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Case Report

Mild Benign Paroxysmal Torticollis. A Case Description from Physical Therapy Settings

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Abstract: Benign Paroxysmal Torticollis (BPT) describes torticollis with episodes of head tilt that alter sides. It is probably an underestimated diagnosis and milder cases may be mistaken for Congenital Muscular Torticollis (CMT). Physical Therapists (PT) should be aware of BPT as infants with BPT recover spontaneously and should not be treated for CMT. It is important to follow these infants to exclude other reasons for torticollis. A case description of an infant with suspected BPT is described.

Keywords: benign paroxysmal torticollis; infant; physical therapy

1. Introduction

Benign Paroxysmal Torticollis (BPT) is a condition present in infancy. It is described as periodic episodes of torticollis, a head tilt with head rotation that may randomly alter sides. BPT was first described by Snyder 1969 [1]. It may be associated with other symptoms: vomiting, ataxia, pallor, drowsiness, or irritability [2,3]. Episodes can last from hours to days [3]. The episodes are more frequent and last longer in the earlier months [4]. The condition is self-limiting and resolves spontaneously by 2-3 years of age [2,3]. In a review from 2024, family history for migraine was found in 25% to 100% of cases [3]. Since 2013, BPT has belonged to a group of “episodic syndromes that may be associated with migraine” [5].

The aetiology of BPT is unknown, and the prevalence is difficult to establish as the diagnosis is underestimated [3]. Hadjipanayis et al found 2015 that child neurologists are aware of BPT while pediatricians are not. A telephone survey with eighty-two Cypriot pediatricians showed that only 2.4 % of them were aware of BPT and none was confident regarding its management [6]. Bratt and Menelaus conclude that no treatment is indicated for BPT. They recommend that these children are kept under review until the episodes are completely resolved [2]. Neurological findings and motor development have been found to be normal [4,7]. Headache is common in childhood [8] and BPT has been found to give a small to moderate risk of developing migraine [7,9,10].

In pediatric physical therapy settings, a Physical Therapist (PT) meets a lot of infants with torticollis, mostly Congenital Muscular Torticollis (CMT). It is not uncommon to meet infants with torticollis that alter sides, they usually have a normal passive range of motion in neck rotation and lateral flexion (*clinical experience AÖ*). Greve et al found that infants with torticollis that alter sides appear to have a lower cervical range of motion limitations than those that always tilt to the same side [11]. These infants with torticollis that alter sides are likely to have mild BPT.

Unfamiliarity with BPT among pediatricians can delay diagnosis, lead to unnecessary tests and anxiety for parents [6]. Likewise, a PT who is not aware of BPT can give an unnecessary training program, treating BPT as CMT. The only action necessary from the PT is to follow progress and motor development, and to react if needed. There are several differential diagnoses other than CMT, some can be life threatening. Even if these are rare we need to be aware of them and react early if indicated [12–16].

The Muscle Function Scale (MFS) is a scale constructed to measure muscle function/strength in lateral flexors of the neck in infants with CMT. An infant with CMT scores higher on the affected side, the side they tilt toward [17,18]. Infants that alter sides also show a side difference on the MFS, which

the evaluator may interpret as CMT. However, infants with suspected BPT have higher MFS scores on the right side when they tilt toward the right and higher on the left side when they tilt to the left. (*clinical experience AÖ*). This means there is probably tension on one side, and this tension alters sides. This may partly be a muscular problem but what really happens in the muscle during a period of tilting is unknown.

2. Case description

An infant aged one and a half months was referred to the clinic for a mild plagiocephaly. He had a severe lack of head control, a wobbly head that he often held in extension. Parents supported his head all the time, meaning there was no natural training of head control. A home training program for head control and tummy time was given.

The infant had colic and vomited a lot according to parents (his older sister had not vomited at all as an infant) otherwise, he was healthy. At two and a half months, his head control had improved but at this age he started to tilt his head severely toward the right (Figure 1).



Figure 1. Severe tilting toward his right side.

The tilting toward the right disappeared and about two weeks later he developed a mild tilt toward the left (Figure 2).



Figure 2. Mild tilting toward his left side.

According to the daily diary they kept, this pattern continued with notes about which side was tilted and if it was mild or severe (Table 1).

Table 1. Diary for head position left, right or straight. Degree of tilt recorded only in terms of mild or severe to make it easier for parents to judge.

Day starting diary	Tilt the head toward left or right and mild or severe
1	Left severe
2	Right mild
3	Right mild
4	Right mild
5	Right mild in morning, afternoon left mild
6	Right mild in morning, afternoon left mild
7	Left severe
8	Left mild morning, rest of the day right mild
9	-
10	Both left and right AM.
11	-
12	Both left and right AM.
13	Right severe
14	Right mild
15	Left mild
16	Straight
17	Right mild
18	Right severe
19	Right mild
20	Right severe
21	Right mild
22	Right mild
23	Left severe
24	Right mild
25	Right mild
26	Right severe
27	Right mild
28	First right then changed to left
29	Right mild
30	Right mild
31-46	Three days to the left and 12 days to the right alternating from mild to severe

He alternated between the right and left side and between a mild and severe tilt. In the end the tilting was mainly toward the right. The MFS score was always higher on the side he was currently tilting toward. The score changed along with the tilting (Table 2).

Table 2. MFS scores taken on six of the visits, always a higher score on the side that the head was currently tilting toward. When straight no difference in scores.

Head position	MFS score right	MFS score left
Tilt right	3	1
Tilt right	4	3
Tilt left	2	3
Tilt right	4	2
Tilt left	3	5
Head straight	4	4

The infant's mother had migraine, there were no other known health problems in the family.

At the age of six and a half months, his head was mostly in a straight position (Figure 3).



Figure 3. One month before last visit.

Colic had ended at four months of age and vomiting ended at the same time that he ceased tilting his head. After he gained head control, he had normal motor development (Figure 4); motor function was above the median using the SOMP-I method (Structured Observation of Motor Performance in Infants) [19,20].

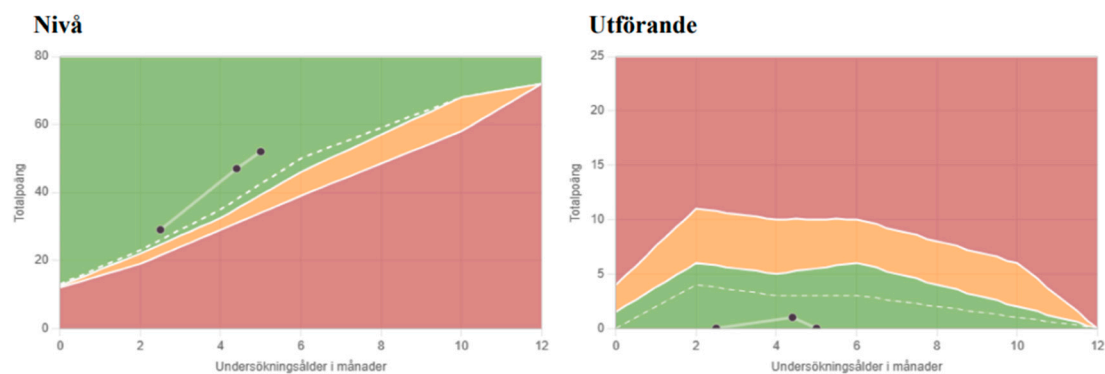


Figure 4. The level of motor performance (Nivå) on the left and quality of motor performance (Utförande) on the right using the SOMP-I method. Green areas are in the normal span, yellow slight delay and red are pronounced delay.

3. Discussion

For a pediatric PT it is not uncommon to meet infants with torticollis that alters sides, possibly without obvious associated symptoms. Some parents say on their first visit that the infant's head has tilted toward alternate sides. Other parents have not noticed this difference; it is discovered when they come to the clinic and the infant suddenly tilts to the opposite side compared with earlier records. These infants are suspected to have mild BPT. Bratt and Menelaus described four cases 1992, the symptoms of the two youngest resolved earlier, before one year of age. Only one of them had associated symptoms [2], corresponding well with infants with suspected BPT seen by a PT. Infants with severe attacks are probably referred to a neurologist and not to a PT. It is likely that milder cases first mistaken for CMT are referred to a PT.

When the MFS shows a side difference in infants with torticollis, we can't take for granted that it is CMT. Suspected BPT also gets a higher score on the side the infants currently tilt toward. All PTs working with infants and especially with torticollis need to be aware of BPT. There is a risk of confusion among professionals in child health care as well as for parents. These infants may get unnecessary treatment, as recovery is spontaneous. We need to assure parents about the natural progress of BPT and avoid anxiety [4]. However, it would be very interesting to know what happens in the muscle during a period of tilting. As there is a difference on the MFS scale during a period of titling, the muscle is affected in some way.

Minor problems with vomiting, irritability, colic may be missed if not asked about. Vomiting is not unusual for infants with or without torticollis. Vomiting, irritability, and drowsiness could in some degree be common to any infant. If they only occur when an infant has a tilting episode, they can be regarded as associated symptoms, but if they occur all the time, it may be within the normal variation. PTs ought to consider standardized questions for all infants with torticollis to catch associated symptoms that may otherwise be missed. Routine control of motor development for all infants with torticollis could also be included. The SOMP-I method evaluating motor performance at ages 0-12 months [19,20] or the Alberta Infant Motor Scale (AIMS) at ages 0-18 months [21,22] could be used to follow motor development in infants.

Backed up by 30 years' clinical and research experience, I have used clinical experience for two statements. I am aware that referral to studies is preferable. However, there is a lack of studies about BPT in PT settings. The first statement is: Infants with suspected BPT have no limitation in their passive range of motion. And the second: that suspected BPT is not uncommon. During 2023 I met 193 infants with torticollis and 10% of them altered sides, this was more than I expected. This fits well with Tozzi et al and Hadjipanayis et al conclusions that BPT is underestimated [3,6].

4. Conclusion

Mild cases of BPT may be mistaken for CMT and referred to a PT. The PT needs to distinguish BPT from CMT at an early stage to avoid unnecessary treatment. It is important to follow infants with BPT to exclude more severe cause of torticollis. Further studies are needed to get better knowledge of how the SCM muscle is affected in infants with suspected BPT.

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Informed Consent Statement: Informed consent was obtained from the parents to use photos of the infant.

Conflicts of Interest: The author declares no conflicts of interest.

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