

Council's jurisdiction on the ground that statute forbids a wider interpretation.

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DEFORMITIES IN A CHILD WHOSE MOTHER TOOK L.S.D.

SIR,—In 1969, we reported in *The Lancet* the case of an infant with transverse deficits of portions of both hands, syndactyly of the right hand, and numerous phalangeal bones missing.¹ The mother was believed to have been exposed to lysergide and cannabis during pregnancy. There had been two previous reports of similar cases.^{2,3}

We should like to describe an additional case of fetal lysergide exposure, wherein the infant exhibited amputation deformities of the third finger of the right hand and the third toe of the left foot. The mother was aged 22, and had previously had one apparently normal child, born in 1968. She had allegedly been taking unknown amounts of lysergide before and throughout the pregnancy. There were three episodes of "hepatitis" during the pregnancy. The baby, a Caucasian male, was born in January, 1970, after 36 weeks' gestation and spontaneous vertex delivery. Birth-weight was 5 lb. 9½ oz. (2537 g.).

Fig. 1 shows the appearance of the infant's right hand at age 2 months. The distal phalanges of the third finger are absent, and there is a freely movable stump with a small pedicle of skin at the end. X-ray studies revealed that the distal bones of the third finger were absent; the proximal phalanx was somewhat pointed. There was some notching of the medial aspect of the right fourth proximal phalanx and the right fifth proximal phalanx. The distal bones of the left third toe were similarly absent.

For the purposes of comparison, fig. 2 depicts the dorsal surfaces of the right hand of our 1969 patient,¹ showing severe syndactyly of the 2nd, 3rd, and 4th fingers. The distal protuberances of the finger stumps in both patients bear some similarities in appearance.

Leucocyte cultures done on the present patient and on his mother revealed normal 46,XY and 46,XX karyotypes. There was no evidence of chromosomal damage. Only one

1. Carakushansky, G., Neu, R. L., Gardner, L. I. *Lancet*, 1969, i, 150.
2. Hecht, F., Beals, R. K., Lees, M. H., Jolly, H., Roberts, P. *ibid.* 1968, ii, 1087.
3. Zellweger, H., McDonald, J. S., Abbo, G. *ibid.* 1967, ii, 1066.



Fig. 1—Right hand of the infant.

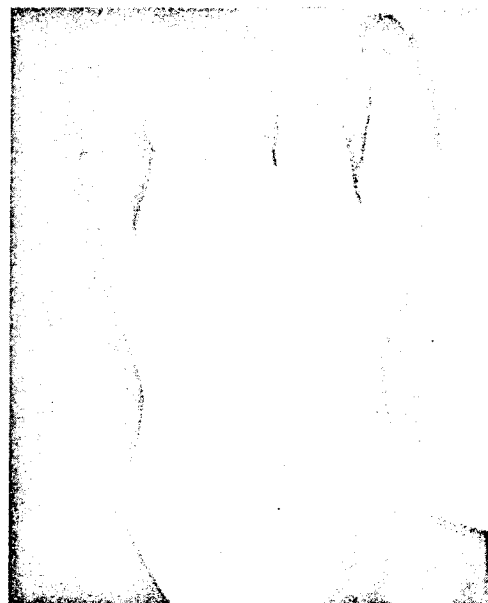


Fig. 2—Dorsal surface of the right hand of patient described in 1969.¹

gap was seen in the 25 mother's cells that were examined; this is well within the range of normal for our laboratory.

Data relating to the teratogenicity of lysergide in animals are in conflict^{4,5} (also reviewed by Smart and Bateman⁶). Nevertheless, the similarities of the deformities in the present patient with those in previously described infants¹⁻³ who had been exposed to lysergide in utero bear close scrutiny. It may be of some importance that in the present case, as well as in all the previously reported instances¹⁻³ of limb abnormalities in infants whose mothers took lysergide, the lesions have been more severe on the right side. This is in contrast to thalidomide embryopathy, in which the left limbs are more severely affected than the right.⁷

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DEXAMPHETAMINE: A POSSIBLE ENVIRONMENTAL TRIGGER IN CARDIOVASCULAR MALFORMATIONS

SIR,—In 1965, we reported to *The Lancet* that we had produced congenital cardiovascular malformations in A/J mice by a single intraperitoneal injection of dexamphetamine sulphate on day 8 of gestation.⁸ Subsequently we demonstrated a significant increase in cardiac anomalies in both A/J and C57BL/6 strains of mice exposed to dexamphetamine ($P < 0.001$).⁹ We have also observed increased numbers of malformations in *Drosophila* ($P < 0.001$), but not in white leghorn chicks ($P = 0.3-0.2$) treated with dexamphetamine sulphate.¹⁰ Investigations in man led us, in 1967,

4. Warkany, J., Takacs, E. *Science*, N.Y. 1968, 159, 731.

5. Idänpää-Heikkilä, J. E., Schooler, J. C. *Lancet*, 1969, ii, 221.

6. Smart, R. G., Bateman, K. *Can. Med. Ass. J.* 1968, 99, 805.

7. Kajii, T. *Lancet*, 1967, i, 385.

8. Nora, J. J., Trasler, D. G., Fraser, F. C. *ibid.* 1965, ii, 1021.

9. Nora, J. J., Sommerville, R. J., Fraser, F. C. *Teratology*, 1968, 1, 413.

10. Vargo, T. A., Nora, J. J. Unpublished.