

Preface

The *Handbook of Pediatric Autopsy Pathology* has been compiled to fill a current void in the armamentarium for the pathologist performing the pediatric autopsy. The pediatric autopsy must be approached with great care in technique and dissection; malformations may be easily overlooked by the uninitiated. Of major importance in pediatric autopsy pathology is the need for accurate diagnosis in order to provide genetic counseling and the implication of possible recurrence in future pregnancies.

Although adult autopsies have declined in recent years, the importance and demand for pediatric autopsies has accelerated. There have been extensive developments in the pediatric field that enhance the importance of the autopsy, so that at the present time, the autopsy has probably greater importance within the field of the fetal and perinatal pathologist than at any other age. These features largely relate to congenital malformations and genetic counseling. The detailed description of all abnormalities in both fetuses, stillborn, and older children is of paramount importance supplemented by cytogenetic studies, metabolic evaluation, and DNA and other analyses.

The effect of any environmental or nutritional hazard is most obvious when related to periods of growth, and the fetus and the newborn are such periods in human development. Thus, any new environmental hazard and the effects of environmental agents and drugs including chemicals such as lead or radioactive materials, alcohol, or intrauterine infection, can and are best assessed by sampling specific tissues and organs from fetuses, stillborns, and newborn infants at autopsy examination.

The careful performance of perinatal autopsies followed by dissemination of the findings to parents, clinicians, and public health organizations is important in the reduction of perinatal mortality and morbidity. Every pathologist should have a working knowledge of the pediatric autopsy.

The careful performance of neonatal autopsies both adds to our basic understanding of neonatal diseases and is an excellent monitor of the results of treatment.

The development of perinatology, prenatal diagnosis of birth defects, and genetic counseling requires accuracy of prenatal diagnostic techniques, including ultrasonography and correlation of clinical data with the results of carefully performed fetal autopsies. Parents and clinicians depend on accurate autopsy diagnoses for intelligent family planning.

The autopsy examination is the foundation upon which a complete perinatal autopsy is built. In addition to the performance of a skilled autopsy biopsy, other ancillary studies and techniques are necessary to address the vital issues of accurate diagnosis. The *Handbook of Pediatric Autopsy Pathology* thoroughly addresses these issues including microbiologic, cytogenic, X-ray, and special studies such as enzyme and DNA analysis in metabolic diseases. This handbook also addresses the examination of the embryo in spontaneous abortions. The approach outlined is simple enough to be used routinely by the general pathologist with conventional facilities.

Part I and the Introduction provide a general description of the techniques used in the pediatric autopsy as well as general aspects of the autopsy including the death certificate, cause and manner of death, obtaining permissions from the family, and examination of the placenta. Part II includes hydrops, chromosomal defects, and congenital abnormalities, with a discussion of major malformations. Disorders of each of the organ systems and metabolic diseases are discussed in Part III, including the autopsy on metabolic disorders. Part IV includes sudden infant death, the medicolegal and forensic autopsies, special procedures, infection control, and biological hazards at the autopsy. At the end of each chapter is an appendix that includes standard reference tables.

This book is not intended to be an exhaustive treatise on pediatric pathology, but rather a guide to the actual performance of the pediatric autopsy as well as to the recognition and interpretation of pathologic findings.

The *Handbook of Pediatric Autopsy Pathology* provides the prosector with a valuable source of information for conducting a meaningful and comprehensive autopsy. Thus, it should also be useful for general pathologists, as well as for specialist pediatric pathologists.

The *Handbook of Pediatric Autopsy Pathology* is dedicated with great pride to Professor John L. Emery who was the master of pediatric pathology and whose techniques in performing an autopsy have been acclaimed worldwide. He, in fact, recognized the need for a pediatric pathology autopsy manual and initiated the writing of this book before his untimely death and before it could become a reality. Not only was he a pediatric pathologist par excellence, but a poet and an accomplished artist. Some of his sketches have been included in this volume.

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