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Short Communications

An Unidentified Neonatal Progeroid Syndrome: Follow-up Report *

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Abstract. Two male infants with a pseudo-hydrocephalic progeroid syndrome with natal teeth are compared with two very similar female cases reported in the literature and interpreted as congenital progeria. All these cases may represent a separate entity, a previously unrecognized genetic progeroid syndrome.

Key words: Progeroid – Pseudohydrocephalus – Natal teeth.

It is the purpose of this report to suggest that a previously unrecognized progeroid disorder can be delineated. It is based on two personal observations, made in 1966 and 1977, and a recent report by Rautenstrauch et al. (1977).

In 1977, Rautenstrauch et al. [1] reported two sisters "who demonstrated the typical symptoms of progeria at birth". Among the strikingly similar features, the authors commented on the very curious presence of two *incisors present at birth.* The children did not have cataracts.

Natal teeth may occur as an isolated abnormality or accompany systemic abnormalities in the Hallermann-Streiff syndrome, the Ellis-van Creveld syndrome, and the Pachyonychia congenita syndrome [2, 4]. Patients with progeria (Hutchinson-Gilford syndrome) show markedly delayed dentition [3—5].

In 1966 and in 1977 I saw two unrelated male infants with a neonatal progeroid syndrome who were similar to the patients described by Rautenstrauch et al. In addition, 2—4 incisors were present at birth. Figure 1 illustrates the similarity of the patients of Rautenstrauch et al. (left) and my second patient (Sv.R., born in 1977; right), when all three infants were aged 8 months.

Figure 2 compares my first patient (T.M., on the right), seen in 1966, and the new patient (Sv.R.; left) at the age of 1—2 months. From left to right, Figure 3 shows the profiles of patient 2 (Sv.R.) at 6 weeks and 8 months respectively, and of patient 1 (T.M.) at 7 weeks of age, demonstrating the development of a beak-shaped nose. The infants have rather large hands and feet with long digits (Fig. 4),

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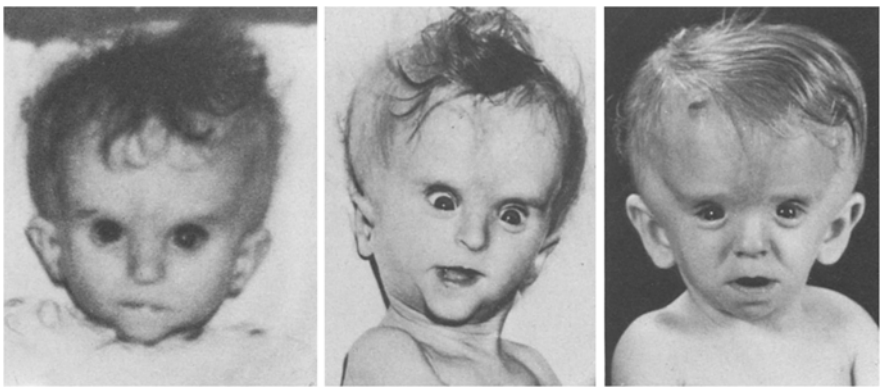

Fig. 1

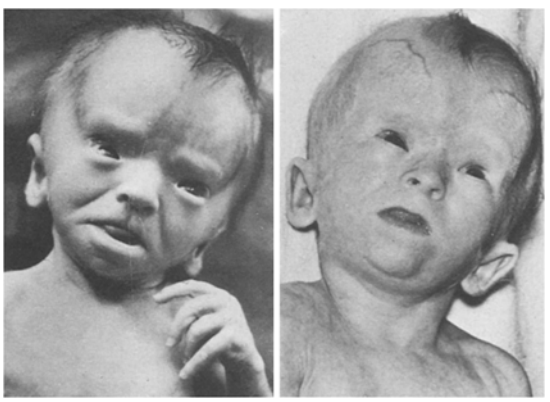

Fig. 2

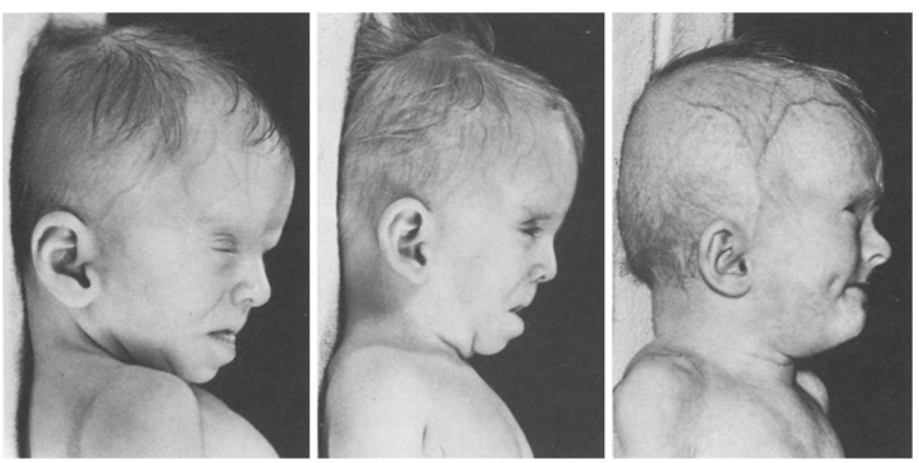

Fig. 3

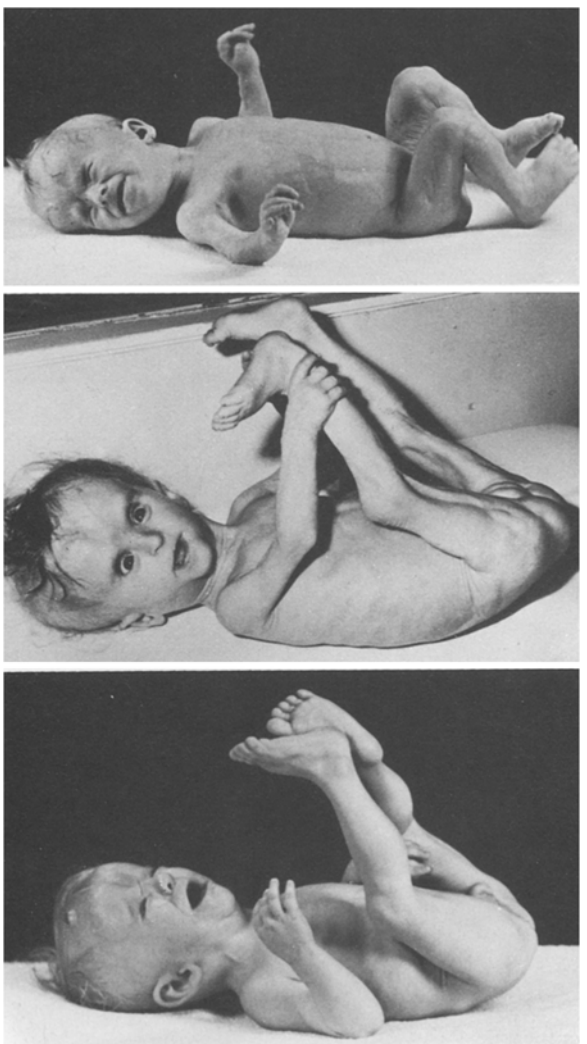

Fig. 4

and a generalized deficiency of subcutaneous fat, although they may develop a paradoxical caudal fat accumulation (Fig. 4 middle, patient 2 of Rautenstrauch et al. at 8 months of age; Figure 5, my patient T.M. at 9 months of age).

All four children have been born to healthy young parents who were not consanguinous, except for a maternal age of 42 at the time of birth of my patient 2 (Sv.R.). They have a total of 7 unaffected siblings (my patient 1: 1, patient 2: 3, the patients of Rautenstrauch et al.: 3).

A synopsis of the clinical findings in all 4 patients is given in Table 1.

The course of the disease and the prognosis in these patients seems to be variable. Both of my patients have marked growth deficiency, whereas those of

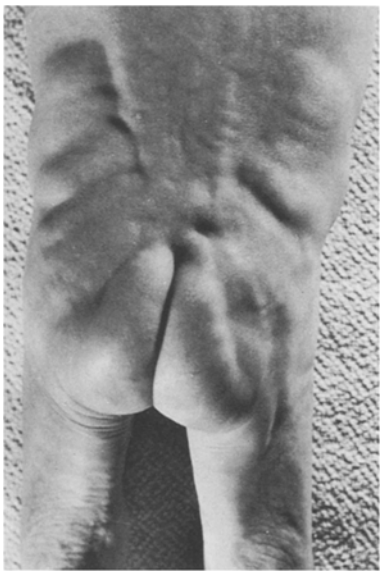

Fig. 5

Table 1. Comparison of the clinical findings in four patients with a neonatal progeroid syndrome

Clinical sign	This report		Rautenstrauch et al. (1977)	
	Patient 1	Patient 2	Patient 1	Patient 2
Birth at term or retarded; smallness for age	+; 2200 g, 45 cm	+; 2550 g; 49 cm	+; 2380 g, 48 cm	+; 2110 g, 47 cm
Hydrocephaloid skull	+	+	+	+
Widely open sutures	+	+	+	+
Persistent fontanelle	+	+	+ ?	+
Prominent scalp veins	+	+	+	+
Sparse scalp hair	+	+	+	+
Low-set ears	+	+	+	+
Hypoplasia of the facial bones	+	+	+	+
Nose may become beak-shaped	+	+	+	+
Progeroid face	+	+	+	+
No cataracts	+	+	+	+
Dentition present at birth	+ (2 incisors)	+ (4 incisors)	+ (2 incsisors)	+ (2 incisors)
Large hands and feet with long fingers and toes	+	+	+ ?	+
Large penis	+	(+)	(♀)	(♀)
Generalized diminution of subcutaneous fat	+	+	+	+
Prominence of veins and muscles	+	+	+	+
Paradoxical caudal fat accumulation during infancy	+	(+)	?	+ ?

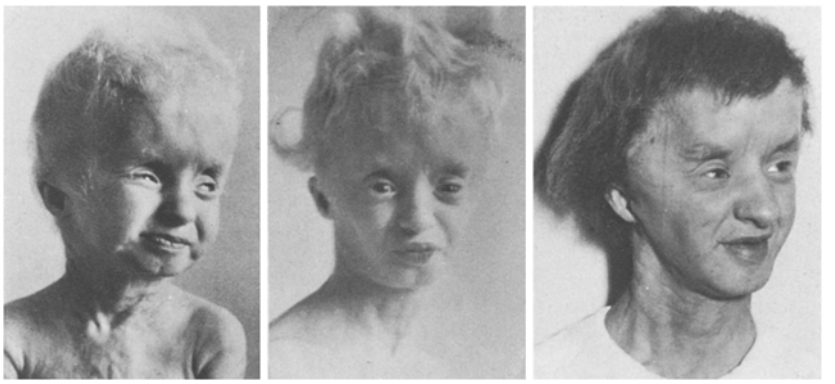

Fig. 6. Case P., U. at 3 years, 8 years, and 18 years respectively

Rautenstrauch et al. were of normal length at 8 months of age. Developmental retardation was evident in both patients of Rautenstrauch et al. and in one of mine (T.M.) who was severely retarded with regard to all functions. The other patient (Sv.R.) is neurologically and mentally normal at the age of $1^{5}/_{12}$ years.

Another patient with a progeroid disorder, whom I have followed for 22 years (1946—1968), is shown in Figure 6. Her height and weight were below the 3rd percentile at 18 years of age. This girl has a pseudohydrocephalic skull with a large, open anterior fontanelle. She is of average, or even above average, intelligence with good social adaptation. Her menstrual cycle is normal. She has always presented a diagnostic problem [6] and I am still not certain whether she should be grouped with the patients discussed above.

Apart from the brief clinical descriptions presented above, I have not been able to add much to the study of these cases. Chromosomal analyses were normal, including search for chromosomal instability in both lymphocytes and cultured skin fibroblasts, which had shown decreased proliferative capacity in one of Rautenstrauch's patients, but not in our patient 2 (Sv.R.). We have not yet completed a study of enzyme patterns and activities, as well as HLA antigens, in cultured fibroblasts or other cells.

Certainly these children do not have either classical progeria, acrogeria [7], metageria [8], the Hallermann-Streiff syndrome [9, 10], the oculodento-osseous dysplasia syndrome, or the Cockayne syndrome etc. The phenotype perhaps resembles the Hallermann-Streiff syndrome most closely. I can also see some resemblance to the Berardinelli-Seip syndrome.

I suggest that the patients discussed in this report represent a new, probably genetic, neonatal progeroid syndrome.

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