Studying sudden infant death syndrome in a developing country

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And this woman's child died in the night because she overlaid it – and she rose at midnight and took my son from beside me, while thine handmaid slept and laid it on her bosom and laid her dead child on my bosom.

I Kings 3:19-20.

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The biblical quotation above is evidence that children have been dying in their sleep since antiquity, although this phenomenon has been described by several names. Even up to the 1950s physicians commonly thought that infants dying suddenly and unexpectedly had either smothered in their own bedding, or that an adult had "overlaid" them. I never heard of crib death during my training in the late 1950s and early 1960s. It was not mentioned in pediatric textbooks and no organized research was taking place. That might still be the case today were it not for the indignation of several American parents who lost infants. They would not accept the veil of ignorance surrounding crib death, nor, more importantly, the absence of any effort to accumulate knowledge about the condition.[1]

The advocacy efforts of these parents who formed what was to become the National SIDS Foundation, led to the convening of the First International Conference on Causes of Sudden Infant Death in Seattle in 1963. The proceedings of the conference were notable for cataloguing and critically evaluating available theories about sudden infant death and charting pathways of research needed to answer the questions raised. It was not possible at the time to discern the incidence or to say whether infants were dying suddenly and unexpectedly of a discrete disease entity, or coincidently from different disorders. Studies on pathology and epidemiology were specifically called for.[2]

Much of this was available by the time the Second International Conference convened in 1969.[3] The now-familiar risk factors such as low birth weight, male sex, low social class, seasonal incidence, and the unique age distribution (peaking between 2 and 4 months) were affirmed. The association with sleep, and the apparent silent nature of death were presented. The most important development, however, was the elegant autopsy evidence presented by Beckwith showing that respiratory obstruction was the mechanism causing the deaths of SIDS victims.[4] This effectively caused other theories popular at the time, like allergy, toxins, and overwhelming infection, to fall by the wayside. Two important risk factors with implications for prevention, the prone sleeping position and an association with smoke, were identified later.[5]

It was notable that, in all countries where SIDS was studied, and at that time these were exclusively developed countries (US, Canada, UK, Australia, and Czechoslovakia), the features of SIDS observed were identical. Questions were raised at the conference about whether SIDS exists in developing countries. It was felt at the time, however, that because of the high "background" infant mortality rates and difficulties in performing autopsies, the question could not be answered. Fortunately the excellent paper by

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Geib & Nunes that appears elsewhere in this issue demonstrates that sudden unexpected infant death can be studied in a developing area, and that its characteristics are no different from those found elsewhere in the world.[6]

I agree with the classification of cases used by the authors. Sudden infant death syndrome can be diagnosed, not with certainty, but with a high degree of probability, even in the absence of an autopsy. Beckwith states: "I have no problem diagnosing SIDS where an infant between the ages of 8 weeks and 8 months dies unexpectedly during apparent sleep, and where the external examination and personal history are negative. I would personally rather see no autopsy is such cases than to have one done by a pathologist who does not believe in SIDS, and calls them positional asphyxia, pneumonia, overlaying or undetermined." (JB Beckwith, personal communication 12/20/05).

I am obliged to add a note of caution about the use of epidemiologic data, specifically risk factors in SIDS. Such data is useful in identifying trends in a population, but not in dealing with individual patients. Term infants from non-smoking, rich families who sleep in the supine position also die of SIDS; just not as frequently. Though not addressed in this study, I am sure the grief and guilt that often overwhelms families in the US who lose babies to SIDS ("what did I do to cause my babies death?") is also present in Brazilian families. Families who lose treasured infants should be supported, not made to feel more guilty.

Finally, the public health measures called for by Geib & Nunes, prevention of adolescent pregnancy, early and continuing involvement of expectant mothers in prenatal care, control of smoking during pregnancy, encouragement of breastfeeding, and guidance on healthy infant sleeping habits are important not just to prevent SIDS, but to improve the general health of infants.

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