

Effect of Antenatal Treatment on the Severity of Congenital Toxoplasmosis

TO THE EDITOR—We read with interest the brief report by Hutson et al [1]. The authors reported on a United States-based cohort of 210 persons presenting with

congenital toxoplasmosis who underwent brain computed tomography. They observed hydrocephalus in 65 patients (31%), due mainly to aqueductal obstruction. Other patterns (eg, unilateral obstruction of the foramina of Monro) were also reported. Interestingly, a relationship was observed between parasite serotype and the anatomic pattern of hydrocephalus. In our experience in France, hydrocephalus or ventricle dilatation was detected with fetal ultrasound in 18 (0.8%) of 2048 cases of maternal infection. In a historical cohort of 300 infants followed up for congenital toxoplasmosis, only 1 (0.3%) was observed to have hydrocephalus [2].

This striking difference in severity of the same disease between the United States and France deserves further investigation. Several factors, such as host genetics, infective stages, and inoculum size, could possibly account for this difference, but little information is currently available. Another explanation could be genetic differences between the strains circulating in the 2 countries. The severity of the disease is determined, at least partially, by the parasite genotype. In Brazil, where atypical strains are common, ocular sequelae of congenital toxoplasmosis are more frequent and severe than in Europe [3]. In France, as in Europe, generally it has been clearly demonstrated that parasite strains have a highly clonal structure with a predominance of type II [4], whereas in the United States the parasite population is more heterogeneous (although type II is frequently observed, atypical strains are also often found [4]). Using serotyping methods, Hutson et al [1] observed that 24 (37%) of the 65 patients presenting with hydrocephalus were infected by type II strains. Therefore, strain differences are unlikely to account for the variation in severe neurological sequelae between the 2 countries.

A noticeable difference between the United States and France, which probably accounts for the different outcomes observed, is the provision in France of antenatal treatment that is absent in the

United States. In France, owing to the mass screening for toxoplasmosis in susceptible pregnant women, all infected fetuses are given pyrimethamine-sulfadiazine with folinic acid as soon as possible and are followed up closely. The efficacy of antenatal treatment is still controversial issue. Although no randomized controlled studies are available, there is evidence in the literature that the early introduction of treatment shortly after maternal infection reduced the risk of fetal infection and abated the sequelae in newborns [5, 6]. In our experience in France, we demonstrated that the implementation of monthly screening in 1992 decreased the rate of fetal infection and that antenatal identification and treatment of infected fetuses reduced the frequency and severity of clinical manifestations [7]. We are aware that population size differences and other potential biases prevent a rigorous comparison between the 2 countries, but it seems that consistent attitudes concerning the management of congenital toxoplasmosis are urgently needed and that the cost-effectiveness of screening programs in pregnant women should be addressed by health authorities.

Note

Potential conflict of interest. Both authors: No reported conflicts. Both authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

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