTHS & 13 DAYS, SEX: F
REGN: NO: 12605268	IPD NO: 129370/23/1201
DATE OF ADMISSION: 25/07/2023	DATE OF DISCHARGE: 02/08/2023
CONSULTANT: DR. K. S. IYER / DR. NEERAJ AWASTHY	

DISCHARGE DIAGNOSIS

- Congenital heart disease
- **Doubly committed ventricular septal defect with right coronary cusps prolapse (left to right shunt)**
- **Mild aortic regurgitation**
- **Right ventricle**
- **Failure to thrive (< 3rd Percentile); Z score < - 3 SD**

OPERATIVE PROCEDURE

Dacron patch closure of ventricular septal defect done on 28/07/2023

RESUME OF HISTORY

Krisha Gupta is a 1 years old female child (date of birth: 15/04/2022) from Gorakhpur who is a case of congenital heart disease. She is 1st in birth order and is a product of full term normal vaginal delivery. Her birth weight was 2.4 kg. Maternal age is currently 30 years.

She had history of failure to thrive for which she was shown to pediatrician. During evaluation, cardiac murmur was detected at 3 months of age. Echo was done which revealed Congenital heart disease – ventricular septal defect.

She had persistent poor weight gain and increasing sweating. She was seen by Dr. Neeraj Awasthy in Gorakhpur Echo was done which revealed Congenital heart disease – ventricular septal defect. She was advised surgical management. She was referred to FEHI, New Delhi for further management

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Her post-operative course was smooth.

She was ventilated with adequate analgesia and sedation for 5 hours and extubated on 0 POD to oxygen by hood.

She had initial chest drainage (70ml). Chest drain tube removed on 2nd POD.

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

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

She was electively supported with dobutamine 0 POD (for few hours) → 5mic/kg/min @ 2 ml/hr) in view of doubly committed ventricular septal defect closure and lactic acidosis (Lactate 3mmol/L)

Nitroglycerine infusion was started 0 POD (for few hours) → 1mic/kg/min @ 0.8 ml/hr) for her high systemic blood pressure (MAP 94mmHg).

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.

She had no fever or leucocytosis. Her TLC was 11,150/cmm and platelets 1.50 lacs/cmm on 0 POD. All cultures till date are negative. Antibiotics were not required. She was clinically well and apyrexial all through. Her predischarge TLC was 11,150/cmm and platelets were 1.50 lacs/cmm.

Her pre-operative renal function showed (S. creatinine 0.22 mg/dl, Blood urea nitrogen 6 mg/dl)

Her post-operative renal function showed (S. creatinine 0.24 mg/dl, Blood urea nitrogen 11 mg/dl) on 0 POD

Her pre-discharge renal function showed (S. creatinine 0.20 mg/dl, Blood urea nitrogen 14 mg/dl)

Her pre-operative liver functions showed (SGOT/SGPT = 37/21 IU/L, S. bilirubin total 1.14 mg/dl, direct 0.27 mg/dl, Total protein 7 g/dl, S. Albumin 4.9 g/dl, S. Globulin 2.1 g/dl Alkaline phosphatase 299 U/L, S. Gamma Glutamyl Transferase (GGT) 12 U/L and LDH 313 U/L).

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1.9cm. - Left kidney measures 5.9 x 2.2cm. Urinary bladder is empty. No evidence of free fluid is seen in abdomen

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

Dacron patch closure of ventricular septal defect done on 28/07/2023

REMARKS: Diagnosis: - Acyanotic congenital heart disease, Increased pulmonary blood flow, Doubly committed ventricular septal defect with right coronary cusps prolapse, Mild aortic regurgitation, All valves-normal, LVFN-Normal, Normal sinus rhythm. Operation: Trans Pulmonary artery ventricular septal defect closure with Dacron patch. Operative Findings: Situs solitus, levocardia, AV-VA concordance, Thymus – present, innominate vein – present, adequate size, pericardium – normal, no pericardial effusion, systemic and pulmonary venous drainage – normal, Patent ductus arteriosus – absent, Main pulmonary artery and branch Pulmonary artery – soft and adequate size and confluent, coronaries – normal, interatrial septum – normal, interventricular septum - Doubly committed ventricular septal defect of nearly 2*2cm, aortic valve – right coronary cusps prolapse, right ventricle– dilated, aorta – normal. Procedure:- Induction of general anaesthesia and placement of monitoring lines. Supine position placed. Antibiotic given. WHO Surgical safety checklist confirmed. Median sternotomy and both thymic lobes were divided. Pericardial cradle created with silk 3-0 suture. Aortic purse string taken with Prolene 5-0, Systemic heparinization (400 U/kg). Bicaval purse string with prolene 5-0 suture. On aortobicaval cannulation, ACT>480s, went on Cardiopulmonary bypass, whole body perfusion established & systemic hypothermia to 35° C. Both cavae looped. Cardioplegia purse string taken and cannula inserted. Aorta cross-clamped, anoxic cardiac standstill 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. LV vented through atrial septal defect. Pulmonary artery was cut transversely just above the pulmonary valve, ventricular septal defect was seen. ventricular septal defect closed with Dacron patch with prolene 5-0 suture in continuous manner. Rewarming started, patent foramen ovale closed with Prolene 5-0 suture after left atrium deairing. Rewarming, caval desnaring, and deairing done. Cross clamp removed after de-airing. Heart picked in normal sinus rhythm. Right atriotomy was closed with 5-0 prolene. Epicardial pacing wires (2 atrial and 1 ventricular) placed with prolene 6-0. Weaned off Cardiopulmonary bypass with Dobutamine 5mcg/Kg/Min. Meticulous hemostasis secured. Protamine given followed by decannulation. 20F straight chest drains placed in pericardium and mediastinum. Counts tallied. Pericardium closed over Aorta, right atrium and right ventricle. Both pleurae intact. Drains placed. Hemostasis ensured. Routine sternal closure with steel no.2

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PG 69mmHg, no additional ventricular septal defect, tiny subaortic tissue tag, tricuspid aortic valve, right coronary cusps prolapse, trace aortic regurgitation, normal origin coronaries, flow related acceleration in Right ventricular outflow tract max PG 29mmHg, trace pulmonary regurgitation max PG 21mmHg, confluent branch Pulmonary arteries, left arch, normal branching, no Coarctation of aorta, no Patent ductus arteriosus, no left superior vena cava, normal biventricular function, LVIDd 3.7 (Z score +4.15), LVIDs 2.32 (Z score +3.4), LVPWd 0.3 (Z score -0.78), LVFS 37%, LA 2.4 (Z score +3.43), MV annulus 2.07 (Z score +2.1), aortic annulus 1.23 (Z score +3.16), sinus 1.44 (Z score +1.33), PA annulus 12mm (Exp 8mm), Right pulmonary artery 8.9mm (exp 6mm), Left pulmonary artery 8.3mm

POST OP ECHO

Epicardial Echo done on 28/07/2023 ventricular septal defect patches in situ, no residual shunt, laminar inflow, No tricuspid regurgitation, Laminar outflow, Trace pulmonary regurgitation, No aortic regurgitation, LVEF: 40 - 45%

Done on 28/07/2023 (04:00 PM) revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, mild mitral regurgitation, mild aortic regurgitation, LVEF 40-45%, no collection

Done on 29/07/2023 revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, trace tricuspid regurgitation, mild mitral regurgitation, laminar outflow, mild aortic regurgitation, LVEF 40-45%, no collection

Done on 31/07/2023 revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, mild tricuspid regurgitation max PG 30mmHg, mild mitral regurgitation, laminar outflow, mild aortic regurgitation, laminar flow in arch, no Coarctation of aorta, LVEF 50%, no collection

ABDOMINAL USG

Done on 25/07/2023 revealed Liver shows homogeneous normal echopattern. Hepatic veins & intrahepatic biliary radicles are not dilated. Portal vein measures 3mm in diameter (normal). Gallbladder is contracted. CBD not dilated. Pancreas appears normal in size & echogenicity. Spleen is normal in size & echogenicity (Span 4.3cm). 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 5.8 x

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She had mildly deranged liver functions on 1st POD (SGOT/SGPT = 110/24 IU/L, S. bilirubin total 4.01 mg/dl & direct 0.58 mg/dl and S. Albumin 5.4 g/dl). This was managed with avoidance of hepatotoxic drug and continued preload optimization, inotropy and after load reduction. Her liver function test gradually improved. Her other organ parameters were normal all through.

Her predischarge liver function test are SGOT/SGPT = 30/14 IU/L, S. bilirubin total 1.34 mg/dl, direct 0.35 mg/dl, Total protein 6.4 g/dl, S. Albumin 4.5 g/dl, S. Globulin 1.9 g/dl Alkaline phosphatase 175 U/L, S. Gamma Glutamyl Transferase (GGT) 13 U/L and LDH 680 U/L).

Thyroid function test done on 28/07/2023 which revealed was normal→ Thyroid function test showed T3 4.31 pg/ml (normal range – 2.41 – 5.50 pg/ml), T4 1.72 ng/dl (normal range 0.96 - 1.77 ng/dl), TSH 1.870 µIU/ml (normal range – 0.700 – 5.970 µIU/ml).

Gavage feeds were started on 0 POD. Oral feeds were commenced on 2nd POD.

CONDITION AT DISCHARGE

Her general condition at the time of discharge was satisfactory. Incision line healed by primary union. No sternal instability. HR 120/min, normal sinus rhythm. Chest x-ray revealed bilateral clear lung fields. Saturation in air is 100%. **Her predischarge x-ray done on 31/07/2023**

In view of congenital heart disease in this patient her 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 : Semisolids diet as advised

Normal vaccination (After 6 weeks from date of surgery)

ACTIVITY: Symptoms limited.

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She was seen at FEHI, New Delhi on 24/07/2023. Her saturation at that time was 100% with weight of 6.4 Kg and Height 76 cm. Echo was done which revealed situs solitus, levocardia, D-loop, normal systemic and pulmonary venous drainage, intact interatrial septum, laminar inflow, trace tricuspid regurgitation, A2 with Anterior mitral leaflet tip prolapse, mild mitral regurgitation (MRVC 2.5mm), moderate size doubly committed ventricular septal defect (left to right shunt) max PG 69mmHg, no additional ventricular septal defect, tiny subaortic tissue tag, tricuspid aortic valve, right coronary cusps prolapse, trace aortic regurgitation, normal origin coronaries, flow related acceleration in Right ventricular outflow tract max PG 29mmHg, trace pulmonary regurgitation max PG 21mmHg, confluent branch Pulmonary arteries, left arch, normal branching, no Coarctation of aorta, no Patent ductus arteriosus, no left superior vena cava, normal biventricular function, LVIDd 3.7 (Z score +4.15), LVIDs 2.32 (Z score +3.4), LVPWd 0.3 (Z score -0.78), LVFS 37%, LA 2.4 (Z score +3.43), MV annulus 2.07 (Z score +2.1), aortic annulus 1.23 (Z score +3.16), sinus 1.44 (Z score +1.33), PA annulus 12mm (Exp 8mm), Right pulmonary artery 8.9mm (exp 6mm), Left pulmonary artery 8.3mm.

She was advised surgical management.

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

In view of her diagnosis, symptomatic status, echo findings she 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 6.4 kg, Height on admission 76 cm, Weight on discharge 6.4 kg

Her Weight on admission 6.4 kg. Failure to thrive (< 3rd Percentile); Z score < - 3 SD

Her blood Group O positive

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

All blood and urine culture were sterile.

INVESTIGATION:

ECHO Done on 24/07/2023 revealed situs solitus, levocardia, D-loop, normal systemic and pulmonary venous drainage, intact interatrial septum, laminar inflow, trace tricuspid regurgitation, A2 with Anterior mitral leaflet tip prolapse, mild mitral regurgitation (MRVC 2.5mm), moderate size doubly committed ventricular septal defect (left to right shunt) max

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FOLLOW UP:

Long term cardiology follow- up in view of:-

1. Large ventricular septal defect closure
2. Mild tricuspid regurgitation
3. Mild mitral regurgitation
4. Mild aortic regurgitation

Review on 03/08/2023 in 5th floor at 09:30 AM for wound review

PROPHYLAXIS : **Repeat Echo after 9 - 12 months after telephonic appointment**

MEDICATION: **Infective endocarditis prophylaxis prior to any invasive procedure**

- Syp. Paracetamol 100 mg PO 6 hourly x one week
- Tab. Pantoprazole 5 mg PO twice daily x one week
- Syp. Shelcal 2.5 ml PO twice daily x 3 months

- **Syp. Lasix 5 mg PO once daily x one week and then**
- **Syp. Lasix 5 mg PO alternate days x one week and then stop**

- **Tab. Aldactone 3.125 mg PO once daily x one week and then**
- **Tab. Aldactone 3.125 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 11/08/2023; 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 12/08/2023**

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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(DR. KEERTHI AKKALA)
(CTVS RESIDENT)

(DR. K.S. IYER)
(EXECUTIVE DIRECTOR
PEDIATRIC CARDIAC SURGERY)

Please confirm your appointment from (Direct 011-47134540, 47134541, 47134500/47134536)

- **Poonam Chawla Mob. No. 9891188872**
- **Treesa Abraham Mob. No. 9818158272**
- **Gulshan Sharma Mob. No. 9910844814**
- **To take appointment between 09:30 AM - 01:30 PM in the afternoon on working days**

OPD DAYS: MONDAY – FRIDAY 09:00 A.M

In case of fever, wound discharge, breathing difficulty, chest pain, bleeding from any site call 47134500/47134536/47134534/47134533

Patient is advised to come for review with the discharge summary. Patient is also advised to visit the referring doctor with the discharge summary.

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