INTRODUCTION

Pediatric hydrocephalus: a continuing evolution in our understanding and management

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PEDIATRIC hydrocephalus is not a new condition, and for many years there had been little in the way of new treatments or improved outcomes. That has changed in the last few decades with increasingly sophisticated imaging methods, technological innovations in shunt design and placement, expanded role of endoscopy, and a renewed interest in scientific investigation. At the same time, the recognition of the burden of this illness in underdeveloped countries has inspired neurosurgeons to help develop the infrastructure and expertise to treat children with hydrocephalus and other neurosurgical conditions in geographic areas of need.

Hydrocephalus is not a single disease. It is a manifestation of many conditions including congenital malformations, trauma, tumors, infection, and hemorrhage. It is well known that etiology is a significant risk factor for outcome in these children, and therefore clinical investigations require large numbers of children with different forms of hydrocephalus. Basic scientists are now working in a multidisciplinary cooperative way to share expertise in these many areas.

Although hydrocephalus is a common topic in many issues of the JNSPG journals, the exciting developments in this field in the last 20 years suggested to us that it was

time for an issue of *Neurosurgical Focus* dedicated to the topic. In this issue we present a large analysis of the vexing problem of hydrocephalus and Chiari malformation, two papers discussing choroid plexus issues, a description of hydrocephalus in non-accidental injury, two papers on imaging/anatomy in cases of shunt malfunction, and a useful analysis describing age-specific shunt malfunction rates in patients with myelomeningocele. Maternal risk factors for hydrocephalus are reviewed, and a review of global surgery for pediatric hydrocephalus rounds out this edition of *Neurosurgical Focus*.

We hope you enjoy these works from some of the leaders in the field of pediatric hydrocephalus.

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Disclosures

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