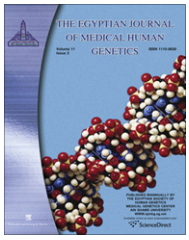
The Egyptian Journal of Medical Human Genetics (2010) **11**, 187–191

Ain Shams University

The Egyptian Journal of Medical Human Genetics

www.ejmhg.eg.net
www.sciencedirect.com



CASE REPORT

Baraitser–Winter syndrome: An additional Arab patient

Maha M. Abou Henedy, Makia J. Marafie *, Sawsan J. Abulhasan

Kuwait Medical Genetic Center, Maternity Hospital, Kuwait

Received 10 October 2009; accepted 1 December 2009

KEYWORDS

Baraitser–Winter syndrome;
Eye coloboma;
Mental retardation;
Multiple congenital anomalies;
Brain malformation;
Kuwait

Abstract An Arab child is presented herein with a phenotype that fits the rare Baraitser–Winter syndrome. Her clinical features included a unilateral iris coloboma, ptosis, hypertelorism, epicanthic folds, broad nasal bridge, full cheeks, pointed chin, low set abnormal ears and short neck. In addition, she had cardiac defect, previously undescribed brain anomaly, seizures, hypotonia and developmental delay. Chromosomal analysis of the peripheral lymphocytes and FISH study revealed a normal 46, XX karyotype. To date, Baraitser–Winter syndrome has only been reported in 19 patients of different ethnic families. The present case adds a new finding to the spectrum of malformations published before.

1. Introduction

Baraitser–Winter syndrome (OMIM 243310); was first described in sibs of unrelated parents as a combination of iris coloboma, bilateral ptosis, hypertelorism, broad nasal bridge, prominent epicanthic folds, growth and mental retardation [1]. Since then, 19 more cases had been reported showing characteristic clinical features resembling that of Baraitser–Winter syndrome [2–13]. Consequently, the phenotypic spectrum had been broadened including; microcornea, microphthalmia, microcephaly, trigonocephaly, gyral malformation, seizures, hypotonia, cardiac, urogenital, and skeletal defects. The precise genetic mechanism behind this syndrome is not identified so far. It has been postulated that mutation in the PAX-8 gene, which maps to 2q12–q14, may be responsible for the malformations in this syndrome [8]. This was because of the two cases that had been reported with pericentric inversions of chromosome 2; involving 2p12–q14, which were inherited from phenotypically normal mothers [2,3]. Moreover, the presence of affected siblings in two of the previously reported families [1,10], supported by the familial consanguinity in other reports [4,10], suggested an autosomal recessive inheritance.

2. Case report

The proband was the first child of a healthy unrelated young couple. She was the product of a mixed marriage between an Egyptian mother and a Kuwaiti father. She had one normal younger sister and the family history was unremarkable. She was born after a normal pregnancy and a non-complicated

* Corresponding author. Address: Kuwait Medical Genetics Centre, Maternity Hospital, P.O. Box 5833, Safat 13059, Kuwait. Tel.: +965 24814328; fax: +965 24842073.
E-mail address: mj_marafie@yahoo.com (M.J. Marafie).

Peer review under responsibility of Ain Shams University.
doi:10.1016/j.ejmhg.2010.10.004

ELSEVIER **Production and hosting by Elsevier**

delivery at 38 weeks of gestation. Birth weight was 2750 g (10th centile), length 51 cm (75th centile), and head circumference 35.5 cm (90th centile). Apgar score was 9 and 10 at 5 and 10 min, respectively. At birth the following anomalies were noted: hypertelorism, epicanthic folds, bilateral ptosis, deep set downward slanted eyes, long eye lashes, right sided iris coloboma, frontal bossing, bitemporal constriction, low set posterior rotated ears with large lobule, short nose with broad nasal bridge, long hypoplastic philtrum, small carp shaped mouth, high arched narrow palate, thin lips, full cheeks, pointed chin, micrognathia, short neck with folded skin and low posterior hair line (Figs. 1 and 2). Chromosomal analysis of the peripheral lymphocytes using G–T–G high resolution banding technique, and applying the FISH techniques on metaphase spread and interphase nuclei with N-myc specific probe for 2p23–p24, cyclineD1 (11q13)/CEP11 and telomeric regions for chromosomes 2 and 11 revealed normal 46, XX karyotype. Thyroid functions test, serum ammonia, lactic acid levels and metabolic screening were all normal. Pelvi-abdominal ultrasound, skeletal survey and audiometry showed no abnormality. Echocardiography detected a small patent ductus arteriosus. Ophthalmic examination revealed right sided iris coloboma with a thin retina. MRI of the brain at ages 11 days and at 1 year demonstrated dilated lateral ventricles, prominent basal cistern and sylvian fissures and about a 5 mm choroid plexus cyst in the posterior aspect of cavum septum pellucidum (Fig. 3). At 11 months of age, she developed repeated attacks of a febrile generalized fits controlled by Phenobarbital. EEG showed abnormal record on account of diffuse background activity slowing with regional accentuation of slow waves. She was re-evaluated at 18 months of age, with a weight of 11.5 kg, length of 82 cm and HC of 47.5 cm, all were on the 50th centile. She was hypotonic with global developmental delay. Informed consent was obtained from parents of the child and this work was done after approval of the ethics committee.

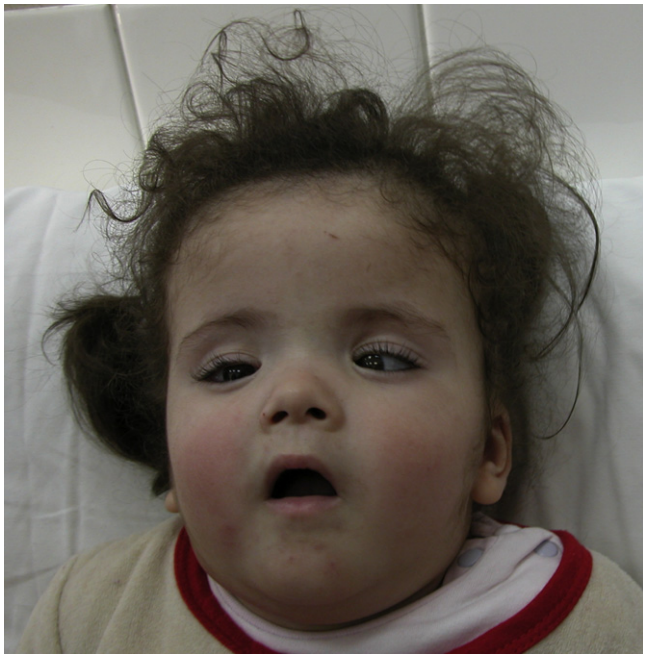


Figure 1 The proband at age of 17 months reveals short nose with a broad base, ptosis, strabismus, long eye lashes, hypertelorism, full cheeks, long hypoplastic philtrum, thin lips with downturned angles of the mouth and short neck.

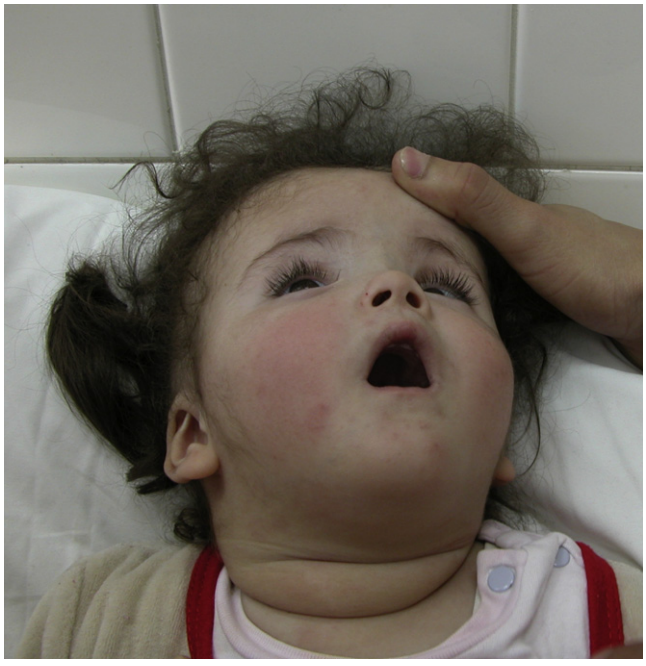


Figure 2 Note low set posterior rotated ears with large lobule and short neck with folded skin.

3. Discussion

The combinations of the iris coloboma, ptosis, hypertelorism, broad nasal bridge, epicanthic folds, growth and mental retardation were considered as a distinct syndrome, first

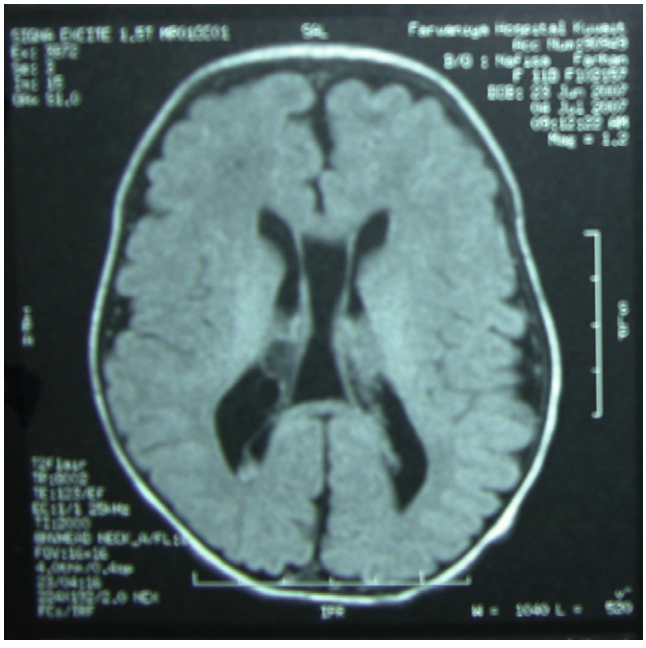


Figure 3 Coronal brain MRI images of the proband at age of 11 months. Note choroid plexus cyst in the posterior aspect of cavum septum pellucidum.