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An Observational Study of Response of Primary Torticollis to Physiotherapy

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Abstract
Background: *Torticollis is the common term for various conditions of head and neck dystonia which display specific variations in head movements [phasic components] characterized by the direction of movements. Torticollis results in a fixed or dynamic posturing of the head and neck in tilt, rotation and flexion.1 Spasms of the sterno-cleido-mastoid, trapezius and other neck muscles, usually more prominent on one side than the other, cause turning or tipping of the head. 2, 3 Material and Method: Total 10 children with swelling at the side of neck, difficulty in head movement, not feeding on side of breast and with the history of prolonged or difficult labor. Diagnosis of torticollis and or sterno-cleido-mastoid tumor was based on history and physical examination of the swelling in the neck. They were advised physiotherapy and proper position as per protocol for 4 weeks to 24 weeks. Patients were reviewed at 4 weeks interval for response to physiotherapy. Results: Most of the cases were below 4 weeks of age [n 6- 24.8%] with overall male to female of 4:6. The common presentation of torticollis were excessive cry with neck movement [n 4- 42.02%], followed by sterno-cleido-mastoid tumor or swelling on side of neck [n 4- 44.08%], history of prolonged/difficult labor [n 2- 13.9%]. Major physical signs were head tilt on one side in all cases and swelling in right side of neck in 4 [44.08%] cases. 8 [80.50%] patients improved completely within 4 weeks to 4 months of physiotherapy while 2 [19.5%] cases showed partial improvement. Conclusion: Majority of cases completely improved on physiotherapy and rest showed considerable improvement.*

Keywords: *Physiotherapy, Torticollis, Sterno-cleido-mastoid, Swelling.*

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I. INTRODUCTION

Torticollis also known as wry neck is a dystonic condition defined by an abnormal, asymmetrical head or neck position, which may be due to a variety of causes. The term torticollis is derived from the Latin words *tortus* for twisted and *collum* for neck. The most common case has no obvious cause and the pain and difficulty with turning the head usually goes away after a few days, even without treatment.[4] Torticollis or wry neck results from tightness and shortening of one or rarely both sterno-cleido-mastoid[5, 6, 7]. Congenital muscular torticollis is further divided into three groups, sterno-cleido-mastoid tumor group [SMT], those with tightness of the SCM but no clinical tumor as muscular torticollis [MT] [8]. Postural torticollis [POST] is used to describe congenital torticollis patients who have neither all the clinical features of torticollis but no demonstrable tightness nor tumor of the SCM[6, 7, 8]. Usually these patients present with swelling [40-50%]. It often persists until they are aged one year. It is rarely bilateral and may be seen in older children in whom the mass was not previously identified[9, 10]. The mass is generally 1-3 cm. in diameter, a painless swelling in the substance of the SCM and develops in neonates at the age of 2-3 weeks[11, 12]. In infants, the tumor is firm and the patient's head is tilted and flexed to the side of the fibrosis and face turned toward opposite side. About 50-70% of SCM tumors resolve spontaneously during first year of life with minimal residual deficits. Early physiotherapy is initiated if there is any difficulty in rotation from fibrosis and most of the patients respond to it. Surgery is recommended for resistant cases after 6 months of physical therapy.

II. MATERIAL AND METHOD

Patients from birth to one year of age with diagnosis of congenital torticollis without any associated syndrome were included. Patients with torticollis due to other causes like cervical spine anomalies etc were excluded. The diagnosis of torticollis was made on clinical grounds in presence of one or more symptoms like swelling at the side of neck, difficulty in head movement with presence of head tilt etc. All patients were followed up at four weekly interval with documentation of head tilt, active and passive range of rotation and side flexion of the neck, facial asymmetry, and size of the tumor and time of disappearance of tumor and treatment duration. They were subjected to physiotherapy and proper positioning of neck.

III. RESULTS

In this study, total ten patients were present. Most of the cases were below 4 weeks of age [n 6- 24.8%] with overall male to female of 4:6. The common presentation of torticollis were excessive cry with neck movement [n 4- 42.02%], followed by sterno-cleido-mastoid tumor or swelling on side of neck [n 4- 44.08%], history of prolonged/difficult labor [n 2- 13.9%]. Most common observation was SCM tumor or swelling on neck side [44.08%] and common group which caused wry neck was SCM tumor. The most common site of tumor was lower-third of SCM muscle [33.6%] followed by middle third [30.1%]. The cases of difficult labor were [13.9%]. Total 8 [80.50%] cases improved completely within 4 weeks to 4 months through physiotherapy while 2 [19.5%] cases show partial improvement.

S. No.	Signs & Symptoms	Patients	Percentage
1.	Excessive cry with neck movement	4	42.02%
2.	Swelling on side of neck	4	44.08%
3.	Difficult labor	2	13.9%

IV. DISCUSSION

Torticollis occurs in 0.4%-2% of all births.5, 6 A history of difficult birth was found in 30-60% of patients with torticollis. The aetiology is not clearly understood. Many theories are available, like primary myopathy of SCM muscle, compartmental syndrome, and intrauterine crowding.7 Most studies showed that 90%-100% of infants with CMT who received early physiotherapy treatment improved within the first year of life.7, 13 Many studies included left side was involved. In study, left side of the neck was affected in 54.1% over 90% had a head tilt and 2.4% had feeding difficulty as a result of the torticollis.13 Most common site for SCM muscle but in Cheng JC series tumor was found clinically in the lower third of the SCM muscle in 35% and middle third in 40.4%. In Cheng JC series 91.1% cases were completely improved by manual stretch therapy and home treatment protocols.6 In the study of Kumar B, the swelling was noticed in all cases at the age 1-8 weeks.14 In the study Das BK, two cases presented at neonatal age, 7 at infantile age and 5 were >1 year of age.15 Overall prognosis of torticollis, may it be SCM tumor or congenital muscular torticollis or postural torticollis, is excellent. Most studies showed total resolution in 90%-95% of cases.

V. CONCLUSION

In early diagnosis of torticollis, stimulation treatment protocol, home positioning and manual stretching shows good results in most of the patients, while some requires surgical treatment.

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