INCULPATION OF LSD CHALLENGED

To the Editor: I am appalled by the unsubstantiated implications in the title of the article by Drs. Eller and Morton, "Bizarre Deformities in Offspring of User of Lysergic Acid Diethylamide" (New Eng J Med 283:395-397, 1970).

Certain conditions are important in establishing a teratogenic effect of a drug. Teratogenic agents cause malformations only at a certain dose range, below which development is apparently undisturbed and above which embryonic or maternal death results. In this case, there is no mention of the dosage taken, nor even any historical or analytic evidence presented that the substance consumed only once was lysergic acid diethylamide (LSD).

Most agents are teratogenic only during the developmentally labile early period of gestation when the embryo is being shaped and embryonic organs first being formed. In humans this period extends roughly from the end of the first week to the twelfth week of gestation. In this case report the woman used LSD once "at about the time of conception." However, its use is implicated rather than the high doses of estrogens, medroxyprogesterone acetate and maternal vaginal bleeding that occurred early in the first trimester.

In addition, differences in type and severity of malformations may be due to genetic factors both embryonic and parental. The syndrome described has a known autosomal recessive inheritance. Chromosome studies in this infant were negative. However, no complete genetic study of the mother or unknown father was presented. The findings may be related to any number of situations that may contribute to congenital abnormalities (e.g., maternal nutrition, physiologic, psychologic and pathologic states, socioeconomic circumstances and cultural practices), none of which were fully discussed.

The controversy over the teratogenic potential of LSD has not been firmly clarified by animal experimentation. A large number of investigators report conflicting results.[1,2]

A differentiation should be made between the effect of drug ingestion during gestation on the developing embryo (teratogenicity) and the effect of ingestion by either parent before conception (cytogenicity involving the unfertilized egg or sperm). These may have totally different fetal consequences. The importance of the alleged cytogenetic effect is more complex and controversial.[3-5]

Most published literature on LSD and human teratology consists of case reports linking birth defects in neonates with a history of parental LSD usage. Until more definitive studies are performed on both the animal and clinical levels, prestigious medical journals should be extremely critical in accepting for publication incomplete case reports concerning this highly complex, controversial and emotionally fraught area to avoid further confusion, hysteria and a widening of the credibility gap.

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