Characterization of Pediatric Split Cord Malformation

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Introduction

Diastematomyelia – also referred to as split cord malformation – is a rare form of closed spinal dysraphism thought to arise from dysfunctional gastrulation during early embryogenesis. This abnormality is frequently associated with other congenital anomalies. Many patients become symptomatic and require intervention, but the rarity of this condition has resulted in a paucity of data regarding its optimal management. In this study, we sought to compile cases of pediatric diastematomyelia across time and analyze these cases for patterns of patient characteristics and postoperative outcomes.

Methods

Data was collected from the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) database. Pediatric patients were included with an ICD-9 code 742.51, corresponding to “diastematomyelia.”

Results

17 pediatric patients were available in the NSQIP database with a diagnosis of diastematomyelia between the years of 2012-2014. Mean patient age was 9.68 years (SD = 5.77). None of the patients were known to have been born prematurely. 12 patients carried an ICD code corresponding to an additional congenital malformation. Most operations were performed electively, with the exception of two emergent cases, and the majority of cases were performed by pediatric neurosurgeons. Seven patients suffered seven postoperative complications: three cases of wound disruption, one surgical site infection, one urinary tract infection, one case of bleeding, and one of systemic sepsis. All patients were discharged home following surgery, after an average length of stay of 3.94 days (SD = 1.85).

Conclusions

This study contributes to the body of knowledge surrounding pediatric diastematomyelia, a rare condition for which management and outcomes have not been adequately studied to date. Further similar studies are warranted to continue classifying this patient population.

Learning Objectives

By the conclusion of this session, participants will better understand the rare condition diastematomyelia, understand the current consensus on its optimal treatment, and appreciate the need to further qualify this patient population and its postoperative outcomes.

References