Preface

A COMPREHENSIVE ANALYSIS OF THE CHOROID PLEXUS is not available in the English language. Studies on the choroid plexus, its secretions and other properties, however, have increased greatly in recent years. New technics have brought fresh information about the choroid plexus, ependyma, and cerebrospinal fluid. The choroid plexus now is known to absorb and phagocytize as well as to filter and secrete, and the fluid no longer is viewed merely as a jacket of water protecting the central nervous system. Light and electron microscopic studies continue to yield new data. The discovery that some radioactive substances are concentrated by the choroid plexus has awakened clinical interest, as has the finding that bleeding into the cerebral ventricles may arise from the plexus not only in children, but also in adults. In this volume, we have gathered data from widespread sources to elucidate normal structure and function, and the clinical disorders of the choroid plexus in relation to embryology, anatomy, chemistry, and physiology.

The word "choroid" or "chorioid" comes from the Greek noun *chorion*, meaning skin. The word is applied generally to vascular membranes, such as the vascular tunic of the eye. "Plexus" is derived from the Latin word for "a twining", and refers to interwoven networks of blood or lymphatic vessels, or nerves. The term "choroid plexus" usually includes three components: epithelium, blood vessels, and connective tissue. The epithelial covering, also called lamina choroidea epithelialis or choroidal epithelium, is a modified ependyma derived from the neuropithelium lining the neural tube. The vascular channels and framework of connective tissue are leptomeningeal in origin. Ependyma is the lining membrane of the cerebral ventricles and central canal of the spinal cord. The term was first used by Virchow and comes from the Greek word for "outer garment".

Some anatomists restrict the term choroid plexus to the stromal connective tissue and blood vessels. We, however, prefer that "choroid plexus" be used to mean the combination of choroidal epithelium, blood vessels, and connective tissue interstitium, because it is thus used by most physicians. The phrase "tela choroidea" (*tela*: Latin for "web" or "tissue") is at times used as the equivalent of our term "choroid plexus". To most authors, however, tela choroidea means only the roof structures of the 3rd and 4th ventricles, and we shall follow this latter usage.

Except where indicated, all chapters were written by the principal authors. To save space, the names of the lower parts of the ventricular system have consistently been written as 3rd and 4th rather than third and fourth. Terms derived from foreign languages but used anatomically have not been italicized. The transliteration of Russian names such as Klosovsky (Klosovskii) and Volgina (Volzhina) is variable, but we have used the original publication as our authority. The word "mucin" is used to mean materials stained by the muci-carmine technic and as a brief alternative to mucicarmine-reactive materials.

A final problem of usage is the restriction of the term "diencephalic" to a particular portion of choroid plexus in the 3rd ventricle in the embryo, but to include the entire plexus of the 3rd ventricle when referring to adult structures. We have avoided this problem here by using "diencephalic choroid plexus" only in

discussing the embryo, and "plexus of the 3rd ventricle" in considering the adult.

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