PRENATAL DIAGNOSIS OF ROBERT/SC SYNDROME IN A DIABETIC MOTHER WITH A HISTORY OF MEBENDAZOLE AND GLIBENCLAMIDE INTAKE

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Abstract- The Robert/SC (pseudothalidomide) syndrome is a rare autosomal recessive disorder, associated with phocomelia and craniofacial abnormalities. An anomalous fetus with lower limb phocomelia and micromelia, lumbar myeloschisis, upper limb and ribs defects and craniofacial abnormalities is reported whose diabetic mother took mebendazole and glibenclamide in early pregnancy. Ultrasonographic findings of syndromes with phocomelia are discussed as well as Robert/SC syndrome which is the most probable diagnosis. Robert/SC phocomelia syndrome is a rare autosomal recessive condition characterized by severe pre and postnatal growth deficiency, symmetric limb reductions of variable severity and craniofacial anomalies including hypertelorism, hypoplastic nasal alae, cleft lip and palate. About half of the reported cases presented chromosomal abnormalities. We think that findings in our case are consistent with Robert/SC syndrome with additional abnormalities.

Acta Medica Iranica, 41(3): 147-149; 2003

Key Words: Robert/SC syndrome, gestational diabetes, glibenclamide, mebendazole, prenatal sonography

INTRODUCTION

About 3 to 4 decades ago, many newborns with phocomelia were reported which were induced by thalidomide. After cut out of thalidomide, phocomelia is seen rarely. In this study a case of Robert/SC syndrome is presented as well as main differentials.

CASE REPORT

A 26 year old Iranian woman G2P I was referred to our ultrasonography unit to document fetal lie. The mother was scanned with three 1W high resolution ultrasound transducer. Ultrasonography demonstrated a single pregnancy, female fetus with hypertelorism, ventricular dilatation, lumbar myeloschisis, right lower limb phocomelia and left lower limb micromelia (Fig. 1). Parents were young, healthy and non-consanguineous. They did not report any history of congenital abnormalities in family. The mother's previous pregnancy was a healthy boy. In this pregnancy the mother, unaware of her (3-4 weeks) gestation and suffering from an infectious illness, was treated with mebendazole, a total of 600 mg (100 mg twice daily) for 3 days. There was maternal diabetes in this pregnancy, therefore she had taken glibenclamide for three days, two tablets per day at about 6th or 7th weeks of pregnancy. The mother did not report any history of injection, vaccination, X-ray or complications during her pregnancy with the fetus described in this report. She was delivered at 25 weeks' gestation by elective caesarean section after an uneventful pregnancy. Infant died 10 minutes later. A radiographic skeletal examination was performed, revealing left radial hypoplasia, ulnar deviation of the left side, proximal focal femoral deficiency, knee dislocation, fibular agenesis on the left side, absence of right iliac, femur, fibula and tibia, six metatarsals and six digits (polydactyly) on the right side. The ribs were 11 pairs. Lumbar myeloschisis and hypertelorism were also seen (Fig. 2). Ultrasonographic findings were confirmed by radiographic examination and autopsy.

Received: 4 November 2001, accepted: 22 January 2003

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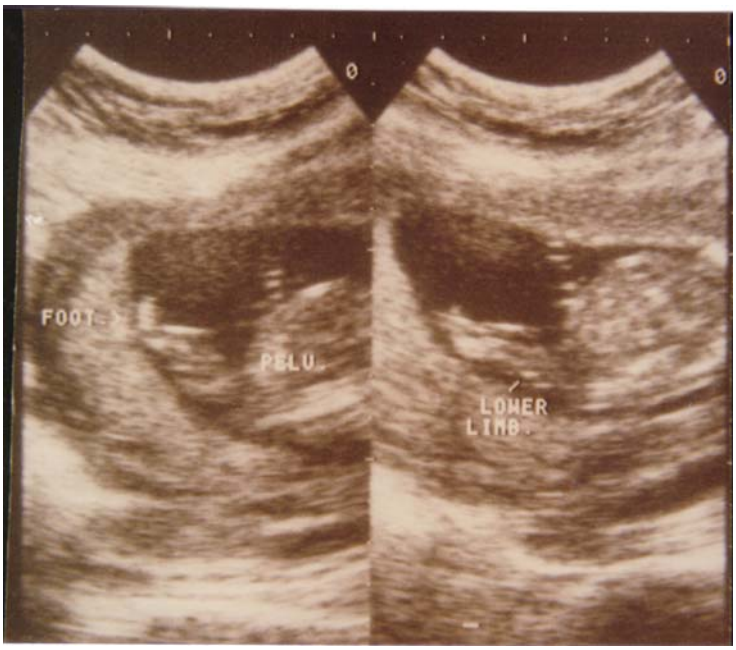
DISCUSSION

The case described in this report had lower limb phocomelia and micromelia, lumbar myeloschisis, upper limb and ribs defects and craniofacial abnormalities. This constellation of findings is associated with numerous syndromes. The Robert/SC (pseudothalidomide) syndrome is a rare autosomal recessive disorder, associated with phocomelia and craniofacial abnormalities including hypertelorism,

hypoplastic nasal alae, cleft lip and palate and chromosomal abnormality in about half of the cases. The autosomal recessively inherited DK-phocomelia syndrome is associated with phocomelia, oligodactily, thrombocytopenia and heart, brain, and kidney malformations. CHILD syndrome consists of phocomelia, ichthyosis, brain and heart malformations. Another syndrome in this domain is limb/pelvis-hypoplasia/ aplasia syndrome (AA/RR-S) which is associated with unusual facies, thoracic dystrophy and deficiencies in upper and lower extremities (1,2).



Phocomelia **Micromelia**

Fig 1. Sonogram of the fetus showing left lower limb micromelia and right lower limb phocomelia

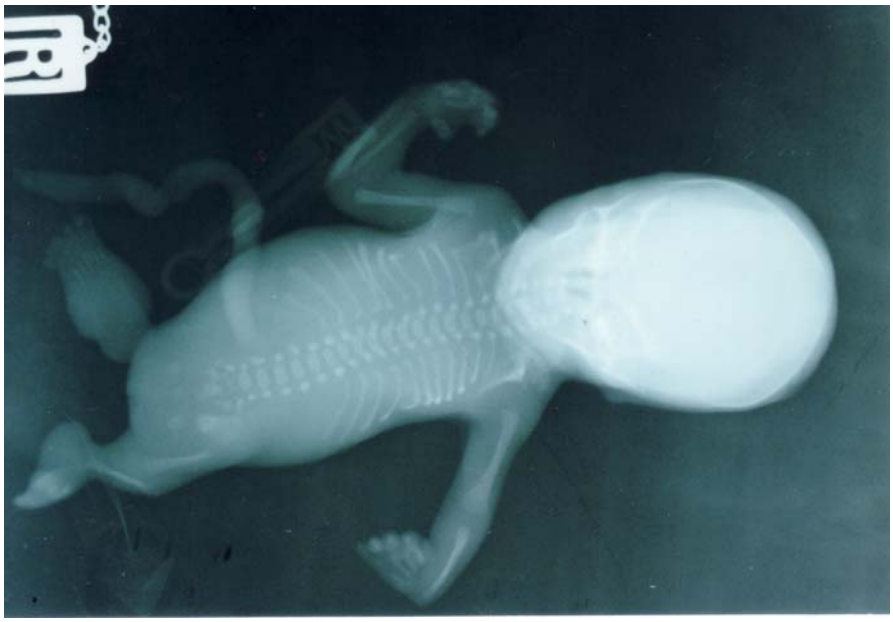


Fig. 2. Radiogram shows abnormalities of upper and lower limbs, ribs defects, lumbar myeloschisis and hypertelorism

Thrombocytopenia with radial aplasia (TAR) syndrome comprises absent radius with thumbs and hypomegakaryocytic thrombocytopenia without cleft palate (3). Lurie and Wulfsberg indicated that these differently named syndromes are in fact the same autosomal recessive inherited condition (2). While comparing the findings of our case with those of the other five syndromes, our case resembles Rebert/SC syndrome. The administration of drugs to pregnant women comprises special problems. Mebendazole and Glibenclamide are classified in C and D categories of drugs during pregnancy, respectively. No adequately large-scale studies on the safety of mebendazole therapy during human pregnancy have yet been carried out. The drug is known to be teratogenic in rats and mice, so there has been an understandable reluctance to use it in pregnancy (4).

The WHO recommended that mebendazole should not be administered in the first trimester (5). At review there was not any report of phocomelia in diabetic pregnant women who had taken glibenclamide (6). Severe involvement of lower limb in this case is atypical for Robert/SC syndrome, so synergistic effects of glibenclamide and mebendazole remain questionable.

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