J. of Obst. & Gyn. of India Vol. 51, No. 5 : September/October 2001 Pg 206-207

Rare Case of Congenital Diaphragmatic Hernia

Janaki Radhakrishnan, M. H. Sharada, P. Panigrahi, R. Saikhedkar

Departments of Obstetrics & Gynaecology and Paediatrics (Neonatology Unit), Jawaharlal Nehru Hospital and Research Centre, Bhilainagar –9, Madhya Pradesh – 490009.

Hiatus hernia or diaphragmatic hernia is a rare congenital anomaly. Usually intrauterine death occurs; but if the baby survives, the anomaly constitutes more urgent neonatal emergency. Most of the infants with acute cardio-respiratory complaints die during or immediately after the birth, before the corrective operative measures can be attempted. In the living neonate, the cardinal triad of dyspnoea, cyanosis and dextrocardia may arouse suspicion of the more commoner left than right sided diaphragmatic hernia. Occasional case reports of uncorrected diaphragmatic hernia appeared in the Indian literature. We present in this case report, the details of diagnosis and corrective operative procedure adopted on a large left diaphragmatic hernia during the immediate postnatal period of a male infant.

Case Report

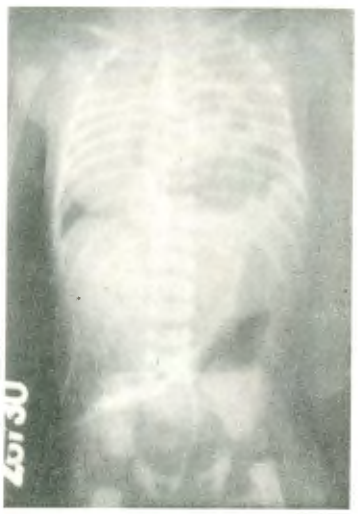

Fig. 1: Photograph of skiagram chest showing large left diaphragmatic hernia, mediastinal shift to right and dextroposition of heart.

An unbooked 4th gravida, Mrs. R.L. aged 32 years, was admitted on 27.8.98 at 7.30 a.m. with the complaints of labour pains and leaking membranes of 2 hours duration. She had 2 normal full term deliveries 7 years and 5 years back respectively and one miscarriage 1 year back of 5 months gestation. Her LMP was 12.11.97 and EDD was 19.8.1998. On examination, she was anaemic, pulse 88/minute, regular and B.P. 120/80 mm of Hg. Cardiovascular, respiratory and central nervous system examination was normal.

Laboratory investigations : Hb. 10.4 gm/dl, Blood Group 'O' Rh +ve, urine analysis: normal. Blood for hepatic and renal function tests: normal values. Blood for VDRL and RBC for sickling test: negative. Patient delivered a live male child weighing 2.55 kg. vaginally without maternal complications on 27-8.1998 at 9.42 A.M. Baby did not cry after birth. Peripheral cyanosis present. Limb muscles were flaccid. Heart rate was less than 100/ minutes. APGAR scoring 1/10 at the time of birth; 3/10 after 5 minutes, and 6/10 after 10 minutes. Throat secretions were present. Respiratory system revealed diminished breath sounds over the left infrascapular regions and crepitations in both the lungs. Cardiovascuar system examination revealed more clearly audible first and second heart sounds over right mammary area, right sternal border and bradycardia. Abdomen was scaphoid without hepato-splenomegaly. CNS: hyporeflexia. There were no other congenital anomalies. The infant received in neonatal intensive care unit, i.v. calcium gluconate, 50% dextrose solution, i.m. vitamin K, and supportive care. His Hb was 15.3 gm/dL, PCV 46% and arterial PO2. 75 mmHg, X-ray chest showed left diaphragmatic hernia with shift of heart and mediastinum to the right. Right lung was less aerated (Fig. 1). A provisional clinical diagnosis of left diaphragmatic hernia with mediastinal

shift to right and dextrorotation of heart causing cardio-respiratory distress was made. A high risk consent was taken as the patient's party insisted for emergency corrective operation. The baby who was already intubated and on mechanical ventilator was disconnected from the ventilator and while oxygen was being given through endotracheal tube, shifted to operation theatre around 1 AM on 28.8.1998. The infant had fresh bleeding from endotracheal tube and bradycardia (heart rate <80/ minute). Resuscitative measures were instituted. A large diaphragmatic defect about 6x8 cm with 1 cm anterior lip without posterior lip was found during the operation.

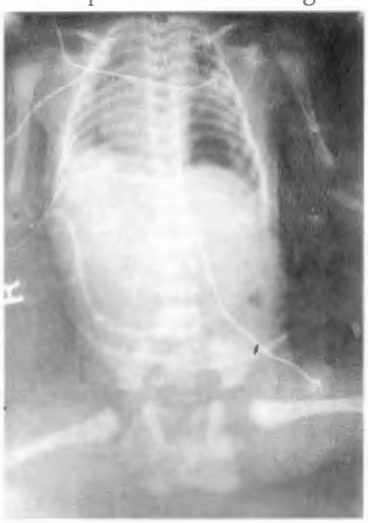

Fig. 2: Photograph of skiagram chest immediately after the correction of left diaphragmatic hernia.

The contents in left hemithorax included a part of stomach, whole of the small intestine, trasverse colon, spleen, and posterior part of left lobe of the liver. The operative procedure consisted of gentle reduction of viscera from the defect and delivery into the abdominal cavity. As it was not possible to close the defect completely even after applying tension on anterior lip, two prolene meshes (6x6 cm size each) were used to close the large defect. No attempt was made to correct the malrotated gut. The abdominal wall was sutured using 4/O vicryl suture material (Fig. 2). Post-operatively the infant was cyanosed, hypotensive and required mechanical ventilatory support. At 8.10 am on 28.8.1998, he had cardio-respiratory arrest and could not be revived.