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Case Report

Nephrotic Syndrome in a Girl with Vesicoureteral Reflux and Situs Inversus

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Abstract

In this case report a five year old girl is presented with steroid-responsive nephritic syndrome who had bilateral Vesicoureteral Reflux (VUR) and situs inversus. A combination of situs inversus, nephrotic syndrome and VUR has not been reported previously.

Key words: Nephrotic Syndrome, Situs Inversus, Vesicoureteral Reflux

Introduction

Situs inversus totalis which is transmitted as an autosomal recessive trait is reported with an incidence of 1:2500 to 1:20000 in live births[1]. Nephrotic syndrome is an unusual renal disease in children with incidence of 2-7:100000[2]. Association of situs inversus with some renal anomalies (atresia, hypoplasia, dysplasia, ectopic kidney, polycystic kidney, horseshoe kidneys and glomerular diseases) have been reported previously[3-6]. Renal cell carcinoma has been reported to be associated with situs inversus in adults[5,7,8].

In our review of literature combination of nephrotic syndrome and vesicoureteral reflux (VUR) has not been reported in patients with sinus inverses.

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Case Report

A 5-year-old girl was treated as steroid-dependent idiopathic nephrotic syndrome since her second year of age. Blood pressure was normal and no anomaly was detected clinically, except the heart sounds which were better detectable on the right side of the sternum.

Chest X-ray, echocardiography and ultrasonography were in favour of situs inversus totalis. The heart structure was normal except for dextrocardia.

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Discussion

Situs inversus totalis is a reverse position, as in a mirror image, of the thoracic and abdominal viscera. Incomplete forms of situs inversus viscerum are less common than situs inversus totalis[8].

The complete and incomplete forms of this condition are associated with several anomalies in multiple organ systems, including cardiac pulmonary, genitourinary, skeletal system and the eye[5,7]. Patients with Alport's syndrome and situs inversus were reported previously[9]

Association of situs inversus and nephritic syndrome has not yet

been reported, but association of VUR and anomalies of other systems was reported in an infant of five months old age.[10]

In conclusion combination of situs inversus totalis, idiopathic nephrotic syndrome and VUR is absolutely rare and probably this is the first case which has been reported.

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