

DISCHARGE SUMMARY

PATIENT NAME: DHARNI SHARMA DHARNI	AGE: 1 YEAR, 8 MONTHS & 9 DAYS, SEX: F
REGN: NO: 15900368	IPD NO: 188432/26/1201
DATE OF ADMISSION: 17/08/2026	DATE OF DISCHARGE: 25/08/2026
CONSULTANT: DR. K. S. IYER / DR. NEERAJ AWASTHY / DR. HIMANSHU PRATAP	

DISCHARGE DIAGNOSIS

- Cyanotic Congenital Heart Disease with decreased pulmonary blood flow
- Tetralogy of Fallot
- Large malaligned outlet type ventricular septal defect
- Severe Pulmonary artery stenosis (infundibular and valvular)
- Pulmonary valve borderline adequate, stenotic thickened valve
- Patent foramen ovale
- Delayed motor milestone

OPERATIVE PROCEDURE

Trans right atrial Dacron patch closure of ventricular septal defect + Infundibular resection+ Transannular patch Augmentation of Right ventricular outflow tract, Main pulmonary artery up-till Left pulmonary artery origin + Direct closure of patent foramen ovale done on 18/08/2026

Tricuspid valve inspected and found satisfactory. Main pulmonary artery accepted Hegar No 12

RESUME OF HISTORY

Dharni Sharma Dharni is a 1 year and 8 months old female child (date of birth: 09/12/2024) from Allahabad, Uttar Pradesh, who is a case of congenital heart disease. She is 1st in birth order and is a product of full term LSCS (lower segment caesarian section) delivery. Her birth weight was 3.5 kg. Maternal age is currently 27 years.

She had history of bluish discoloration. She also had history of delayed motor milestone for which she was shown to pediatrician. During evaluation, cardiac murmur was detected. Echo was done which revealed Congenital heart disease. She was referred to Fortis Escorts Heart Institute, New Delhi for further management.

She was seen at FEHI, New Delhi on 14/08/2026. Her saturation at that time was 70% with weight of 9.7 Kg. Echo was done and she was advised surgical management

Now she is admitted at FEHI, New Delhi for further evaluation and management. On admission, her saturation was 70%, Her Hb 14.5 g/dl, TLC was 13,940cmm, platelets 3.14 lacs/cmm and Hematocrit 53.4% on admission.

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 uncertain long term issues.

Weight on admission 9.6 kg, Height on admission 80 cm, Weight on discharge 9.6 kg

Her Weight on admission 9.6 kg. (15th – 50th Percentile); Z score 0 to – 2 SD

Her blood Group B 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 14/08/2026 revealed normal segmental analysis, normal systemic and pulmonary venous drainage, patent foramen ovale (Bidirectional shunting), laminar outflow, trace tricuspid regurgitation, no mitral regurgitation, non-restrictive malaligned perimembranous ventricular septal defect (Bidirectional shunting) > 50% override, Tetralogy of Fallot, severe Pulmonary stenosis (valvar + supra-valvar), max PG 72mmHg, trileaflet aortic valve, normal origin of coronaries, confluent and adequate branch Pulmonary arteries, left arch, laminar flow in arch, no Patent ductus arteriosus, no Coarctation of aorta, no left superior vena cava, no additional ventricular septal defect, normal biventricular function, no collection, dilated right atrium and right ventricle, LVIDd 1.8cm, LVIDs 1.2cm, PA annulus 7mm (Exp 11mm), Right pulmonary artery 7.2mm, Left pulmonary artery 8.7mm (Exp 7.5mm)

POST OP ECHO

Epicardial Echo done on 18/08/2026 revealed VSD patch in situ, tiny residual shunt, well opened RVOT, Laminar inflows, Laminar LV outflow, LVEF- 40-45%, free PR

Done on 18/08/2026 revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, well opened Right ventricular outflow tract max PG 18mmHg, LVEF 45-50%, no collection

Done on 19/08/2026 revealed ventricular septal defect patch in situ, no residual shunt, laminar inflow, well opened Right ventricular outflow tract max PG 14mmHg, good flow in branch Pulmonary arteries, LVEF 50%, mild left pleural collection, no right pleural or pericardial collection

Done on 20/08/2026 revealed LVEF 50%, mild left and right pleural collection, no pericardial collection

Done on 21/08/2026 revealed bilateral mild pleural collection, no pericardial collection, LVEF 50-55%

Done on 22/08/2026 revealed trace right pleural collection, mild + left pleural collection, no pericardial collection, dilated RA, IAS shifted to left, TAPSE 5mm, TV TDI s' 5.8, RVFAC 32%, IVC distended (12m) <50% variation

Done on 22/08/2026 revealed trace to mild left pleural collection, no right pleural or pericardial collection

Done on 24/08/2026 revealed trace left pleural collection, no right pleural or pericardial collection

Done on 24/08/2026 revealed ventricular septal defect patch in situ, tiny residual shunt, laminar inflow, trivial tricuspid regurgitation, laminar outflow, well opened Right ventricular outflow tract max PG 12mmHg, good flow across it, good flow in branch Pulmonary arteries, free pulmonary regurgitation, LVEF 50-55%, trace left pleural collection, no right pleural or pericardial collection, laminar flow in arch, TAPSE 5.5mm, IVC normal size with > 50% variation, RVFAC 35%

Done on 25/08/2026 revealed no collection, LVEF 50-55%

ABDOMINAL USG Done on 18/08/2026 revealed Liver shows homogeneous normal echopattern. Hepatic veins & intrahepatic biliary radicles are not dilated. Portal vein is normal (4mm in diameter). • Gallbladder shows normal anechoic pattern. G.B. wall thickness is normal. • CBD is normal in caliber. • Spleen is normal in size & echogenicity (Span 5.2cm). • Pancreas appears normal. Rest of retroperitoneum obscured by bowel gases. • 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 5.5cm x 2.2cm. - Left kidney measures 5.5cm x 2.6cm. • Urinary bladder is empty. • No evidence of free fluid is seen in abdomen.

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

Trans right atrial Dacron patch closure of ventricular septal defect + Infundibular resection+ Transannular patch Augmentation of Right ventricular outflow tract, Main pulmonary artery up-till Left pulmonary artery origin + Direct closure of patent foramen ovale done on 18/08/2026

Tricuspid valve inspected and found satisfactory. Main pulmonary artery accepted Hegar No 12

REMARKS: Diagnosis: - Cyanotic Congenital Heart Disease with decreased pulmonary blood flow, Large malaligned outlet type ventricular septal defect with severe Pulmonary artery (infundibular and valvular Pulmonary stenosis). Operation:- Trans right atrial Dacron patch closure of ventricular septal defect + infundibular resection + Trans Annular Patch Augmentation of Right ventricular outflow tract, Main pulmonary artery upto Left pulmonary artery origin. Operative Findings: - Situs solitus, levocardia {S, D, S}, AV-VA concordance, Thymus present, Pericardium normal, Superior vena cava normal, Inferior vena cava normal, Pulmonary Veins normal, right atrium A normal, Right ventricular outflow tract hypertrophied, Main pulmonary artery, pulmonary valve borderline adequate, stenotic thickened valve, Right pulmonary artery adequate, Left pulmonary artery adequate, Aorta normal, Coronaries normal, Patent ductus arteriosus ductal ligament, no flow, interatrial septum patent foramen ovale, ventricular septal defect nonrestrictive Large malaligned outlet type ventricular septal defect, Infundibulum hypertrophied septal and parietal bands. Procedure- Routine induction of General Anesthesia and placement of monitoring lines. Median sternotomy. Thymectomy done. Systemic heparinization (400 U/kg). Right pulmonary artery, Left pulmonary artery, aorta, Main pulmonary artery dissected. Aorto-bicaval cannulation, went on

Cardiopulmonary bypass. Cooled to 34°C. 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. Left atrium vented through patent foramen ovale. Infundibular resection done, Right ventricular outflow tract, Main pulmonary artery accepted Hegar No 10. ventricular septal defect closed with Dacron patch using 5-0 prolene continuous and interrupted suture. Tricuspid valve inspected and found satisfactory. Rewarming done. Patent foramen ovale closed directly using 5-0 prolene. Right atrium closed with 5-0 prolene in double layers. Rewarming done patent foramen ovale closed directly using 5-0 prolene. Right atrium closed with 5-0 prolene in double layers. Rewarming done. After adequate deairing Aortic cross clamp released. Weaned off Cardiopulmonary bypass with 5µ/kg/min dobutamine. However, on epicardial echo, patient had a flat non-moving septum and dilated right ventricle with borderline hemodynamics. Decision to do a transannular patch augmentation of Main pulmonary artery taken. Re-cardiopulmonary bypass established, heart arrested with cold blood cardioplegia. Right atrium opened to vented through patent foramen ovale. Main pulmonary artery opened vertically between stay sutures and extended distally across bifurcation till Left pulmonary artery origin. Right ventricular outflow tract opened between stays around 2 cms proximally from the annulus. Main pulmonary artery accepted Hegar no 12, Main pulmonary artery, Left pulmonary artery and Right ventricular outflow tract augmented with a transannular untreated autologous pericardial patch with prolene 5-0. patent foramen ovale closed directly using 5-0 prolene. Right atrium closed with 5-0 prolene in double layers. Rewarming done. After adequate deairing Aortic cross clamp released. Weaned off Cardiopulmonary bypass with 5µ/kg/min dobutamine. Hemostasis secured. Protamine given followed by decannulation. Epicardial pacing wires (2 atrial and 1 ventricular) placed. Both pleurae open. Routine sternal closure over drains.

Weaned off Cardiopulmonary bypass with 5µ/kg/min dobutamine. However, on epicardial echo, patient had a flat non-moving septum and dilated right ventricle with borderline hemodynamics. Decision to do a transannular patch augmentation of Main pulmonary artery taken. Re-cardiopulmonary bypass established, heart arrested with cold blood cardioplegia. Right atrium opened to vented through patent foramen ovale. Main pulmonary artery opened vertically between stay sutures and extended distally across bifurcation till Left pulmonary artery origin.

Her post-operative course was associate with bilateral pleural collection.

She was ventilated with adequate analgesia and sedation for 3 hours and extubated on 0 POD to oxygen by mask.

She had initial chest drainage (165ml serosanguineous) on 0 POD, (80ml serous) on 1st POD, (245ml serous) on 2nd POD, (130ml serous) on 3rd POD and (25ml serous) on 4th POD. chest drain removed on 5th 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 2nd POD. She was weaned from oxygen to air by 4th POD.

She was electively supported with dobutamine (0 – 1st POD → 5mic/kg/min @ 2.9 ml/hr) in view of definitive repair of Tetralogy of Fallot and metabolic acidosis (BE -2.2mmol/L)

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

There were no post-operative arrhythmias.

From 1st POD, she had bilateral pleural collection. This was managed with fluid restriction and increasing diuretics.

Pacing wire was removed on 6th POD.

She had no fever but had mild leucocytosis with thrombocytopenia. Her TLC was 17,670/cmm and platelets 1.00 lacs/cmm on 2nd POD. All cultures till date are negative. Antibiotics were not required. She was clinically well and afebrile all through. Her pre-discharge TLC was 15,720/cmm, platelets were 2.61 lacs/cmm and Hb 12 g/dl.

Her pre-operative renal function showed (S. creatinine 0.35 mg/dl, Blood urea nitrogen 14 mg/dl)

Her post-operative renal function showed (S. creatinine 0.28 mg/dl, Blood urea nitrogen 7 mg/dl) on 0 POD

Her pre-discharge renal function showed (S. creatinine 0.28 mg/dl, Blood urea nitrogen 7 mg/dl)

Her pre-operative liver functions showed (SGOT/SGPT = 25/12 IU/L, S. bilirubin total 0.65 mg/dl, direct 0.18 mg/dl, Total protein 7.1 g/dl, S. Albumin 4.6 g/dl, S. Globulin 2.5 g/dl Alkaline phosphatase 164 U/L, S. Gamma Glutamyl Transferase (GGT) 11 U/L and LDH 286 U/L).

She had mildly deranged liver functions on 1st POD (SGOT/SGPT = 203/25 IU/L, S. bilirubin total 2.37 mg/dl & direct 0.41 mg/dl and S. Albumin 4.1 g/dl) and repeat (SGOT/SGPT = 116/20 IU/L, S. bilirubin total 1.84 mg/dl & direct 0.41 mg/dl and S. Albumin 3.6 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 = 29/06 IU/L, S. bilirubin total 0.78 mg/dl, direct 0.24 mg/dl, Total protein 6.6 g/dl, S. Albumin 3.7 g/dl, S. Globulin 2.9 g/dl Alkaline phosphatase 124 U/L, S. Gamma Glutamyl Transferase (GGT) 24 U/L and LDH 490 U/L).

Thyroid function test done on 18/08/2026 which revealed T3 3.19 pg/ml (normal range – 2.41 – 5.50 pg/ml), T4 1.85 ng/dl (normal range 0.96 - 1.77 ng/dl), TSH 3.150 μ IU/ml (normal range – 0.700 – 5.970 μ IU/ml).

Repeat Thyroid function test done on 20/08/2026 which revealed T3 1.51 pg/ml (normal range – 2.41 – 5.50 pg/ml), T4 1.11 ng/dl (normal range 0.96 - 1.77 ng/dl), TSH 2.520 μ IU/ml (normal range – 0.700 – 5.970 μ IU/ml).

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

CONDITION AT DISCHARGE

Her general condition at the time of discharge was satisfactory. Incision line healed by primary union. No sternal instability. HR 110-120/min, normal sinus rhythm. Chest x-ray revealed bilateral clear lung fields. Saturation in air is 98-100%. **Her pre-discharge x-ray done on 24/08/2026**

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.

Other future siblings are advised detailed cardiology review.

PLAN FOR CONTINUED CARE:

DIET : Fluid restricted 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. Free pulmonary regurgitation**

Review on 26/08/2026 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. Syp. Paracetamol 150 mg PO 6 hourly x one week
 2. Tab. Pantoprazole 10 mg PO twice daily x one week
 3. Syp. Lasix 15 mg PO twice daily till next review
 4. Tab. Aldactone 7.5 mg PO twice daily till next review
 5. Syp. Shelcal 5 ml 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 01/09/2026; Till then wash below waist with free flowing water

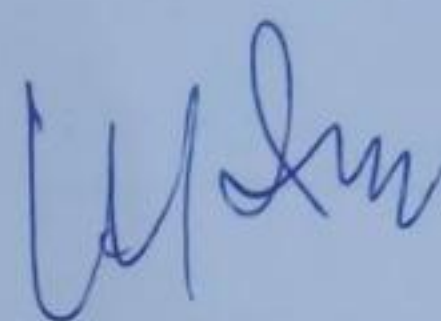
4th hrly temperature charting - Bring your own thermometer

- **Daily bath after suture removal with soap and water from 02/09/2026**

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



(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.