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Developmental Dysplasia of the Hip (DDH) Treatment Outcomes in 50 Patients at BSMMU: A Prospective Interventional Study

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Abstract

Developmental Dysplasia of the Hip (DDH) is a spectrum of disorders affecting hip joint development in infants and young children. This prospective interventional study evaluated the outcomes of 50 patients diagnosed with DDH and managed at Bangabandhu Sheikh Mujib Medical University (BSMMU) between 2017 and 2019. Patients underwent age-appropriate treatments, including Pavlik harness, closed reduction, open reduction, and pelvic osteotomies. Functional and radiological outcomes were assessed over a minimum of 24 months using the modified McKay criteria and Severin classification, respectively. The cohort included 34 females and 16 males, with a mean age of 14.2 months (range: 3–24 months). The overall success rate was 88%, with complications noted in 12% of cases. Radiological improvement (Severin Grade I–II) was observed in 86% of patients, and 90% achieved good to excellent functional outcomes. The findings highlight the effectiveness of timely and appropriate intervention in DDH management, emphasizing the importance of early diagnosis and individualized treatment planning for optimal long-term outcomes.

Keywords

Developmental Dysplasia of the Hip, DDH, BSMMU, Prospective Study, Hip Dysplasia Treatment, Pediatric Orthopedics

Introduction: Developmental Dysplasia of the Hip (DDH) is a spectrum of disorders affecting hip joint development. Early diagnosis and appropriate intervention improve functional outcomes. This study evaluates the treatment outcomes of 50 patients diagnosed with DDH and managed at Bangabandhu Sheikh Mujib Medical University (BSMMU) from 2017 to 2019.

Methods: This prospective interventional study included 50 patients diagnosed with DDH based on clinical and radiological criteria. Patients underwent appropriate interventions, including Pavlik harness, closed reduction, open reduction, and pelvic osteotomies. Functional and radiological outcomes were assessed using the modified McKay criteria and Severin classification, respectively, over a minimum follow-up period of 24 months.

Results: A total of 50 patients (34 females, 16 males) with a mean age of 14.2 months (range: 3–24 months) were included. Treatment modalities varied based on patient age and severity. The overall success rate of intervention was 88%, with complications observed in 12% of cases. Radiological improvement and functional recovery were noted in the majority of patients.

Parameter	Value
Total Patients	50
Gender (Male: Female)	16:34
Mean Age (Months)	14.2 (Range: 3-24)
Treatment Modalities	
- Pavlik Harness	20 (40%)
- Closed Reduction	12 (24%)
- Open Reduction	10 (20%)
- Pelvic Osteotomy	8 (16%)
Success Rate	88%
Complication Rate	12%
Radiological Outcome (Severin Grade I-II)	86%
Functional Outcome (Good to Excellent by McKay)	90%

Conclusion:

The study demonstrates favorable outcomes for DDH interventions at BSMMU, with high success rates and satisfactory radiological and functional recovery. Early diagnosis and appropriate treatment selection remain crucial for optimal prognosis. Further long-term studies are recommended to evaluate late complications and residual dysplasia.

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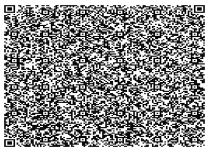	Website: www.ijarm.com
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