RESEARCH ARTICLE

Epidemiological Surveillance of Birth Defects Compatible with Thalidomide Embryopathy in Brazil

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Abstract

The thalidomide tragedy of the 1960s resulted in thousands of children being born with severe limb reduction defects (LRD), among other malformations. In Brazil, there are still babies born with thalidomide embryopathy (TE) because of leprosy prevalence, availability of thalidomide, and deficiencies in the control of drug dispensation. Our objective was to implement a system of proactive surveillance to identify birth defects compatible with TE. Along one year, newborns with LRD were assessed in the Brazilian hospitals participating in the Latin-American Collaborative Study of Congenital Malformations (ECLAMC). A phenotype of LRD called thalidomide embryopathy phenotype (TEP) was established for surveillance. Children with TEP born between the years 2000–2008 were monitored, and during the 2007–2008 period we clinically investigated in greater detail all cases with TEP (proactive period). The period from 1982 to 1999 was defined as the baseline period for the cumulative sum statistics. The frequency of TEP during the surveillance period, at 3.10/10,000 births (CI 95%: 2.50–3.70), was significantly higher than that observed in the baseline period (1.92/10,000 births; CI 95%: 1.60–2.20), and not uniformly distributed across different Brazilian regions. During the proactive surveillance (2007–2008), two cases of suspected TE were identified, although the two mothers had denied the use of the drug during pregnancy. Our results suggest that TEP has probably increased in recent years, which coincides with the period of greater thalidomide availability. Our proactive surveillance identified two newborns with suspected TE, proving to be a sensitive tool to detect TE. The high frequency of leprosy and the large use of thalidomide reinforce the need for a continuous monitoring of TEP across Brazil.

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