Basic Research in Pediatric Neurosurgery

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At a recent meeting, pediatric neurosurgeons assessed the state of the art of our subspecialty. More than one of the participants described the lack of basic research in pediatric problems, evidenced by the lack of basic science papers in the pediatric neurosurgical literature. These comments misrepresent what is in fact the case. Considering the size of our subspecialty, there is an amazing amount of productive basic science research underway. Recently, Children's Memorial Institute for Education and Research hosted a seminar on the molecular biology of pediatric brain tumors. Pediatric neurosurgeons from 14 pediatric neurosurgical centers presented papers. The papers spanned the field from animal models, through cell cycle, apoptosis, cell surface receptors to immune therapy. There are also numerous pediatric neurosurgical centers working on the genetics of congenital malformations, the mechanisms of neurulation, cortical development, neuronal pathway development and of course hydrocephalus.

Most of these efforts result in manuscripts more suited to basic science journals. This leads to the misconception that there is little basic research in pediatric neurosurgery. In fact, research, both clinical and basic, is alive and well. It is my perception that basic research is amazingly abundant in pediatric neurosurgery considering the size of our subspecialty. We are slightly more numerous than the number of neurosurgeons that separated from general surgery to form the American Board of Neurosurgery.

It is important to point out that this is not the time to rest. Never, in recent history, has there been more pressures directed at impeding the development of the neurosurgeon scientist. Managed care and the drive for clinical productivity will continue to have a negative effect on the development of the next generation of surgeon scientists. Those in leadership in societies and academic centers must resist and create incentives, financial and protected time, to preserve the pediatric neurosurgeon scientist.