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EXTENDING PHYSIOTHERAPY BEYOND CLINICAL WALLS: FUNCTIONAL RECOVERY THROUGH SELF-PACED HOME EXERCISES FOLLOWING SHOULDER SUBSCAPULARIS RELEASE IN NEGLECTED OBSTETRIC BRACHIAL PLEXUS INJURY – A CASE REPORT.

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Background: Neglected obstetric brachial plexus injury (OBPI) often leads to lasting upper limb dysfunction, especially shoulder internal rotation deformity caused by muscle imbalance. Lack of timely rehabilitation worsens these limitations. Although subscapularis release surgery corrects the deformity, postoperative physiotherapy is essential for functional recovery. Home-based, self-paced rehab programs improve accessibility and adherence, especially for school-going children with limited hospital access.

Purpose: To report functional recovery in a 10-year-old girl with neglected OBPI following structured self-paced home exercises after subscapularis release.

Methods and Materials: A 10-year-old girl with neglected left OBPI presented with Erb's palsy and shoulder internal rotation contracture. Birth history included forceps-assisted delivery for shoulder dystocia. At 9 years, she underwent subscapularis release with postoperative immobilization in an abduction–external rotation splint. A one-year physiotherapy program included ROM exercises, internal rotator stretching, and task-specific training based on Modified Mallet domains, with periodic use of a resting aeroplane splint. Exercises were taught in hospital and continued at home with regular follow-up.

Results: After one-year, notable improvements were observed. Shoulder range increased: abduction from 60° to 150°, external rotation from 0° to 20°, and flexion from 70° to 160°. The Modified Mallet score improved from 10/25 to 15/25, and predicted Active Movement Scale scores improved, with abduction from 3 to 5 and external rotation from 2 to 4.

Conclusion: Self-paced, home-based physiotherapy after subscapularis release can achieve meaningful functional recovery in children with neglected OBPI. Hospital-guided instruction with patient-led home exercises effectively extends care beyond clinics, improving access for school-going children and underserved populations. Structured home-based physiotherapy, combined with hospital instruction and periodic follow-up, can optimize functional recovery in children with neglected OBPI. It ensures continuity of care, improves daily function, and enhances access for underserved populations despite limited hospital visits.

Keywords: Obstetric brachial plexus injury, Internal rotation deformity, Subscapularis release, Self-paced, Home-based physiotherapy.