Fortis Escorts
HEART INSTITUTE

Escorts Heart Institute and
Research Centre Ltd.
Okhla Road, New Delhi - 110 025 (India)
Tel. : +91-11-47135000
Emergency Tel. : +91-11-105010
Fax : +91-11- 2682-5013
Email : contactus.escorts@fortishealthcare.com
Website : www.fortisescorts.in
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DISCHARGE SUMMARY

Commented [GS1]: Given

PATIENT NAME: MOHD AJAZ	AGE: 4 YEARS, 4 MONTHS & 5 DAYS, SEX: M
REGN: NO: 12430618	IPD NO: 113206/23/1201
DATE OF ADMISSION: 28/06/2023	DATE OF DISCHARGE: 04/07/2023
CONSULTANT: DR. K. S. IYER / DR. NEERAJ AWASTHY	

DISCHARGE DIAGNOSIS

- Congenital heart disease
- **Restrictive perimembranous ventricular septal defect with Outlet extension, partially restricted by right coronary cusps prolapse (left to right shunt)**
- **Right ventricular outflow tract Discreet infundibular muscle bundle with fibrosis**
- **Failure to thrive (< 3rd Percentile); Z score < - 3 SD**

OPERATIVE PROCEDURE

Dacron patch closure of ventricular septal defect + Right ventricular outflow tract resection done on 29/06/2023

Pulmonary valve non-stenotic. Right ventricular outflow tract admitting adequate Hegar No 12

He had multiple runs of ventricular fibrillation while coming off that settled with Potassium correction and Inj Lignocaine.

RESUME OF HISTORY

Mohd Ajaz is a 4 years old male child (date of birth: 24/02/2019) from Delhi who is a case of congenital heart disease. He is 2nd in birth order and is a product of full term LSCS (lower segment caesarian section) delivery with adequate birth weight, born to a non-consanguineous marriage, Maternal age is currently 25 years. Other sibling (7 years old boy) is apparently well.

For last 3 months, he had history of recurrent lower respiratory tract infection for which he was shown to pediatrician. During evaluation, cardiac murmur was detected. Echo was done which revealed Congenital heart disease – ventricular septal defect with Right ventricular outflow tract obstruction.

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He was referred to FEHI, New Delhi for further management.

Now he is admitted at FEHI, New Delhi for further evaluation and management. On admission, his saturation was 99%. Review Echo done on 28/06/2023 revealed normal segmental analysis, intact interatrial septum, laminar inflow, trace tricuspid regurgitation, trace mitral regurgitation, restricted perimembranous ventricular septal defect with outlet muscular extension (left to right shunt) max PG 70mmHg, laminar LV outflow, no aortic regurgitation, muscle bundle in Right ventricular outflow tract max PG 60mmHg) with doming pulmonary valve, confluent branch Pulmonary arteries, laminar flow in arch, no Coarctation of aorta, normal ventricular function, minimal pericardial effusion, PA annulus 13mm (Exp 12.5mm), LVIDd 3cm, restricted by right coronary cusps prolapse

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 uncertain long term issues.

Weight on admission 11 kg, Height on admission 96 cm, Weight on discharge 11 kg

His Weight on admission 11 kg. Failure to thrive (< 3rd Percentile); Z score < - 3 SD

His blood Group AB positive

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

On clinical evaluation, he was found to have ? dysmorphic features.

FISH test done for DIGEORGE SYNDROME, 22Q11.2 DELETION, FISH, SPECIMEN WHOLE BLOOD, TOTAL NUMBER OF CELLS – 200, DIGEORGE SYNDROME, 22q11.2 DELETION , FISH 0, NORMAL – 200, INTERPRETATION FISH analysis revealed 200 cells (Interphase and Metaphase) with normal signal pattern

Karyotype was done which revealed 46,XY (ISCN-2020)

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All blood and urine culture were sterile.

INVESTIGATION:

ECHO

Done on 28/06/2023 revealed normal segmental analysis, intact interatrial septum, laminar inflow, trace tricuspid regurgitation, trace mitral regurgitation, restricted perimembranous ventricular septal defect with outlet muscular extension (left to right shunt) max PG 70mmHg, laminar LV outflow, no aortic regurgitation, muscle bundle in Right ventricular outflow tract max PG 60mmHg) with doming pulmonary valve, confluent branch Pulmonary arteries, laminar flow in arch, no Coarctation of aorta, normal ventricular function, minimal pericardial effusion, PA annulus 13mm (Exp 12.5mm), LVIDd 3cm, restricted by right coronary cusps prolapse

POST OP ECHO

Epicardial Echo done on 29/06/2023 revealed VSD patch in situ. no residual shunt. Laminar inflows. Well open RVOT max PG 15 mm of Hg Good flow in branch PAs. LVEF ≈ 40-45%

Done on 29/06/2023 (06:00 PM) revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, laminar LV outflow, well opened Right ventricular outflow tract max PG 20mmHg, good flow in branch Pulmonary arteries, LVEF 40-45%, trace right pleural collection, no left pleural or pericardial collection

Done on 30/06/2023 revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, laminar LV outflow, well opened Right ventricular outflow tract max PG 20mmHg, good flow in branch Pulmonary arteries, mild right pleural collection, no left pleural or pericardial collection

Done on 03/07/2023 revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, trace tricuspid regurgitation, well opened Right ventricular outflow tract max PG 12mmHg, mild pulmonary regurgitation, laminar LV outflow, mild aortic regurgitation, laminar flow in arch, no Coarctation of aorta, LVEF 45-50%, no collection

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ABDOMINAL USG Done on 29/06/2023 revealed Liver shows homogeneous normal echopattern. Hepatic veins & intrahepatic biliary radicles are not dilated. Portal vein measures 5mm 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 5.6cm). 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 6.1cm x 2.5cm. - Left kidney measures 5.7cm x 2.8cm. Urinary bladder is partially filled. No calculi / filling defect seen. 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 + Right ventricular outflow tract resection done on 29/06/2023

Pulmonary valve non-stenotic. Right ventricular outflow tract admitting adequate Hegar No 12

He had multiple runs of ventricular fibrillation while coming off that settled with Potassium correction and Inj Lignocaine.

REMARKS: Diagnosis: - Acyanotic Congenital Heart Disease. Restrictive Perimembranous ventricular septal defect with Infundibular stenosis. Operation:- Trans – right atrial Dacron patch closure of ventricular septal defect + Right ventricular outflow tract resection. Operative Findings: - Situs: Solitus, levocardia, Thymus present, Pericardium normal, Patent ductus arteriosus absent, Superior vena cava normal, Inferior vena cava normal, Pulmonary Veins normal, Main pulmonary artery adequate, Branch Pulmonary arteries adequate size, Aorta normal, Coronaries normal, interatrial septum intact, Right ventricular outflow tract Discreet infundibular muscle bundle with fibrosis. Pulmonary valve Non stenotic, interventricular septum Perimembranous ventricular septal defect with Outlet extension, partially restricted by right coronary cusps prolapse. Procedure: - Routine induction of general anaesthesia and placement of monitoring lines. Positioned supine. Routine skin preparation and draping. Median sternotomy and thymus preserved. Pericardial well created. Systemic heparinization at 400 units/kg done. Aortobicaval cannulation done, went on Cardiopulmonary bypass and cooled to 34^{0}C. Aorta cross-clamped and heart arrested with cold blood cardioplegia delivered antegrade through

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the aortic root and topical cooling. Cavae snared. Oblique right atriotomy parallel to the A-V groove was done, atrial stays taken and LA was vented through a surgically created patent foramen ovale. Right ventricular outflow tract muscle resection done. Right ventricular outflow tract admitting adequate Hegar No 12. Trans-PA ventricular septal defect closure done with Dacron patch using a pledgetted 5/0 prolene continuous suture. patent foramen ovale was closed directly with 5/0 prolene. Right atriotomy closed with 5/0 prolene. Rewarming, deairing and aortic cross-clamp removal done. Heart picked up in normal sinus rhythm. Weaned of Cardiopulmonary bypass without supports. He had multiple runs of VF (ventricular fibrillation) while coming off that settled with Potassium correction and Inj Lignocaine. Both pleurae intact. Epicardial pacing wires (2 atrial and 1 ventricular), and mediastinal drains were applied. Protamine given, decannulation done and haemostasis achieved. Pericardium reapproximated over right ventricle and aorta. Sternum was closed with steel wire. Wound closed in layers. Sterile dressing applied.

His post-operative course was relatively smooth.

He was ventilated with adequate analgesia and sedation for 4 hours and extubated on 0 POD to oxygen by mask.

He had initial serosanguinous chest drainage (210ml) and (40ml) on 1st POD. 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.

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 4th POD.

He had fever (37°C) on 0 POD. He was thoroughly investigated for the same. On evaluation he had leucocytosis. His TLC was 27,940/cmm and platelets 2.02 lacs/cmm on 0 POD and His TLC was 22,860/cmm and platelets 2.08 lacs/cmm on 1st POD. This was managed symptomatically with antipyretics. All cultures were negative. He was clinically well all through and apyrexial later. His predischarge TLC was 16,380/cmm and platelets were 2.97 lacs/cmm.

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His pre-operative renal function showed (S. creatinine 0.46 mg/dl, Blood urea nitrogen 13 mg/dl)

His post-operative renal function showed (S. creatinine 0.40mg/dl, Blood urea nitrogen 14 mg/dl) on 0 POD

His pre-discharge renal function showed (S. creatinine 0.44 mg/dl, Blood urea nitrogen 15 mg/dl)

His pre-operative liver functions showed (SGOT/SGPT = 36/16 IU/L, S. bilirubin total 0.26 mg/dl, direct 0.09 mg/dl, Total protein 7.4 g/dl, S. Albumin 4.8 g/dl, S. Globulin 2.6 g/dl Alkaline phosphatase 296 U/L, S. Gamma Glutamyl Transferase (GGT) 13 U/L and LDH 406 U/L).

He had mildly deranged liver functions on 1st POD (SGOT/SGPT = 63/19 IU/L, S. bilirubin total 0.38 mg/dl & direct 0.17 mg/dl and S. Albumin 4.7 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 = 25/14 IU/L, S. bilirubin total 0.28 mg/dl, direct 0.07 mg/dl, Total protein 7.9 g/dl, S. Albumin 4.6 g/dl, S. Globulin 3.3 g/dl Alkaline phosphatase 175 U/L, S. Gamma Glutamyl Transferase (GGT) 19 U/L and LDH 357 U/L)

Thyroid function test done on 29/06/2023 which revealed was normal→ Thyroid function test showed T3 4.21 pg/ml (normal range – 2.15 – 5.83 pg/ml), T4 1.64 ng/dl (normal range 0.92 - 1.99 ng/dl), TSH 4.230 µIU/ml (normal range – 0.730 – 8.350 µIU/ml).

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

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 03/07/2023**

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.

Other siblings are advised detailed cardiology review.

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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. **Possibility of recurrence of Right ventricular outflow tract obstruction**
2. Mild pulmonary regurgitation
3. Mild aortic regurgitation

Review on 04/07/2023 in 5th floor at 09:30 AM for wound review

Repeat Echo after 9 - 12 months after telephonic appointment

PROPHYLAXIS :

Infective endocarditis prophylaxis prior to any invasive procedure

MEDICATION:

- Syp. Shelcal 5 ml PO twice daily x 3 months
- **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 12/07/2023; 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 13/07/2023**

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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