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Letter to Editor

The Importance of Examining Congenital Hypothyroidism in Connection with Congenital Heart Disease: Letter to Editor

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ABSTRACT

Dear Editor-in-Chief: I read and enjoyed your stylish article, "Frequency of Congenital Cardiac Malformations in Neonates with Congenital Hypothyroidism", in relation to heart disease with hypothyroidism. As we know, one of the most commonly associated congenital hypothyroidism disorders is congenital heart disease, which has a significant effect on the recovery of patients suffering from these disorders. On the other hand, both of these cases are visible and consistent in patients with Down syndrome.

Down syndrome is the most common chromosomal abnormality among live-born infants, which usually has certain characteristic signs, including a variety of dysmorphic features, such as flat facial features, small head and ears, short neck, and congenital malformations, the most important of which are congenital heart diseases and other health problems and medical conditions.

In what follows, we will study the diagnosis and treatment of an infant with Down syndrome undergoing surgery due to congenital heart disease, whose late detection of hypothyroidism led to lack of proper response to heart failure correction.

Keywords: Congenital heart disease, Heart failure, Hypothyroidism, Treatment-resistant

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I read and enjoyed your stylish article, "Frequency of Congenital Cardiac Malformations in Neonates with Congenital Hypothyroidism", in relation to heart disease with hypothyroidism.

As we know, one of the most commonly associated congenital hypothyroidism disorders is congenital heart disease, which has a significant effect on the recovery of patients suffering from these disorders. On the other hand, both of these cases are visible and consistent in patients with Down syndrome (1-3).

Down syndrome is the most common chromosomal abnormality among live-born infants, which usually have certain characteristic signs, including a variety of dysmorphic features, such as flat facial features, small head and ears, short neck, and congenital malformations, the most important which are congenital heart diseases and other health problems and medical conditions.

In what follows, we will study the diagnosis and treatment of an infant with Down syndrome undergoing surgery due to congenital heart disease, whose late detection of hypothyroidism led to a lack of proper response to heart failure correction.

A 6-month-old boy suffering from Down syndrome with normal foot tests (i.e., hypothyroidism screening) at birth was diagnosed with pulmonary arterial hypertension (PAH) and a large ventricular septal defect (VSD), which is a form of acyanotic disease. He was hospitalized in the 4th months due to lack of weight gain. The VSD surgical closure was performed, and PAH treatments began for the patient. The patient was hospitalized with a clinical presentation of cyanosis and hypotonia.

Despite the good results of postoperative

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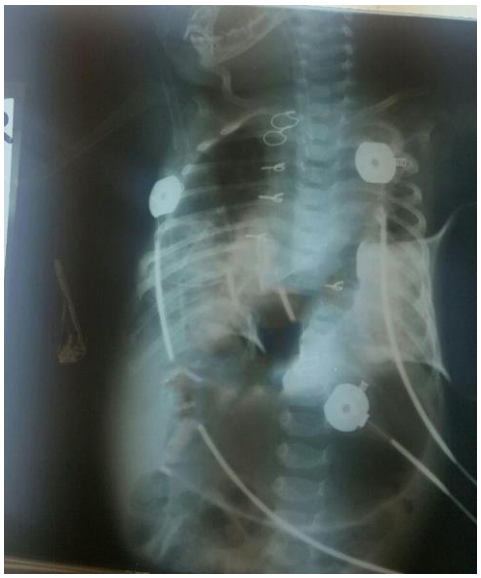

Figure 1. Bilateral lower lobe pulmonary consolidation in chest X-ray (Severe pneumonia)

echocardiography, which showed the effectiveness of the surgery, the patient was again referred with the clinical presentation of cyanosis, and cardiopulmonary resuscitation with intubation was performed for the patient, and he was dispatched to the hospital center. Radiography depicted lobar infiltrate in the right lung, extensive lung involvement in the left lung, and severe pneumonia (Figure 1), for which an appropriate response was not observed after 3 days of admission and related therapeutic measures.

After examination, in terms of hypothyroidism, TSH>100 mlU/L was reported, for which levothyroxine started corresponding to the weight and age of the infant at a dose of 0.25 mg. The TSH values<45, <15, <5, and 3.7 mlU/L were observed at the intervals of 3, 9, 17, and 20 days, respectively. Ultimately, the patient was extubated and showed a significant improvement in pneumonia (Figures 2 and 3).

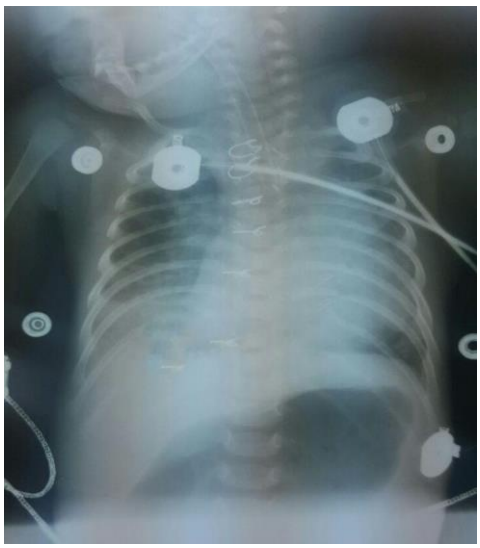

Figure 2. Partial pneumonia remission after 10 days of treatment in chest X-ray

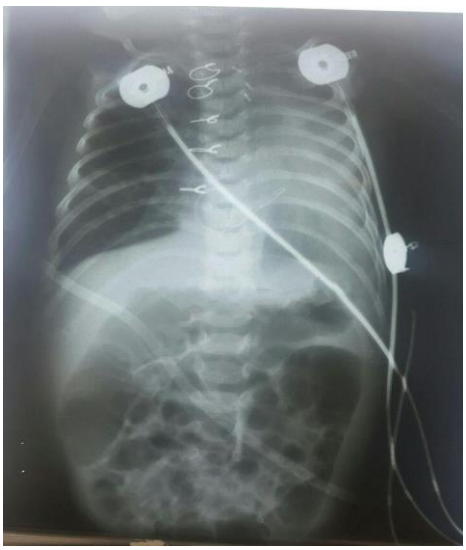

Figure 3. Significant pneumonia remission after 20 days of treatment in chest X-ray

Conclusion

The incidence of congenital hypothyroidism in patients with treatment-resistant heart diseases should always be considered, and it is advised to also check these patients for hypothyroidism.

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