

Perinatal Arterial Ischemic Stroke

Madam, I would like to congratulate Dr. I. S. Hamid and Dr. Z. A. Mueed for a comprehensive review on the Perinatal Arterial Ischemic Stroke (PAS) in the Journal of Pakistan Medical Association,¹ July 2008 Stroke issue. However, it should be noted that the definition and terminologies for stroke in the perinatal period has been recently modified. The terminologies like PAS (which authors have used in their article), PPERI (presumed pre or perinatal arterial ischaemic stroke) and many others that have been used in the past to describe stroke in the perinatal period, have been largely replaced by new suggested terminologies.

For the purpose of standardization, a consensus group of experts in the area of paediatric stroke proposed new definitions and terminologies in a workshop convened by the National Institute of Child Health and Human Development (NICHD) and National Institute of Neurological Disorders and Stroke (NINDS) in August 2006. The summary report of the workshop was published in *Pediatrics*, the official journal of American Academy of Pediatrics in September 2007 issue.² In this consensus workshop, experts in the area of paediatric stroke proposed that previously used different terminologies for stroke in the perinatal period such as perinatal stroke, perinatal arterial

ischaemic stroke (referred to as PAS), perinatal and neonatal ischaemic stroke, arterial ischaemic stroke, foetal stroke, and presumed pre-natal or perinatal arterial ischaemic stroke (referred to as PPERI) should be replaced by one uniform terminology, the ischaemic perinatal stroke (IPS). The term IPS was chosen to define "a group of heterogeneous conditions in which there is focal disruption of cerebral blood flow secondary to arterial or cerebral venous thrombosis or embolization between 20 weeks of foetal life through the 28th postnatal day confirmed by neuroimaging or neuropathologic studies."² The term IPS shall encompass all types and categories of ischaemic stroke in the perinatal period. They proposed that since the timing of the event resulting in ischaemic perinatal stroke is typically unknown, IPS should be classified based on the gestational or postnatal age at the time of diagnosis. They suggested the following three sub-categories:

1) foetal ischaemic stroke diagnosed before birth by using foetal imaging methods or in stillbirths on the basis of neuropathologic examination,

2) neonatal ischaemic stroke diagnosed after birth and on or before the 28th postnatal day including in preterm infants, and

3) presumed perinatal ischaemic stroke or PPIS diagnosed in infants more than 28 days of age in whom it is

presumed but not certain that the ischaemic event occurred sometime between the 20th week of foetal life through the 28th postnatal day.

Since the emergence of the above mentioned consensus definitions and terminologies, the term ischaemic perinatal stroke (IPS) has largely replaced all other previously used terminologies over the last two years. This consensus document will be extremely helpful in developing standardized approaches to this disorder in neonates which already faces great diagnostic and management difficulties, especially in underprivileged areas of the world. It is hoped that, that such initiatives if considered globally, will serve to further enhance the quality of both clinical care and research work in the area of perinatal stroke.

Mubeen F. Rafay

Section of Pediatric Neurology, Children's Hospital, Winnipeg.

Reference

1. Hamid IS, Mueed ZA. Perinatal arterial ischaemic stroke: An update with literature review . JPMA. 2008; 58:395-99.
 2. Raju TN, Nelson KB, Ferriero D, Lynch JK and the NICHD-NINDS Perinatal Stroke Workshop participants. Ischemic perinatal stroke: summary of a workshop sponsored by the National Institute of Child Health and Human Development and the National Institute of Neurological Disorders and Stroke. Pediatrics. 2007; 120:609-16.
-