his life to malformations in man and animal, told me he had seen as many individuals with 2 heads as he had with phocomelia.

Suddenly in 1961 the incidence of phocomelia increased rapidly. Almost every clinic in West Germany admitted 3 times as many such infants in 1961 as in 1960. The data in Table 1 shows the incidence which was reported to me in March, 1962, by various university pediatric clinics in West Germany and also in 3 centers in the British Commonwealth. By the time of the 1961 pediatric meeting in Düsseldorf almost all pediatricians were aware of the outbreak of phocomelia.

TABLE 1.—INCIDENCE OF PHOCOMELIA IN THE VARIOUS UNIVERSITY PEDIATRIC CLINICS

	1949–59	1959	1960	1961	In 3 years
Bonn	--------	2	19	50	71
Bremen	--------	--------	4	20	24
Frankfurt	--------	1	4	11	16
Göttingen	--------	3	1	10	14
Hamburg (Lenz-person)	--------	1	16	57	74
Hamburg (Lenz-letter)	--------	1	30	154	185
Heidelberg	--------	2	5	9	16
Kiel	--------	2	4	26	32
Munchen	3	2	14	44	60
Munster	[1] 4	3	27	96	126
Birmingham	--------	--------	4	13	17
Liverpool	--------	--------	8	25	33
Stirling	--------	--------	--------	--------	10

[1] These include peromelia, amelia, and micromelia as well as phocomelia—per year.

In September, 1961, Wiedemann (2) reported the first series of 33 such children and delineated the clinical syndrome. As in most malformations, the severity varies but the pattern is remarkably specific. The essential feature of the abnormality concerns the long bones of the extremities (Figs 1 and 2). The prehensile is lost (Fig. 3). The hand arises directly from the distal end of the affected bone. The radius is absent or both radius and ulna are defective; in some instances only one short bone remains; in extreme cases the radius, ulna, and humerus are lacking and the hand buds arise from the shoulders (Fig. 1). Both sides are affected but not usually with equal severity. The legs may be affected in the same manner; in most instances the deformity of legs is less severe (Fig. 2). The tibia fails to form. The fibula also may not form and the femur may be short. The hip girdle is not fully developed and there is a dislocation of the hip with external rotation of the stub of the femur. The feet are externally rotated. Polydactylism and syndactylia of the toes are common (Fig. 3). In the extremely severe cases the arms and the legs are missing (Fig. 4). In some instances the external ear is missing and the internal auditory canal is abnormally low (Fig. 5). Usually hearing is not grossly impaired. Unilateral facial paralysis is relatively common. The vast majority of children are of normal mentality.

Pfeiffer and Kosenow(4) noted that a mid-line facial hemangioma on the forehead which extended over the nose to form a "moustache" on the upper lip was almost pathognomic of the syndrome (Fig. 1). A saddle nose was also common. These features diminish and tend to disappear as the infant grows. In some

TABLE 2.—INCIDENCE OF MAJOR MALFORMATIONS[1]

Type	Personal observations		Letters	
	Number	Percent	Number	Percent
Arms only	43	52.4	103	50.6
Arms and legs	23	28.1	60	29.6
Arms, legs, and ears	2	2.4	7	3.4
Arms and ears	3	3.7	10	4.9
Ears only	7	8.5	14	6.9
Legs only	1	1.2	4	2.0
Other malformations	3	3.7	5	2.5
Total	82	----------	203	----------

[1] Courtesy of Dr. W. Lenz, Hamburg, Germany.