

In Memoriam

Sudden infant death syndrome research pioneer: André Kahn (1943–2004)



This issue of the *Journal of Pediatric Neurology* includes the latest paper on which I worked with my friend and colleague André Kahn and his team, the last he will have written. André Kahn was the Professor of Pediatrics at the Free University of Brussels (ULB), Head of the Department of Pediatrics at the Hôpital Universitaire des Enfants Reine Fabiola, Doctor Honoris Causa of the Tokyo Women's Medical University, co-founder of the European Society for the Study and Prevention of Infant Death, the Pediatric Sleep Study Group of the American Sleep Research Society and the Task Force of Pediatric Arousals of the Japan SIDS Research Society. He was an exceptional pediatrician dedicated to developmental medicine, a humane, sensible clinician, a rigorous scientist and an inspiring, visionary leader. He died unexpectedly on September 1, 2004. Among many achievements, improving our understanding of sleep developmental physiology

and reducing the risk of sudden infant death have been his major contributions to our field. André Kahn's interest in apparently life-threatening events and sudden infant death syndrome was initially prompted by personal experience. While he was completing his training in pediatrics at the Free University of Brussels, his own baby suffered a respiratory arrest. She recovered unharmed. Following this event, André Kahn left the pediatric intensive care unit of the Hôpital Saint-Pierre in Brussels to set up a pioneering pediatric sleep laboratory. He traveled to France and the United States to learn what was then known in this emerging field. With the help of an engineer, he converted an old lamp-electroencephalograph into a polysomnograph. Soon thereafter, he admitted a baby presenting with an apparently life-threatening event. André Kahn discussed technical problems relating to polysomnography and home monitoring with her father, an oceanographic physicist, who then developed a digitized monitoring system that could reliably detect apneas. Soon, the sleep laboratory could accommodate 8 children per night. All-night observation and maintenance were ensured by André Kahn and two colleagues in a shift. They analyzed the recordings systematically and open-mindedly to identify possibly relevant risk factors. They also publicized information about sudden infant death syndrome in order to promote awareness of it among physicians and the general public. One particular challenge concerned judicial issues, as parents of children who died unexpectedly were often convicted with charges of infanticide. Retrospective study of polysomnography data obtained in infants who eventually had sudden infant death syndrome led André Kahn's team to recognize the role of immaturity and present the syndrome as an autonomic neurodevelopmental condition with decreased propensity to be aroused from sleep. They also emphasized

environmental risk factors, such as position and medication, and the possibility of underlying conditions, such as infections or inborn errors of metabolism. Thus they elaborated a three-dimensional model for the unexpected death of infants, involving maturational processes, environmental factors and diseases. This model has proved useful in primary prevention of sudden infant death syndrome. André Kahn's hypothesis of a central role of arousal mechanisms in preventing sudden infant death has been amply verified. The many international collaborative projects he set up to refine the methodology of evaluation of these mechanisms

in children will continue to foster worldwide quality research in this field.

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