

Neurosurgery Abstracts

Title: SINGLE STAGE TREATMENT OF SPINA BIFIDA WITH HYDROCEPHALUS BASED ON A PREDICTION RULE DERIVED FROM PREOPERATIVE CRANIAL ULTRASOUND

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Background: To report a prospective study of one hundred and ten patients of spina bifida with hydrocephalus treated by simultaneous VP shunt and repair of the meningomyelocele.

Method: Between January 2005 and February 2008, 264 patients with spina bifida were admitted to the author's department. Those patients in whom the preoperative cranial USG measurement of the bifrontal diameter was > 26 mm, the bicaudate diameter >20 mm and the diameter of the body of the lateral ventricle >26 mm were predicted to develop post operative hydrocephalus (N=245). Of these 110 patients underwent simultaneous (Group 1) VP shunt with repair of the meningomyelocele while 135 (Group 2) underwent sequential surgery due to the preference of the attending consultant.

Results: There was no intra operative problem in any child. The range of hospital stay in Group 1 was 8-12 days. 22 of the 110 patients in Group 1 developed complications (wound problems, CSF leak, shunt malfunction, death) compared to 38 of 135 in Group 2. The remaining patients had uneventful post operative and follow up course. In patients with uncomplicated meningomyelocele operating time ranged from 1.5 to 2 hours. The duration was longer in babies with diastematomyelia and intra spinal lipoma; these patients also required blood transfusion.

Conclusion: Simultaneous VP shunt with surgery for hydrocephalus was feasible in our setup. The rate of complications was not higher than staged surgery. Single stage repair of spina bifida with hydrocephalus offers considerable advantage in the form of reduction of hospital burden, reduction of costs and reduction of patient morbidity.