

Symposium on Neuro-embryology and Cerebral Dysgenesis

XXV Canadian Congress of Neurological Sciences
Banff, Alberta, June 27, 1990

Summary

The Canadian Association of Child Neurologists sponsored a half-day symposium on neuro-embryology and cerebral dysgenesis in conjunction with the XXV Canadian Congress of Neurological Sciences held in Banff, Alberta on June 27, 1990. This symposium was organized by Dr. H.B. Sarnat of the host University of Calgary and was funded by a generous grant from the Alberta Heritage Foundation for Medical Research.

Three guest speakers were invited to present topics of their research interest and expertise in which they had made important contributions. The following four review articles are the essence of these presentations and a lecture by the host. Professor Miguel Marin-Padilla, a developmental neuropathologist at Dartmouth University in Hanover, New Hampshire, USA, presented two topics: the first, which is here published, is a review of his numerous and often cited original contributions to an understanding of the role of ontogenetic disorders of the basicranium in the pathogenesis of anencephaly, exencephaly and the Chiari malformations; his second topic was his equally respected work in the early events in the formation of the cerebral cortex with emphasis on the formation of the plexiform layer in the marginal zone prior to the onset of radial neuroblast migrations that form the cortical plate. Dr. Laurence E. Becker, chief neuropathologist at The Hospital for Sick Children in Toronto and the University of Toronto presented his extensive application of Golgi impregnation methods to the study of synaptic organization in the developing normal cerebral cortex and in various metabolic and dysplastic disorders of development. These studies represent both pioneer work and contemporary contributions in this important field with its implications in the pathogenesis of epilepsy and mental retardation. Dr. Douglas D. Cochrane, a paediatric neurosurgeon at British Columbia's Children's Hospital in Vancouver and the University of British Columbia discussed neurosurgical considerations in the treatment of infants with cerebral dysgenesis of various types, with emphasis on the indications for shunting in cases complicated by hydrocephalus and the management of encephaloceles. Dr. Harvey B. Sarnat, paediatric neurologist and developmental neuropathologist at Alberta Children's Hospital and the University of Calgary presented an overview of developmental processes of the nervous system and how their impairment may lead to specific malformations. Finally, a panel discussion was held amongst all of the participants and questions from the audience were entertained though not always thoroughly answered, highlighting the need for more data on many important topics.

H.B.S.