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Assessment of vertebral anomalies in Spina Bifida patients: Study of 422 cases

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Purpose: Spina bifida is among well-known type of the most severe birth defects that the vertebral column is open. Associated spinal cord anomalies and vertebral anomalies tremendously affect the prognosis of children with spina bifida. The aim of this study is to investigate the incidence of scoliosis and other vertebral anomalies with spina bifida patients and evaluate the relationship between each other.

Methods: Statistical retrospectively analyses were performed in our pediatric patient study group with spina bifida. We examined the spina bifida patients with vertebral anomalies including scoliosis, formational failure (wedge vertebrae, hemi vertebrae, and butterfly vertebrae) and segmental failure. Rates of these anomalies were evaluated.

Results: 192 male and 230 female infants were included in this evaluation. And spina bifida patients with vertebral anomalies examined. The most frequent establishing anomaly is scoliosis was present in 55,9% (n=236) The incidence of scoliosis was 55,9% in study group; 30,3% among female and 25,5% among male infants. The incidence of patients with kyphosis was 41,2% (n=174). Hemivertebrae rate was 13,5%(n=57) and butterfly vertebrae rate was 20,6%(n=87). Gender distribution was almost closure between each other.

Conclusion: This present study data demonstrate that there is significant relationship between scoliosis and other vertebral anomalies. Prevalence of congenital vertebral anomalies within spina bifida subpopulations is considerably high undoubtedly. It is also worth remembering that understanding association within vertebral anomalies will aid in future treatment technics.

Key words: scoliosis, spina bifida, hemivertebrae, wedge vertebrae, butterfly vertebrae

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