Neuropathologic Aspects of Psychosis in Children

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On the basis of a search of the literature and extensive inquiries to clinicians, this paper catalogues those cases that contain any information concerning possible neuropathologic changes in cases of childhood autism or psychosis. In all, 33 cases were identified. Twenty-nine cases are from the literature; six of these are sibling pairs. Four cases were found by inquiry and have not been reported heretofore. Because of limitations in both the clinical and neuropathologic data in most of the case reports, the paper serves primarily as a source of reference to the 33 cases identified. The information that is available is presented along with some tentative suggestions for further research.

Remarkably little neuropathologic information has been reported on children with severe psychotic syndromes associated with autistic symptoms. In his review of the subject, Rimland (1964) mentioned only one case known to have come to autopsy, and only limited information was available on the pathologic findings. One possible explanation for this scarcity is that, until recently, many have assumed that autistic disturbances represent a psychogenic condition or at least not primarily an organic brain disorder. Wing and Wing (1971) have called attention to the need for examination of the central nervous system and for autopsy studies in well-authenticated cases of autism. This paper presents the findings from a search for possible neuropathologic correlates of disorders of the autistic type. It was thought that such a review would not be complete without inclusion of earlier reports of cases that, regardless of their diagnostic label, were described in sufficient detail to permit accepting their similarity to currently reported cases. It was also hoped that earlier clinicians, without psychodynamic pre-
conceptions about etiology, might have sought more neuropathologic information.

In reviewing the literature of early-onset childhood psychoses and autistic syndromes, one encounters severe confusion and controversy with regard to terminology and classification. This paper does not purport to resolve the various nosologic problems that have existed. However, it does relate to the various similarities in the syndromes at a behavioral level. Because of this difficult dilemma, the author has chosen not to interpret loosely or freely or to modify older terms or descriptions in the literature.

This review of the literature began with Goldfarb and Dorsen's (1956) annotated bibliography, covering 514 references prior to 1948, and Bellak (1958) and Bellak and Loeb's (1969) reviews of the literature from 1948 through 1968. Together, these works cover approximately 1,700 references to childhood psychosis, childhood schizophrenia, and autism. A Medlar search was carried out for the years 1964 through 1970 using locator words including "neuropathology," "autopsy," "biopsy of brain," "childhood schizophrenia," "autism," and "childhood psychoses." In addition, I wrote to 55 clinicians interested in childhood schizophrenia, childhood psychosis, and autism in the United States and England, asking for information on autopsy data. From the 28 replies received, four previously unreported cases were found. An inquiry to 35 large departments of pathology in medical schools throughout the country failed to uncover new cases, probably because pathology records generally are not cross-indexed by diagnosis.

THE CASES

In all, 33 cases were identified. Cases 1 through 29 are from the literature; cases 30 through 33 were found by inquiry and have not been reported heretofore. Cases 20 to 25 represent three pairs of siblings reported by Malamud (1959–1960). Table I summarizes the major categories of the neuropathologic and clinical findings contained in the case reports. The diagnostic labels of the earlier reports, such as "dementia praecocissima" (DeSanctis & Bollea, 1958) and "dementia infantilis" (Hulse, 1954; Rapin, 1965; Kolb & Masland, 1959; Roy, 1959), were retained.

It is interesting to note that in six of the cases there were no significant neuropathologic findings. Cerebral lipidosis was implicated in another six of the cases, two of which had unknown clinical diagnoses. There were also two cases of tuberous sclerosis.

There appear to be roughly two groups of early-onset childhood psychotic syndromes when categorized according to age at onset. One is an