

Looking Backward - Looking Forward

A Brief History of FAS at the

University of Washington and Where We Might Go in the Future

by Ann P. Streissguth, Ph.D.

It is fitting that ICEBERG should start in Seattle just 18 years after the Fetal Alcohol Syndrome made history here. In 1973, two *Lancet* reports first drew international attention to the fact that maternal alcohol ingestion could cause birth defects in children.

How did this remarkable clinical insight come about? A pediatric resident at the UW Medical School noticed that children of alcoholic mothers often had "failure-to-thrive". She kept track of babies born to alcoholic mothers over a certain period of time and found that they were indeed growth deficient and had developmental delays. Dr. David W. Smith, world renowned dysmorphologist, asked to see these children so he could examine them.

When Smith and Dr. Kenneth Lyons Jones saw all of these children at once, it was clear that the children had a common malformation syndrome. The physical defects had to have happened before they were born. They could not have been produced by the environment after birth.

I was in shock when I examined those first eight children. Physiologically, could a mother's drinking so damage a child? The thought was almost too incredible to believe in January, 1973 — yet the mothers of all these brain damaged children were all alcoholics — the only characteristic they all had in common.

In the first article, eight unrelated children were described, all with the same physical symptoms and problems. In the second article three babies diagnosable at birth were described, and the Fetal Alcohol Syndrome was named. (Only later was it discovered that a French pediatrician, Dr. Paul Lemoine in Nantes, had published a study of 120 similar patients in *Quest Medical* after having had the paper turned down by one of the leading French Pediatric Journals. (Identifying alcohol, "our drug" as having adverse effects on the fetus has never been a popular undertaking, now or then.)

Over 2,000 scientific papers on alcohol effects on the fetus were published in the succeeding ten years. The ability of alcohol to cause birth defects was soon firmly established by hundreds of clinical reports and experimental studies on laboratory animals.

The University of Washington Medical School has continued to be a focus for research and clinical work on alcohol and the fetus. In 1974 I began the Seattle Longitudinal Study on Alcohol and Pregnancy. This was a population-based study of pregnant women and their children, examined on numerous occasions. This is the most comprehensive and longest duration study of the effects of alcohol and other prenatal conditions and exposures on children.

In 1978, two important reports appeared. Drs. Smith and Clarren published a survey of the world literature on FAS. This paper remains as the definitive reference for diagnosing FAS. In the same year, Dr. Ruth Little published her doctoral dissertation showing significant reduction in birthweight in babies born to ordinary Seattle mothers who only drank socially during pregnancy.

In 1978, Dr. Little and I began the first Model Demonstration Program to intervene in female alcohol abuse during pregnancy, and prevent Fetal Alcohol Syndrome. This three-year grant from NIAAA provided a million dollars for public awareness, professional education, and clinical services for pregnant women with alcohol problems and children thought to be affected by prenatal alcohol exposure.

This project, called the Pregnancy and Health Program, took the bold and controversial step of recommending *not drinking during pregnancy*. In 1981 the Surgeon

General of the United States made the same recommendation, and that has been the official government policy ever since.

In 1981, an early death claimed Dr. David W. Smith, whose vision and clinical insights had been a sustaining force in the study of alcohol related birth defects over the previous 8 years. Fortunately, one of his fellows, Dr. Sterling Clarren, remained in the Pediatrics Department of the UW Medical School, and he carried on as the local FAS diagnostician through the Congenital Defects Division at Children's Hospital and Medical Center.

Dr. Sterling Clarren and his colleagues at the UW Primate Center have carried out the most successful nonhuman primate study on the effects of prenatal alcohol exposure. This research has shown the enduring effects of binge drinking (the monkeys only drank one day a week) and the multiple

types of neurobehavioral outcomes affected by prenatal alcohol exposure.

In 1983, the Indian Health Service began funding the FAS Follow-up Project which permitted a ten-year follow-up of the first eleven children we diagnosed as FAS, and the follow-up of larger groups of adolescents and adults with FAS/FAE. These studies provided important new information on the long-term problems these persons may encounter. "A Manual on Adolescents and Adults with Fetal Alcohol Syndrome with Special Reference to American Indians" (Streissguth, Randels & LaDue) is available free from the IHS (301-443-1948). This gives recommendations for communities on dealing with this problem and advice to caretakers, teachers, and communities on how to help affected persons.

In 1988 we began a large NIDA-funded project to examine the neurobehavioral effects of prenatal cocaine exposure, and to separate out the effects of alcohol vs. cocaine. We have found cocaine-users frequently also use alcohol and/or other drugs. In conjunction with the Washington State Department of Substance Abuse, we are about to begin a new OSAP-funded project for communities. This program will demonstrate how to screen, identify, and help mothers abusing alcohol and other drugs during pregnancy, and how to help their children.

The project closest to our hearts does not officially exist yet. It is a multifaceted evaluation, treatment and follow-up program for persons of all races and all ages with suspected FAS/FAE and their caretakers. Unless we can better understand the nature of these patients' prenatal brain damage from alcohol, we will be only groping in the dark. Better information will help us as we work toward solutions, try to generalize the work to other professionals, and develop services for affected families.

Dr. Streissguth is a clinical and developmental psychologist. She has been a pioneer in the field and has an international reputation as a researcher in FAS/FAE.



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