

A Rare Congenital Anomaly Involving Skeletal, Cardiac and Genitourinary System

Nitish Kumar¹, Abhishek Roy², Sumana Moitra³, Soumi Biswas⁴

¹Assistant Professor, Department of Pediatrics, NBMCH, Darjeeling, West Bengal, India

²Assistant Professor, Department of Pediatrics, R G Kar Medical College, Kolkata, West Bengal, India

³Assistant Professor, Department of Microbiology, NBMCH, Darjeeling, West Bengal, India

⁴Post Graduate Trainee in MD Biochemistry, Department of Biochemistry, R G Kar Medical College, Kolkata, West Bengal, India

***Corresponding Author:**

Name: Dr. Abhishek Roy

Email: abhishekroy42@rediffmail.com

Abstract: We present a rare case of association of congenital anomaly that involves skeletal, cardiac and genitourinary anomalies in 10 month old female child. It is a rare entity with conglomeration of a lot of congenital anomalies. Association of absent ribs, renal agenesis, ovarian agenesis, ostium secundum and supernumerary nipples could not be matched with any syndrome using morphologic database.

Keywords: Congenital anomalies, Supernumerary nipples, Renal agenesis.

INTRODUCTION

Congenital anomalies (CA) are defined as structural or functional abnormalities including metabolic disorders, present at birth. These anomalies of prenatal origin occur due to defective embryogenesis or intrinsic abnormalities in the process of development and are an important cause of neonatal and infant morbidity and mortality [1, 2].

Supernumerary nipples are common minor congenital malformations. They consist of nipples and/or related tissue in addition to the nipples on the chest. Supernumerary nipples are found to be located along the embryonic milk lines. The ectopic supernumerary nipples are present beyond the embryonic milk lines [3].

CASE REPORT

A 10 month old female child, born out of non-consanguineous marriage was admitted with fever, cough and respiratory distress. She was born at term with birth weight of 2.3 kg and had history of multiple similar episodes since birth.

On examination, it was found that there was a depression over left side of chest with bilateral wheeze. There was also an ejection systolic murmur over left parasternal region. Detail clinical examination revealed microcephaly (39 cm), cleft palate, supernumerary nipples (Fig. 1.), and left sided lipomatous swelling over scapular region (Fig. 2) and hepatomegaly. There was no facial dysmorphism.

Chest x-ray showed absent 4th, 5th and 6th ribs on left side (Fig. 1), bifid cervico-dorsal spine with upper dorsal block and hemivertebra. Echocardiography revealed a large ostium secundum atrial septal defect. Ultrasonography of whole abdomen revealed left sided renal agenesis and left sided ovarian agenesis.



Fig. 1: Left supernumerary nipples



Fig. 2: Lipomatous swelling over left scapula



Fig. 3: Absent ribs on left side

DISCUSSION

The embryonic milk line extends bilaterally from beyond the axillae on the arms, down the chest and the abdomen toward the groin reaching the inner sides of the thighs [3, 4].

Supernumerary nipples appearing with breast tissue and ducts are called polymastia [3].

Supernumerary nipples have been found in various syndromes like Turner syndrome, Fanconi anemia, ectodermal dysplasia, Kaufman-McKusick syndrome and Char syndrome [5]. Association of supernumerary nipples and renal involvement have been reported by many authors [6-11]. These include renal malformations, urinary tract anomalies, renal agenesis and renal adenocarcinoma. Association with central

nervous system (neural tube defect, developmental delay, epilepsy etc), gastrointestinal system (peptic ulcer, pyloric stenosis), respiratory system (laryngeal web, ear abnormalities, accessory lung lobe), skeletal (vertebral anomaly, absence of rib, hemihypertrophy, arthrogyriposis, scalp defects, microcephaly etc) and cardiovascular system (patent ductus arteriosus, atrial septal defect, ventricular septal defect, conduction defect etc.) have also been notified [3].

Congenital unilateral renal agenesis have been frequently associated genitourinary anomalies like vesicoureteral reflux, ureterovesical junction obstruction, ureteropelvic junction obstruction, unicornuate or bicornuate uterus, uterus didelphys, double or absent vagina, absent or hypoplastic ovary, absent fallopian tube, persistent Gartner's duct cyst, and abnormal external genitalia [12-15].

CONCLUSION

Our case is a rare entity with conglomeration of a lot of congenital anomalies. Association of absent ribs, renal agenesis, ovarian agenesis, ostium secundum and supernumerary nipples could not be matched with any syndrome using morphologic database. Such a rare association has not been reported in any world literature to the best of our knowledge.

REFERENCES

1. Rosano A, Botto L, Botting B, Mastroiacovo P; Infant mortality and congenital anomalies from 1950 to 1994: an international perspective. *J Epidemiol Community Health.*, 2000; 54(9): 660-666.
2. Agha MM, Williams JI, Marrett L, To T, Dodds L; Determinants of survival in children with congenital abnormalities: a long-term population-based cohort study. *Birth Defects Res A Clin Mol Teratol.*, 2006; 76(1): 46-54.
3. Nguyen NV; Supernumerary Nipple. *Medscape*, 2014. Available from <http://emedicine.medscape.com/article/111782-5-overview>
4. Conde DM, Kashimoto E, Torresan RZ, Alvarenga M; Pseudomamma on the foot: an unusual presentation of supernumerary breast tissue. *Dermatol Online J.*, 2006; 12(4): 7.
5. Aslan D, Gürsel T, Kaya Z; Supernumerary nipples in children with hematologic disorders. *Pediatr Hematol Oncol.*, 2004; 21(5): 461-463.
6. Matesanz R, Teruel JL, García Martín F, Orte L, Guisasola L, Ortuño J; High incidence of supernumerary nipples in end-stage renal failure. *Nephron*, 1986; 44(4): 385-386.
7. Mehes K; Association of supernumerary nipples with other anomalies. *J Pediatr.*, 1979; 95(2): 274-275.

-
8. Mehes K; Association of supernumerary nipples with other anomalies. *J Pediatr.*, 1983;102(1): 161.
 9. Varsano IB, Jaber L, Garty BZ, Mukamel MM, Grunebaum M; Urinary tract abnormalities in children with supernumerary nipples. *Pediatrics*, 1984;73(1):103-105.
 10. Goedert JJ, McKeen EA, Fraumeni JF Jr.; Polymastia and renal adenocarcinoma. *Ann Intern Med.*, Aug 1981; 95(2): 182-184.
 11. Kahn SA, Wagner RF Jr.; Polythelia and unilateral renal agenesis. *Cutis*, 1982; 30(2): 225-226.
 12. Thompson DP, Lynn HB; Genital anomalies associated with solitary kidney. *Mayo Clin Proc.*, 1966; 41(8): 538-548
 13. Cascio S, Paran S, Puri P; Associated urological anomalies in children with unilateral renal agenesis. *J Urol.*, 1999; 162 (3 Pt 2):1: 1081-1083.
 14. Wiersma AF, Peterson LF, Justema EJ; Uterine anomalies associated with unilateral renal agenesis. *Obstet Gynecol.*, 1976; 47(6): 654-657.
 15. Li S, Qayyum A, Coakley FV, Hricak H; Association of renal agenesis and mullerian duct anomalies. *J Comput Assist Tomogr.*, 2000; 24(6): 829-834.