DISCHARGE SUMMARY

PATIENT NAME: ROHAN YADAV	**AGE: 10 YEARS, 9 MONTHS & 19 DAYS, SEX: M**
REGN: NO: 15227911	**IPD NO: 143890/26/1201**
DATE OF ADMISSION: 26/06/2026	**DATE OF DISCHARGE: 04/07/2026**
CONSULTANT: DR. K. S. IYER / DR. NEERAJ AWASTHY	

DISCHARGE DIAGNOSIS

1. **S/P Pulmonary artery banding + Patent ductus arteriosus ligation via mid sternotomy on 01/03/2016 at Indraprastha Apollo Hospital for**

    - **Congenital Heart Disease**
    - **Large inlet muscular ventricular septal defect**
    - **Apical muscular ventricular septal defect**
    - **Moderate size Patent ductus arteriosus**

2. **Now elective admission for definitive repair for**

    - **Congenital Heart Disease**
    - **Situs solitus, levocardia**
    - **Large Inlet Muscular ventricular septal defect**
    - **S/P Diagnostic cardiac catheterization on 27/06/2026 at Fortis Escorts Heart Institute, New Delhi**

OPERATIVE PROCEDURE

Redo sternotomy + Pulmonary artery debanding + Pericardial patch augmentation of main pulmonary artery + Dacron Patch closure of ventricular septal defect done on 30/06/2026

Tricuspid valve checked and found competent.

RESUME OF HISTORY

Rohan Yadav is a 10 years old male child (date of birth: 11/09/2015) from Jhansi Uttar Pradesh who is a case of congenital heart disease. He is 1st in birth order and is a product of full term normal vaginal delivery, born to 2nd gravida. His birth weight was 3kg. Maternal age is currently 30 years. 2nd sibling is apparently well (6 years old boy).

He had history of fast breathing feeding difficulty for which he was shown to pediatrician. During evaluation, cardiac murmur was detected. Echo was done which revealed Congenital heart disease – multiple ventricular septal defects.

He was admitted at Indraprastha Apollo Hospital on 25/02/2016.

He underwent Pulmonary artery banding + Patent ductus arteriosus ligation mid sternotomy on 01/03/2016 and was discharged on 08/03/2016. He was then lost to follow up.

He had history of cyanosis and dyspnoea on exertion. He was seen by Dr. Neeraj Awasthy in 27/05/2026 in Jhansi. Echo was done and he was referred to Fortis Escorts Heart Institute, New Delhi for further management.

He was seen at FEHI, New Delhi on 23/06/2026. His saturation at that time was 87% with weight of 33.5 Kg. Echo was done which revealed PA band in situ, max PG 100mmHg, good flow in branch Pulmonary arteries, intact interatrial septum, laminar inflow, mild mitral regurgitation, trivial tricuspid regurgitation, large inlet ventricular septal defect and small mid muscular ventricular septal defect (Bidirectional shunting), laminar LV outflow, laminar flow in arch, no Coarctation of aorta, Patent ductus arteriosus, no left superior vena cava, normal LVEF, no collection, Left pulmonary artery 12mm, Right pulmonary artery 15mm, LVIDd 3.48 (Z score -1.8), LVIDs 1.8 (Z score -2.87), LVFS 28%.

He was advised cardiac cath followed by surgical management.

Now he is admitted at FEHI, New Delhi for further evaluation and management. On admission, his saturation was 87%, His Hb 14.4g/dl, TLC was 9,540/cmm, platelets 2.55 lacs/cmm and Hematocrit 44.3% on admission.

Cath and angiography done on 27/06/2026 revealed

CARDIAC CATHETERIZATION AND ANGIOGRAPHY REPORT
Division of Pediatric Cardiology

Name : Rohan Yadav **Registration Number :** 15227911
AGE : 20 months **Sex :** Female **IPD No :** 143890/26/1201
Height (cms): 135 **Weight (Kg) :** 32.95 **Cath Date :** 27/06/2026
BSA (M Sq): **HB (%) :** 14.4 **Cath No. :**
Sedation : Ketamine

Admitting Diagnosis :

- Normal atrial arrangement
- Levocardia
- D Loop (Right Hand Topology)
- Concordant atrioventricular connection
- Two patent AV valves
- Concordant ventriculo - arterial connection

Abnormalities :

- Large Inlet VSD [left to right]
  S/P PA band [2016]

Procedure Done :

- Diagnostic Study

Previous Procedure : Procedure Date

- Nil

Previous Surgery : Surgery Date

- PA BANDING 2016 [APOLLO]

Vascular Access :	Size
Right Femoral Vein	5F
Left Femoral Artery	5F

Catheters/Balloons/Stents:	French	Size	Length
Multipurpose A2	5F		

Pigtail catheter 5F

Guide Wires:	Size	Length	Configuration
Terumo	0.035	150	J

Hemodynamics :

Set Name :	**Basal**				
Total Oxygen Consumption:	140		Pulmonary Blood Flow (Qp):	2.5	
Systemic Blood Flow (Qs):	2.4		Qp/Qs:	1	
			Pulmonary Vascular Resistance:	**0.8**	
Systemic Vascular Resistance:	26.7		Rp/Rs:	.0.03	

Pressure Data:

Site	**Sys**	**Dia**	**Mean**	**Sat**	**PO_2**
AAO	99	61	68	93	
PV				99*	
LV	91		10(ED)		
MPA	17	7	12	72.2	
RA			5		
RV	82		7(ED)		
SVC				64.4	

Angiogram :

1)Innominate vein hand injection done revealed RSVC draining into RA. No LSVC

2)LV angiogram (LAO 40 cranial 40) showed smoothly trabeculated ventricle with normal inflow and contractility. A large Inlet VSD seen filling RV and then filling branch PAs across PA band.

3) Rotational PA angiogram showed PA band in situ and confluent branch Pas, with good flow across branch PA and normal levophase.

3)Arch Aortogram showed left arch, with normal branching and normal coronary origin, no PDA AND NO COLLATERAL .

4) RV angiogram [RAO 40/CAUD 5] showing coarse trabeculated ventricle filling branch PAs with PA band in situ .

Final Diagnosis :

Normal Sinus Rhythm
Normal Ventricular function
Trivial TR

Large Inlet VSD
Normal sinus rhythm
Normal ventricular function
S/P PA Banding [2016][Apollo, Delhi]

S/P Diagnostic cardiac catheterization DONE on 27/06/2026

In view of his diagnosis, symptomatic status, cath and 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 32.95 kg, Height on admission 135 cm, Weight on discharge 32 kg

BMI – 18.07 (50^{th} - 85^{th}); Z score 0 to + 1 SD

His blood Group A positive

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

All blood and urine culture were sterile.

INVESTIGATION:

ECHO

Done on 23/06/2026 revealed PA band in situ, max PG 100mmHg, good flow in branch Pulmonary arteries, intact interatrial septum, laminar inflow, mild mitral regurgitation, trivial tricuspid regurgitation, large inlet ventricular septal defect and small mid muscular ventricular septal defect (Bidirectional shunting), laminar LV outflow, laminar flow in arch, no Coarctation of aorta, Patent ductus arteriosus, no left superior vena cava, normal LVEF, no collection, Left pulmonary artery 12mm, Right pulmonary artery 15mm, LVIDd 3.48 (Z score -1.8), LVIDs 1.8 (Z score -2.87), LVFS 28%

POST OP ECHO

Epicardial Echo done on 30/06/2026 revealed VSD patches in situ. No residual shunt, Laminar inflow, laminar LV outflow, mild flow acceleration in RVOT (Max PG - 44 mm Hg), LVEF-45-50 %

Done on 30/06/2026 revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, mild mitral regurgitation, trace tricuspid regurgitation, laminar LV outflow, well opened Right ventricular outflow tract max PG 24mmHg, LVEF 40-45%, trace right pleural collection, no left pleural or pericardial collection

Done on 01/07/2026 revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, trace tricuspid regurgitation, trace mitral regurgitation, laminar LV outflow, well opened Right ventricular outflow tract max PG 26mmHg, trace pulmonary regurgitation max PG 13mmHg, LVEF 45%, trace right pleural collection, no left pleural or pericardial collection

Done on 03/07/2026 revealed ventricular septal defect patch in situ, no residual shunt, tiny mid muscular ventricular septal defect (left to right), well opened Right ventricular outflow tract max PG 18mmHg, mild pulmonary regurgitation max PG 19mmHg, laminar inflow, trace mitral regurgitation, laminar LV outflow, no aortic regurgitation, LVEF 45-50%, no collection, aortic annulus 13mm, aortic sinus 19mm

ABDOMINAL USG Done on 29/06/2026 revealed Liver shows homogeneous normal echopattern. Hepatic veins & intrahepatic biliary radicles are not dilated. Portal vein measures 9mm 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. Rest of the retroperitoneum is obscured by bowel gases. • Spleen is normal in size (Span 6.7cm) & echogenicity. • 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 ~8.9cm x 3cm - Left kidney measures ~8.3cm x 3.6cm • Urinary bladder is empty. • No evidence of free fluid is seen in abdomen.

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

Redo sternotomy + Pulmonary artery debanding + Pericardial patch augmentation of main pulmonary artery + Dacron Patch closure of ventricular septal defect done on 30/06/2026

Tricuspid valve checked and found competent.

REMARKS: Diagnosis: Congenital Heart Disease, Large Inlet Muscular ventricular septal defect, S/P Pulmonary artery Banding + Patent ductus arteriosus ligation (01.03.2016, Apollo Hospital, Delhi), Lost to follow up. Operation: Redo sternotomy + Pulmonary artery debanding + Pericardial patch augmentation of Main pulmonary artery + Dacron Patch closure of ventricular septal defect. Operative Findings: - Situs solitus, levocardia, AV-VA concordance, Pericardium Absent anteriorly, adhesions present laterally, Superior vena cava normal, Inferior vena cava normal, Pulmonary Veins normal, Main pulmonary artery constricted at area of band, soft, interatrial septum intact, Left pulmonary artery adequate, Right pulmonary artery adequate, Coronaries normal, ventricular septal defect large Inlet muscular ventricular septal defect, tricuspid valve normal, Infundibulum wide open. Procedure- Routine induction of General Anaesthesia and placement of monitoring lines. Redo Median sternotomy. Pericardial adhesiolysis done and pericardial cradle created. Aorta, Superior vena cava, right atrium, Inferior vena cava dissected. Systemic heparinization (400 U/kg). On aorto-bicaval cannulation, went on Cardiopulmonary bypass. Main pulmonary artery dissected off Aorta. Aorta cross-clamped and heart arrested with cold blood cardioplegia delivered antegrade through the aortic root, and topical ice-cold saline. Cavae snared. Right atrium opened parallel to the Atrioventricular groove. Patent foramen ovale created and LA vent put. A large inlet muscular ventricular septal defect located, which was closed with Dacron patch

using a pledgetted 4-0 prolene suture in continuous manner. Tricuspid valve checked and found competent. Main pulmonary artery incised longitudinally at level of Pulmonary artery band. Main pulmonary artery enlarged using an autologous untreated pericardial patch with prolene 5-0 suture in continuous manner. and rewarming started. patent foramen ovale closed directly with prolene 5-0 suture and right atrium closed with prolene 5-0 suture in continuous manner in double layers. After adequate deairing Aortic cross clamp released. normal sinus rhythm achieved. Epicardial pacing wires (2 atrial and 1ventricular) placed and Weaned off Cardiopulmonary bypass with Dobutamine 5 mcg/kg/min. Hemostasis secured. Protamine given followed by decannulation. Both pleurae opened. Routine sternal closure over drains.

His post-operative course was smooth.

He was ventilated with adequate analgesia and sedation for 3.25 hours and extubated on 0 POD to oxygen by mask.

He had initial chest drainage (115ml serosanguinous) on 0 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 3rd 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 9,600/cmm and platelets 1.21 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 11,160/cmm, platelets were 1.56 lacs/cmm and Hb 10.9 g/dl.

His pre-operative renal function showed (S. creatinine 0.50 mg/dl, Blood urea nitrogen 9 mg/dl)

His post-operative renal function showed (S. creatinine 0.32 mg/dl, Blood urea nitrogen 7 mg/dl) on 0 POD

His pre-discharge renal function showed (S. creatinine 0.45 mg/dl, Blood urea nitrogen 5 mg/dl)

His pre-operative liver functions showed (SGOT/SGPT = 19/15 IU/L, S. bilirubin total 0.15 mg/dl, direct 0.07 mg/dl, Total protein 6.9 g/dl, S. Albumin 4.4 g/dl, S. Globulin 2.5 g/dl Alkaline phosphatase 259 U/L, S. Gamma Glutamyl Transferase (GGT) 16 U/L and LDH 239 U/L).

He had mildly deranged liver functions on 1st POD (SGOT/SGPT = 63/27 IU/L, S. bilirubin total 0.74 mg/dl & direct 0.24 mg/dl and S. Albumin 4.1 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 = 21/22 IU/L, S. bilirubin total 0.38 mg/dl, direct 0.09 mg/dl, Total protein 7.8 g/dl, S. Albumin 4.4 g/dl, S. Globulin 3.4 g/dl Alkaline phosphatase 176 U/L, S. Gamma Glutamyl Transferase (GGT) 40 U/L and LDH 410 U/L).

Thyroid function test done on 30/06/2026 which revealed T3 3.42 pg/ml (normal range – 2.53 – 5.22 pg/ml), T4 1.95 ng/dl (normal range 0.97 - 1.67 ng/dl), TSH 3.060 µIU/ml (normal range – 0.600 – 4.840 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 100-120/min, normal sinus rhythm. Chest x-ray revealed bilateral clear lung fields. Saturation in air is 98%. **His predischarge x-ray done on 03/07/2026**

In view of advanced maternal age, preferably she is advised not to have any more pregnancies

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

Other sibling is advised detailed cardiology review.

PLAN FOR CONTINUED CARE:

DIET : Fluid restricted diet as advised

ACTIVITY: Symptoms limited.

FOLLOW UP:

Long term cardiology follow- up in view of:-

1. **Ventricular septal defect closure with Pulmonary artery debanding**
2. **Mild pulmonary regurgitation**

Review on 09/07/2026 in 5th floor at 09:30 AM for wound review

Repeat Echo after 6 - 9 months after telephonic appointment

PROPHYLAXIS :

Infective endocarditis prophylaxis prior to any invasive procedure

MEDICATION:

1. Tab. Paracetamol 500 mg PO 6 hourly x one week
2. Tab. Pantoprazole 40 mg PO twice daily x one week
3. Tab. Lasix 20 mg PO twice daily till next review
4. Tab. Aldactone 12.55mg PO twice daily till next review
5. Tab. Shelcal 500 mg PO twice daily x 3 months

6. **Nasoclear nasal drop 2 drop both nostril 4th hrly**
7. **Nebulization with normal saline 4th hrly**

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

Review at FEHI, New Delhi after 6 – 9 months after telephonic appointment
In between Ongoing review with Pediatrician

Sutures to be removed on 14/07/2026; Till then wash below waist with free flowing water

4th hrly temperature charting - Bring your own thermometer

- **Daily bath after suture removal with soap and water from 15/07/2026**

Telephonic review with Dr. Parvathi Iyer (Mob. No. 9810640050) / Dr. K. S. IYER (Mob No. 9810025815)

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(DR. KEERTHI AKKALA)
(ASSOCIATE CONSULTANT
PEDIATRIC CARDIAC SURGERY)

(DR. K.S. IYER)
(CHAIRMAN
PEDIATRIC & CONGENITAL HEART 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, poor feeding, fast breathing, breathing difficulty, chest pain, wound discharge, 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.