Brief Clinical Report

**MALPUECH FACIAL CLEFTING SYNDROME
IN A JAPANESE BOY WITH
CARDIAC DEFECTS**

Yasutsugu CHINEN and Kenji NARITOMI

*Department of Pediatrics, University of the Ryukyus School of Medicine,
207 Uehara, Nishihara, Okinawa 903-01, Japan*

Summary We reported on a Japanese boy similar to the patients previously reported by Malpuech *et al.* (1983) with mental and growth retardation, hypertelorism, bilateral cleft lips, cleft palate, and urogenital anomalies. He also had undescribed cardiac defects. This is probably the second case report of Malpuech facial clefting syndrome.

Key Words Malpuech facial clefting syndrome, mental retardation, growth retardation, hypertelorism, cleft lip/palate, urogenital defects, cardiac defects

Introduction

A new autosomal recessive malformation syndrome had been reported in three sibs and one male cousin as well as three stillborn children and even other suspected relatives from highly inbred Gypsy families in France (Malpuech *et al.*, 1983). Cardinal findings consisted of mental retardation, postnatal growth retardation, hypertelorism, bilateral or unilateral cleft lips, cleft palate, and urogenital anomalies. We report here an additional Japanese patient of the syndrome.

Clinical Report

The proband was the sixth child born to healthy G6P6 mother and healthy father when both were 36 years of age. Consanguinity was denied by the parents. The first male infant was died at age 2 months of congenital heart disease (details unknown). Other four children are normal and healthy. The pregnancy was uneventful. The mother had no history of medication, smoking, alcohol intake, and other teratogenic agents. He was delivered by emergency cesarean section because of maternal genital bleedings, fetal distress, and breech presentation at 32 gestational weeks. Apgar scores were 7 at 1 min and 8 at 5 min. His birth weight was 1,727 g (appropriate for his gestation). Soon after birth he had grade 1 respiratory distress and cardiac failure due to patent ductus arteriosus (PDA)

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Fig. 1. Facial appearance.

and ventricular septal defect (VSD). PDA was ligated on 38 days of age. He had repeated respiratory infections since 5 months of age, and had mild hepatic dysfunction at 9 months.

He was a small, malnourished, and hyperactive boy with a distinctive facial appearance when first examined by us at the age of 1 year and 2 months. His weight was 5,230 g (-4.0 SD), length 63.8 cm (-4.4 SD), and OFC 41.5 cm (-3.1 SD). He had mild triangular facies with bossed and wide forehead, hypertelorism, hypoplastic supraorbital ridges, arched eyebrows, curly long eyelashes, high nasal root, flaring of alae nasi, prominent antihelices, bilateral cleft lips, and cleft palate (Fig. 1). He had small hemangioma (diameter 3 cm) on right temporal area. He also had short neck, short sternum, left cryptorchidism, hypoplastic scrotum, camptodactyly (left 4th finger), and short 5th fingers. Perijoint skin dimples were noticed at right elbow and knee joints.

A skeletal roentgenogram revealed partial fusion between right 7th and 8th ribs, sagittal clefting of the vertebrae, wormian bones at lambdoid suture, and short left 5th middle phalanx. Absence of left kidney and compensatory hypertrophy of right kidney were revealed by echography. And brain atrophy was suggested by a magnetic resonance imaging. He had moderate mental retardation ($DQ=43$). His bone age was estimated as 6 months at chronological age 11 months. A chromosomal analysis performed at 850-GTG-banded stage was normal.

Discussion

The prominent findings in the propositus were mental and growth retardation, hypertelorism, bilateral cleft lips, cleft palate, and renal aplasia. We sought suitable malformation syndromes using our original computerized database, UR-DBMS (University of the Ryukyus-Database for Malformation Syndromes), involving data of about 4,600 genetic diseases and/or genes (Naritomi, 1995). Although Klippel-Feil syndrome, acrocallosal syndrome, Malpuech facial clefting syndrome,

Table 1. Cardinal findings of Malpuech facial clefting syndrome.

Case Findings	Malpuech et al.(1983)				Present case
	Case 1	Case 2	Case 3	Case 4	
Age	10	8	3.5	5	1
Sex	M	F	M	M	M
Gestation(w)	37	40	40	40	32
Birth weight(g)	2600	2600	2900	2600	1728
Birth length(cm)	47	48	49	49	—
Length(SD)	—3	—5	—4.5	—4	—4.4
DQ	60	55	45	55	43
Prominent/wide forehead	+ p	+ p	+ p	+ p	+
Hypertelorism	+	+	+	+	+
Arched eyebrows	+ p	+ p	+ p	+ p	+
Cleft lip	bilateral	bilateral	bilateral	unilateral	bilateral
Cleft palate	+	+	+	+	+
Renal defects	aplasia(lt) ectopia(rt)	hypoplasia(bil.) VUR	—	malrotation(rt), vesical diverticula, VUR	aplasia(lt), hypertrophy(rt)
Genital defects	ectopic testis	—	micropenis, hypospadias, ectopic testis	—	ectopic testis, hypoplastic scrotum
Cardiac defects	—	—	—	—	PDA,ASD

+ p : judged by photograph, VUR: vesicoureteral regurgitation.

Roberts syndrome, Varadi-Papp syndrome, and 10p trisomy were selected as candidates fulfilled with these 6 findings, only Malpuech facial clefting syndrome (MIM 248340) was considered highly similar to our patient.

Malpuech facial clefting syndrome was based on one Gypsy pedigree in France involved four reported patients, three stillborn children and seven other relatives with similar anomalies (Malpuech *et al.*, 1983). The cardinal findings found in all of the four cases were severe postnatal growth retardation (—3 to —4 SD), moderate mental retardation (DQ 45 to 60), cleft lip (three cases were bilateral, and one case unilateral), cleft palate, and hypertelorism. Renal and urinary tract anomalies were found in three cases (aplasia, hypoplasia, ectopia, malrotation, vesicoureteral reflux, and vesical diverticulosis). Genital anomalies were found in two cases (ectopic testis, hypospadias, micropenis, and hypoplastic scrotum). Because all of these seven major findings are also seen in our patient, and in addition, his facies is quite similar to these four original cases, we considered that our patient had the same disorder as those of the patients by Malpuech (Table 1). This should be the second case report of Malpuech facial clefting syndrome associated with cardiac defects as an additional finding.

Because of highly inbred families and concomitant occurrence in sibs, autosomal recessive inheritance is suggested in Malpuech facial clefting syndrome (MIM

248340). Although the parents denied consanguinity in our family, they and their grandparents are natives in a small limited area in northern part of Okinawa Island. Thus, we cannot deny a possibility of close relation in their ancestors.

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