Childs Nerv Syst (2014) 30:2001
DOI 10.1007/s00381-014-2550-0

LETTER TO THE EDITOR

Myelomeningocele defect closure

Zohreh Habibi · Farideh Nejat

Received: 29 August 2014 / Accepted: 3 September 2014 / Published online: 17 September 2014

Dear Editor:

We read with great interest the recent article by Kobraei et al. (A comparison of techniques for myelomeningocele defect closure in the neonatal period. Childs nervous system 30: 9, 1535–1541, September 2014), concerning the techniques that they have used in myelomeningocele (MMC) surgery. The authors compared the outcome of repair in 32 consecutive patients who underwent MMC defect closure with primary closure, myocutaneous, and fasciocutaneous flaps. According to their experience, there was no significant statistical difference between the three kinds of wound closure, but they finally suggested that myocutaneous flaps as a confident method of repair to be considered for smaller MMCs in addition to larger defects [1].

Surgical closure is essential to cover the exposed neural tissue and prevent infection and cerebrospinal fluid leakage. Most skin defects in MMC patients are small enough that can be closed by tension-free approximation in the midline. In 25 % of the instances, there is a defect that is too large to be closed by this simple technique (a width more than half of the width of the infant's back). In addition to the size of defect, the associated kyphosis influences the appropriate method of repair and the success rate of skin reconstruction [2].

In spite of folate supplementation and relatively regular prenatal ultrasound screening, MMC repair is a common spinal surgery in pediatric neurosurgery service in our center, and the whole procedure from cord untethering to skin closure is done by the neurosurgery team. Regardless of different techniques used for MMC repair, the closure of large MMC defects remains a challenging issue. Most methods described for the closure of large MMCs prolong the time of surgery and anesthesia which complicate the surgery of young infants. Therefore, we recommend our routine method of primary closure for most defects with diameter of less than half of the back (considered as "not large defect"). This method is fast with acceptable cosmesis and less complicated wound closure. For large lesions that make the primary closure impossible and are associated with risk of wound necrosis, we use fasciocutaneous flap that covers the large defect without the risk of dehiscence and necrosis. This method makes the procedure longer than usual and can complicate the surgery of neonates with MMC due to prolonged operation time, but warrants a successful reconstruction.

References

1. Kobraei EM, Ricci JA, Vasconez HC, Rinker BD (2014) A comparison of techniques for myelomeningocele defect closure in the neonatal period. Childs Nerv Syst 30:1535–1541
2. Nejat F, Baradaran N, El Khashab M (2011) Large myelomeningocele repair. Indian J Plast Surg 44:87–90

Z. Habibi · F. Nejat (✉)
Department of Neurosurgery, Children's Hospital Medical Center,
Tehran University of Medical Science, Tehran, Iran
e-mail: nejat@sina.tums.ac.ir