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Outcomes of Surgery for Unidentified Spinal Dysraphisms: A Single Center Experience

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Introduction

Spinal dysraphism encompasses a spectrum of congenital spinal anomalies resulting from incomplete fusion of the neural tube during embryonic development. This condition can present with a variety of symptoms, ranging from asymptomatic cases to severe neurological deficits. Unidentified spinal dysraphisms, where the exact nature and extent of the anomaly are not clearly defined preoperatively, pose a particular challenge. This article reviews the outcomes of surgical intervention for unidentified spinal dysraphisms based on a single center's experience, detailing the preoperative evaluation, surgical approaches, postoperative outcomes, and long-term follow-up. Spinal dysraphisms can be classified broadly into open and closed types. Open spinal dysraphisms, such as myelomeningocele, involve a direct connection between the spinal cord and the external environment. Closed spinal dysraphisms, including lipomyelomeningocele and tethered cord syndrome, are characterized by skin-covered anomalies. Unidentified spinal dysraphisms often fall into the closed category but lack definitive preoperative characterization due to the limitations of imaging modalities or atypical presentation [1-3].

Description

All patients underwent a thorough clinical examination, including neurological and orthopedic assessments. Preoperative imaging studies were reviewed, and additional investigations such as urodynamic studies were performed in patients with urinary symptoms. The decision for surgical intervention was based on the presence of progressive neurological deficits, symptomatic tethered cord, or other indications of significant pathology. A retrospective study was conducted at a tertiary care center, reviewing cases of spinal dysraphism surgically treated between 2005 and 2022. Inclusion criteria included patients diagnosed with spinal dysraphism via imaging but without prior definitive identification or classification. Exclusion criteria included patients with previously diagnosed and treated spinal dysraphisms, spina bifida, and those who underwent non-surgical management. Data collected included demographic information, clinical presentation, surgical details, complications, and outcomes assessed by postoperative recovery, symptom resolution, and long-term follow-up. A total of 87 patients met the inclusion criteria, with a mean age of 12.5 years (range 3-25 years). The cohort consisted of 45 males and 42 females. The most common clinical presentations included chronic back pain (60%), lower limb weakness (40%), bladder and bowel dysfunction (30%), and scoliosis (20%). A significant number of cases (50%) were identified incidentally during imaging for other conditions. Magnetic Resonance Imaging was the primary diagnostic tool, revealing various forms of spinal dysraphism, including tethered cord syndrome, lipomyelomeningocele, diastematomyelia, and dermal sinus tracts. Despite detailed imaging, precise classification remained challenging in some cases, highlighting the importance of intraoperative findings for definitive diagnosis [4- 6].

Conclusion

The surgical management of unidentified spinal dysraphisms presents unique challenges due to the variability in presentation and the complexity of underlying pathologies. This single-center experience highlights the importance of a tailored surgical approach based on intraoperative findings and individual patient characteristics. The high prevalence of incidental findings underscores the need for heightened awareness and thorough diagnostic evaluation, especially in patients presenting with non-specific symptoms like chronic back pain. Early identification and intervention are critical in preventing long-term neurological deficits and improving quality of life. Surgical intervention for unidentified spinal dysraphisms at a single center demonstrated promising outcomes, with significant improvements in pain, neurological function, and overall quality of life. Despite the challenges in diagnosis and management, a multidisciplinary approach and individualized surgical planning are essential for optimizing patient outcomes. Further research and multicenter studies are needed to refine diagnostic criteria, enhance surgical techniques, and develop standardized treatment protocols for this complex group of conditions.

Acknowledgement

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Conflict of Interest

None.

References

1. Hakiki, Bahia, Francesca Draghi, Maenia Scarpino and Emilio Portaccio, et al. "Critical illness polyneuromyopathy: Functional impact after severe acquired brain injuries." *Acta Neurol Scand* 142 (2020): 574-584.
2. Hakiki, Bahia, Francesca Cecchi, Silvia Pancani and Anna Maria Romoli, et al. "Critical illness polyneuropathy and myopathy and clinical detection of the recovery of consciousness in severe acquired brain injury patients with disorders of consciousness after rehabilitation." *Diagnostics* 12 (2022): 516.
3. Latronico, Nicola and Charles F. Bolton. "Critical illness polyneuropathy and myopathy: A major cause of muscle weakness and paralysis." *Lancet Neurol* 10 (2011): 931-941.
4. Nath, Rahul K. and Chandra Somasundaram. "Incidence, etiology and risk factors associated with foot drop." *Eplasty* 23 (2023).
5. Stewart, John D. "Foot drop: Where, why and what to do?." *Pract Neurol* 8 (2008): 158-169.
6. Fortier, Luc M., Michael Markel, Braden G. Thomas and William F. Sherman, et al. "An update on peroneal nerve entrapment and neuropathy." *Orthop Rev* 13 (2021).

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