15104 COMPETITIVE PROBLEMS IN THE DRUG INDUSTRY

ANTICONVULSANTS - Drugs used for the treatment of convulsive disorders include a number with pharmacologic properties that pose a potential threat to the fetus. Diphenylhydantoin (Dilantin; and other brands) for example, can interfere with folic acid metabolism. A recent survey of the outcome of 427 pregnancies in 186 women being treated for seizure disorders found twice the usual frequency of major congenital malformations. The most common deformities were cleft lip with or without cleft palate and microcephaly (B. D. Speidel and S. R. Meadow, Lancet, 2:839, October 21, 1972).

ANTICOAGULANTS - Oral anticoagulants can produce hemorrhage during labor, leading to fetal death. If coumarin-type drugs are used in pregnancy, they should be stopped about one week before labor is expected to begin. If anticoagulation is required in a pregnant woman at term, heparin is the drug of choice.

ANTIBIOTICS AND ANTIMALARIALS - Sulfonamides taken near term can increase the risk of kernicterus in the infant. Streptomycin administered at any time in pregnancy and quinine near term have caused deafness of the newborn. Tetracyclines chelate with calcium and are deposited in bones and teeth; these drugs cross the placenta, collect in fetal calcified tissue and remain as stains in deciduous teeth. The penicillins are generally considered safe for administration during pregnancy.

One of the earliest reported drug-induced human malformations was masculinization of female fetuses by maternal progestational therapy. Many synthetic progestins, as well as methyltestosterone, have been implicated.

Recent studies report that vaginal adenocarcinomas occurred in adolescent girls whose mothers took diethylstilbestrol (DES) during pregnancy. The number of cases reported recently in young women exceeds the total number found before the drug was used in pregnancy (A. L. Herbst et al., N. Engl. J. Med., 284:878, 1971; P. Greenwald et al., N. Engl. J. Med., 285:390, 1971). Whether other drugs can produce such long-delayed effects is not known.