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New Syndrome

Ptosis of Eyelids, Strabismus, Diastasis Recti, Hip Defect, Cryptorchidism, and Developmental Delay in Two Sibs

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We report a distinct syndrome of eyelid ptosis, convergent strabismus, abdominal muscle defect, hip dislocation, cryptorchidism and developmental delay in two brothers. Consanguinity in their parents suggests autosomal recessive inheritance.

KEY WORDS: peculiar face, diastasis recti, hip dysplasia

THE SYNDROME

Main Manifestations (in Both Sibs)

Growth deficiency, mild developmental delay. Unusual face: downslanting palpebral fissures, bilateral ptosis, convergent strabismus, congenital stenosis of the lacrimal ducts, depressed nasal bridge, hypertelorism, apparently low-set ears with folded helices and elongated lobule, and highly arched palate. The maxillary central incisors are partially overlapped in patient 1. Inability to extend the elbows fully with limited pro-supination, partial agenesis of the abdominal muscles, hip dysplasia, and bilateral cryptorchidism are also present.

Family History

Consanguineous healthy parents (second cousins). At the time of the birth of patient 1, his father was 40 years old and his mother was 34 years old. An elder sister of the propositus is normal, and none of the above mentioned anomalies was reported in anyone else in the family (Fig. 1).

Patient 1 (VI-2)

Prenatal history. Unremarkable.

Birth history. Born at 32 weeks of gestation after an uneventful drug-free pregnancy and spontaneous onset of labor. Birth weight was 3,200 g; length and head circumference (OFC) not stated. Transitory neonatal hypoxia; breast-fed for 7 months. Psychomotor development retarded (sat without support at 9 months, walked at 20 months, spoke single words at 24 months).

Clinical course. Hospitalized at 3 months for evaluation of growth failure. No data available from that evaluation. Second admission to the orthopedic department at 6 years for hip problems (bilateral Trendelenburg sign) and limited abduction of the thighs (not more than 30°); the femoral heads were posteriorly palpable. At that time, the patient weighed 17 kg (10th centile) and was 105 cm tall (3rd centile). Since then, he had operations for correction of hip dislocation, but the results were suboptimal.

At 9½ years, the child was first seen by us together with his younger brother (Figs. 2, 3). He weighed 29 kg (25th centile), and his height was 126 cm (3rd centile). Clinical manifestations are shown in Table I. Dermatoglyphic study showed the fingertip patterns to consist of four whorls, five ulnar loops, and one radial loop. The

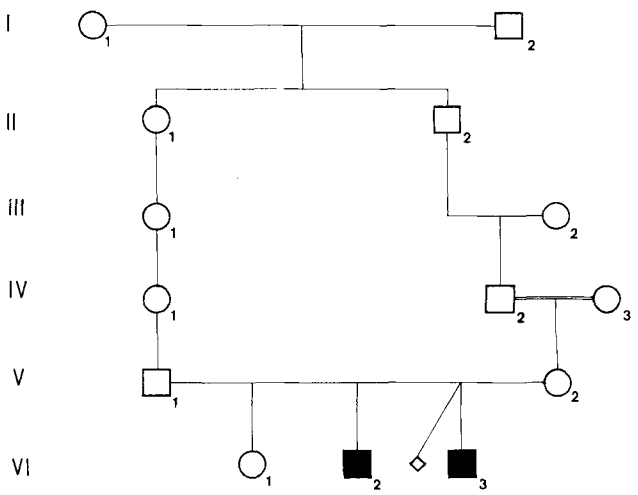

Fig. 1. Family pedigree.

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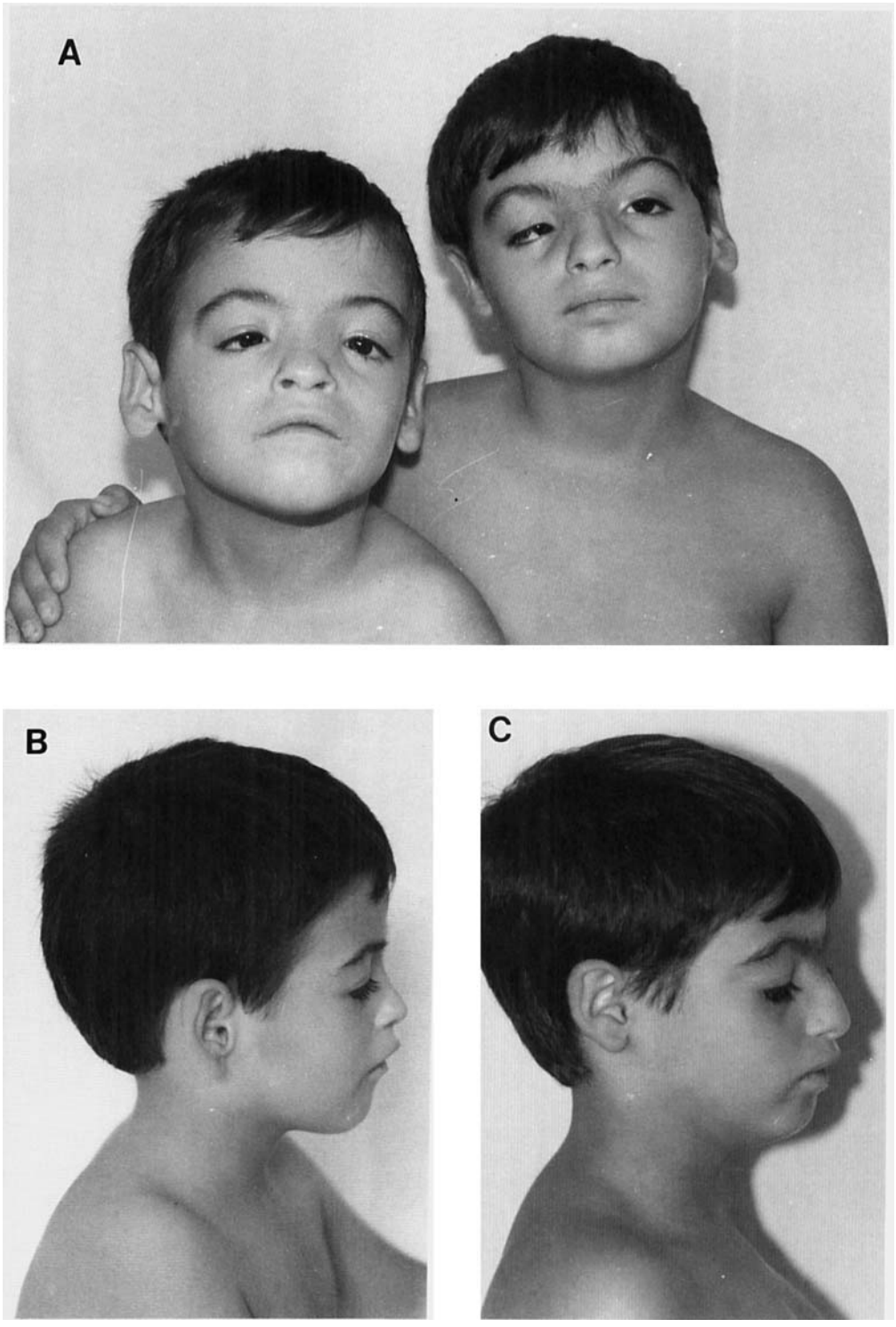

Fig. 2. Patients 1 and 2 at years 6½ and 9½, respectively. **a:** Note ptosis of the eyelids, convergent strabismus, depressed bridge of the nose, smooth philtrum, downturning corners of the mouth. **b,c:** Note malformed helices and micrognathia.

atd angle was 49° on the right palm and 48° on the left palm. Results of biochemical investigations were normal, including amino acid analysis and oligosaccharide chromatography. G-banded karyotype was also normal. Films of the petrous pyramids (transverse projection) showed asymmetry with a sclerotic mastoid process on the right side, hypopneumatization on the left, narrowing of the internal auditory canals. Temporal bone polytomography

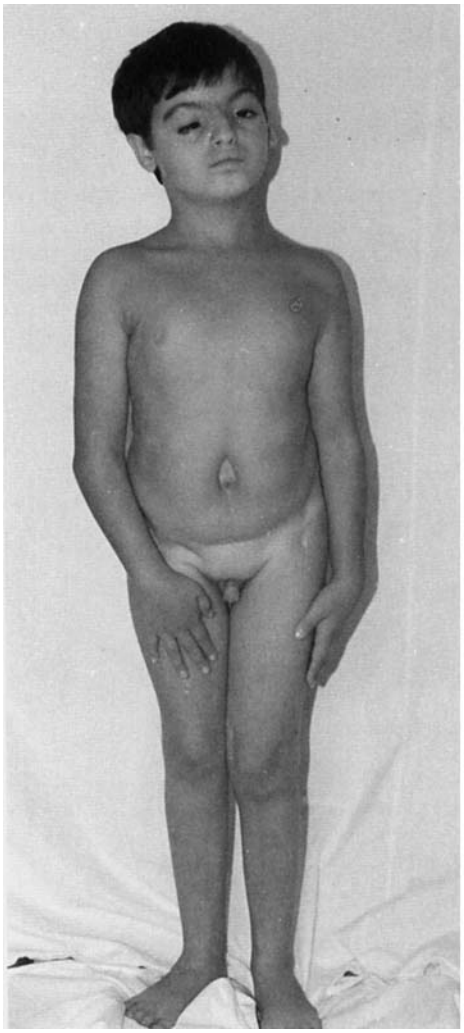

Fig. 3. Patient 1 at 9½ years. Note defect of the abdominal muscles plus scars from surgery for hip dislocation.

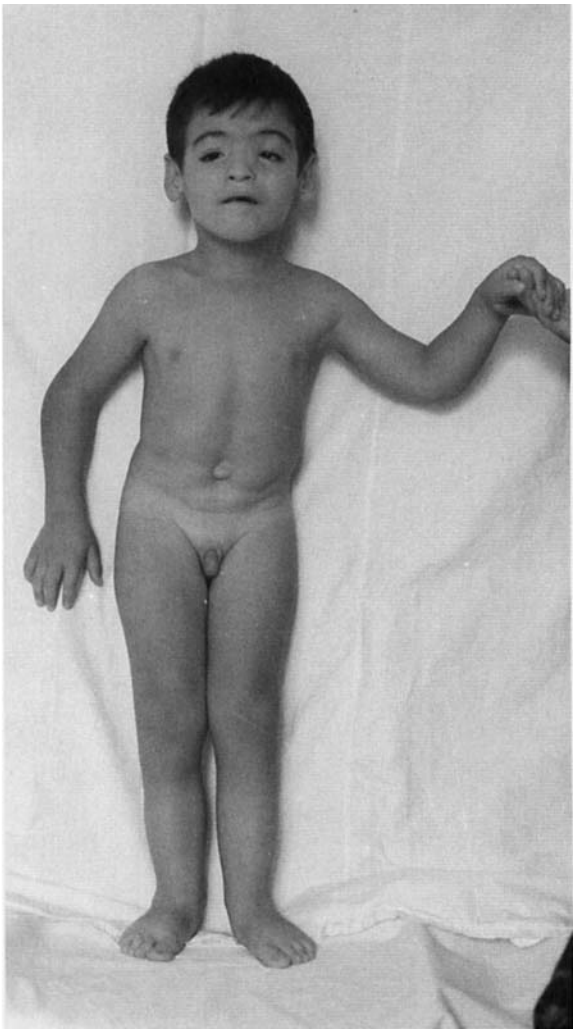

Fig. 4. Patient 2 at 6½ years. Note defect of the abdominal muscles and laterally rotated feet.

(Guillen projection) showed narrow external auditory canals bilaterally, more evident on the left side. The vestibular system was wider, and a widened external semicircular canal was seen bilaterally. Inner ears, audiometric responses, and color vision were normal. CT head scan was normal.

At 12½ years, the patient weighed 36.8 kg (25–50th centile), height was 135.5 cm (3rd centile), and OFC was 52.6 cm (50th centile). He had marked lordosis, moderate hyperreflexia, persistent inability of pro-supination, and some difficulties in fully extending the legs. Bilateral blepharoptosis was still evident. This seemed to explain his ocular torticollis: the patient was constantly in search of a wider visual field.

Patient 2 (VI-3)

Prenatal history. Mild maternal hypertension during the third trimester. No ultrasonographic data available.

Birth history. Born at 28 weeks gestation from a twin delivery (dizygotic co-twin died *in utero* during the 20th week; no apparent malformations were noted. Birth weight 2.4 kg; length and OFC not stated. Kept in incubator during the first months of life for severe hypoxia. Maternal milk was given by gavage until the third month, then spontaneous suction allowed normal breast feeding. Retarded psychomotor development (sat unsupported at 12 months, first single words at 24 months).

Clinical course. At age 2⁹/₁₂ years, the patient was admitted to the orthopedic department because of inability to walk; he could only touch his feet on the floor with support. At that age, a CT scan showed slight dilatation of the lateral ventricles and widened interhemispheric fissure as a consequence of mild atrophy.

This patient was first examined by us at 6½ years (Table I). He weighed 20 kg (25–50th centile); his height was 104 cm (3rd centile). Dermatoglyphic study showed fingertip patterns of one whorl, eight ulnar loops, and one radial loop. The *atd* angle was 48° on the right palm

TABLE I. Summary of Clinical Manifestations

	Patient 1	Patient 2
Sex	M	M
Consanguineous parents	+	+
Gestation (weeks)	32	28
Birth weight (kg)	3.2	2.4
Asymmetric head	+	−
Synophorys	+	−
Downslanting palpebral fissures	+	+
Blepharoptosis	+	+
Blepharophimosis	+	+
Epicanthus inversus	+	+
Limitation of upward gaze	+	+
Ocular hypertelorism	+	+
Stabismus	+	+
Apparently low-set and/or malformed ears	+	+
Depressed bridge of the nose	+	+
Highly arched palate	+	+
Dental caries	+	+
Intellectual impairment	+	±
Hyposomia	+	+
Recurrent middle ear infections	−	+
Accessory and/or widely spaced nipples	+	−
Partial agenesis of the abdominal muscles	+	+
Limitation of elbow extension	+	+
Hip dysplasia	+	+
Cryptorchidism	−	+
CNS abnormalities	−	+
Hyperactive deep tendon reflexes	+	+
Chromosomes	Normal	Normal

and 47° on the left palm. Biochemical investigations were normal.

Polytomography of the temporal bones (Guillen projection) showed mild but complex malformations: abnormally downward directed ear external canals, narrowed internal canal on the left side, widened and short on the right side.

At age 9½, the patient weighed 28 kg (25–50th centile), height was 114.5 cm (3rd centile), and OFC was 52.6 cm (50th centile). His facial appearance was strikingly similar to that of his elder brother, and limitation in his visual field was the same.

Ambulation was grossly difficult, with spontaneous flexion of the knees and laterally rotated feet (Fig. 4). Deep tendon reflexes were hyperactive. The scrotum had a "shawl" appearance with no palpable testes.

DISCUSSION

Both patients had unusual facial anomalies somewhat reminiscent of the clinical phenotype of mandibulofacial dysostosis [Franceschetti and Klein, 1949]; however, the associated anomalies found in these brothers are not consistent with that disorder.

Pashayan et al. [1973] reported a disorder characterized by lacrimal excretory obstruction, antimongoloid slant of palpebral fissures, telecanthus, prominent nasal bridge, bulky nose, and protruding lower lip in four affected family members (mother and three children). Mental retardation, joint laxity, and torsion dystonia were also features variably expressed in them. This syndrome, reported as blepharonasofacial, shows some facial similarities with our patients, but joint laxity, torsion dystonia, and autosomal dominant transmission were not observed by us.

Another complex malformation possibly similar was described by Morillo-Cucci et al. [1975] in two male sibs: unusual face (frontal bossing, large and low-set ears, hypertelorism, palpebral ptosis, nystagmus), small umbilical hernia, muscular hypotonia, joint laxity, mental retardation, and short stature. The similarity to our patients is confined to the face. Our patients showed a consistent defect in abdominal wall musculature, no hypotonia, and limited pro-supination movements.

Ocular hypertelorism, anteverted nostrils, and shawl scrotum characterize the Aarskog syndrome [Aarskog, 1970], but the additional anomalies of our patients rule out this disorder.

As far as we know, the manifestations in these two brothers have not been reported previously. This is probably an autosomal recessive condition since the parents are consanguineous. However, X-linked transmission cannot be ruled out.

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