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CASE REPORT

Fibromatosis colli: a case report

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ABSTRACT

Background: Fibromatosis colli is a benign uncommon condition of infancy, usually manifested at the age of 2-4 weeks of life as a lump in the neck (mostly on the right side) or head tilt. It can be easily diagnosed by ultrasound (US).

Case Presentation: A 3-day-old full-term male neonate was brought to the emergency department with a complaint of left side neck swelling. On examination, the child was normocephalic with open flat anterior fontanelle, normal head, throat and ears, the neck was not tilted with no apparent signs of trauma. Locally, a 1/2 cm mass which was firm, non-warm, and non-tender was felt on the left sternocleidomastoid without cervical lymphadenopathy. The patient was sent for US.

Result: US examination showed a fusiform mass-like lesion within the left sternomastoid muscle, which showed similar echogenicity to the muscle and muscle striation within the lesion, with no abnormal cysts or suspicious features, suggestive of fibromatosis colli.

Conclusion: Familiarity with fibromatosis colli is important to avoid extensive or invasive unneeded investigations and also to reduce anxiety of parents.

Keywords: Fibromatosis colli, neck lump, ultrasound, case report.

Introduction

Fibromatosis colli is also referred to as the pseudo-tumor of the sternocleidomastoid in infancy or congenital muscular torticollis [1]. It is a rare condition, which is mostly self-regressing and benign with an incidence rate of 0.4%. Fibromatosis colli is usually manifested as a palpable neck swelling, head tilt or limited head movements that occur usually between the time-period of 15 to 30 days after birth. Furthermore, in 75% of the cases, the right side of the neck is the most commonly affected side [2].

Although the exact etiology is unknown for this condition, but a proposed explanation is that the common cause is congenital torticollis and sometimes the fibrosis is secondary to neck muscle injuries, which are followed by a trauma experienced by the infant during birth or might be due to the poor intrauterine fatal position [3]. The World Health Organization classified fibromatosis colli as a fibroblastic proliferation with a benign nature [3]. The history might include poor intrauterine position, breech presentation, difficult or forceps assessed delivery [4]. When gender of infected infants is concerned, males are more commonly affected as compared to females [2].

There could be a diverse differential diagnosis for a presentation of a mass or neck swelling in infancy. Therefore, ultrasound (US) imaging is the preferred tool for diagnosis due to the absence of radiations, high degree of confidence and its decreased cost with a 100% sensitivity in 90% of the cases. It also avoids unnecessary investigation and invasive procedures, which are the basic causes of increased parental anxiety [5]. It is reported in the literature that if this condition is diagnosed correctly, it could be managed conservatively with physiotherapy and minimal invasive procedures and investigations [6].

Case Presentation

In this study, a case of a left sided fibromatosis colli was presented. A 3-day-old full-term male neonate was brought to the emergency department by his parents with a complaint of left side neck swelling which was noticed

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by his parents on the same day. The parents confirmed that there was no fever, trauma, irritability, poor feeding, respiratory illness, or any other complaint. The mother had normal gestation and there were no complications during pregnancy. The child was born to a healthy mother via natural non-assisted spontaneous delivery at 38 weeks of gestation with adequate prenatal care. On physical examination, the child was normocephalic and had open flat anterior fontanelle, normal head, throat and ears. The neck was not tilted, without apparent signs of trauma, and had freely range without limitation. Locally, there was a 1/2 cm firm, non-warm, and non-tender mass that could be felt on the left sternocleidomastoid without cervical lymphadenopathy. The child was sent for US by the orthopedist, which showed a fusiform mass-like lesion within the left sternomastoid muscle, which showed similar echogenicity to the muscle and muscle striation within the lesion, with no abnormal cysts or suspicious features, suggestive of fibromatosis colli (Figures 1 and 2)

Discussion

The presented case was a 3-day-old full-term male neonate with a rare condition of fibromatosis colli, on an unusual site and occurred before the usual age of presentation. The patient's neck had swelling; it was not tilted and had no apparent signs of trauma, freely ranging without limitation. There was a 1/2 cm firm, non-warm, and non-tender locally present mass that could be felt on the left sternocleidomastoid.

Fibromatosis colli is usually manifested between the time-period of 15 to 30 days after birth [2]. Whereas, in the presented case the **f**ibromatosis colli was unusually manifested at the third day of the infant life. Additionally, when the gender of infected infants are concerned, males are more commonly affected as compared to females [2]. Similarly, in the current case, a 3-day-old full-term male neonate was presented.

Fibromatosis colli is usually unilateral but it could be bilateral in rare conditions [7]. In the current presented

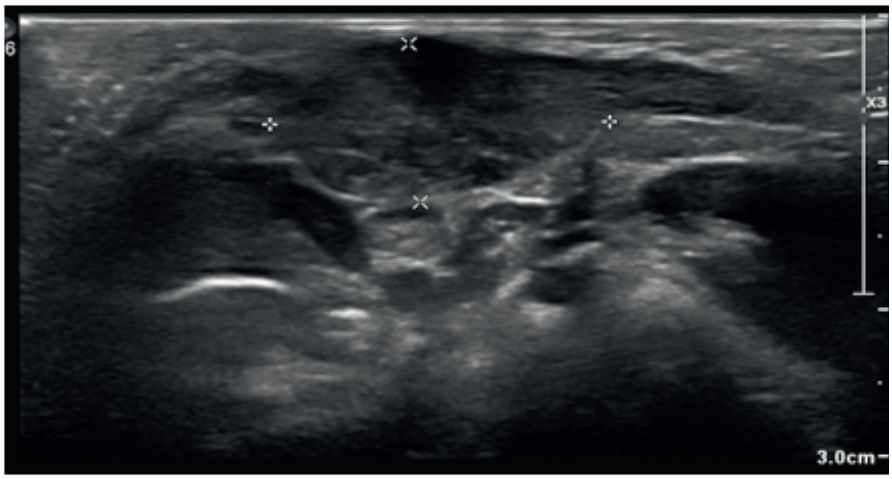

Figure 1. *US examination showing a fusiform mass-like lesion within the left sternomastoid muscle.*

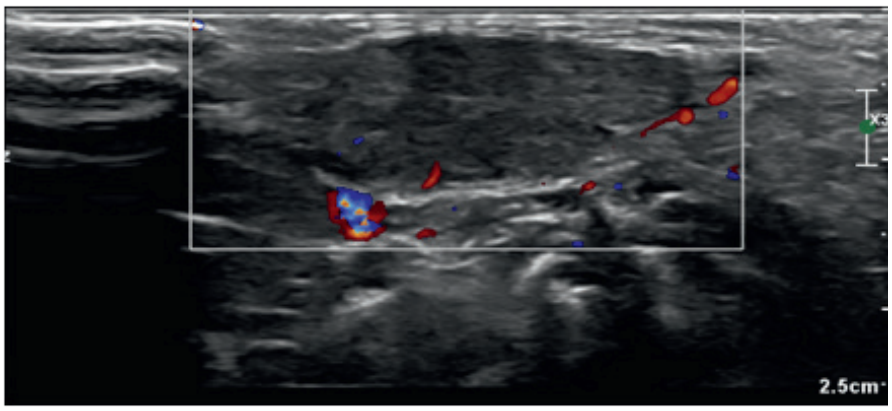

Figure 2. *The mass-like lesion showed similar echogenicity to the muscle and muscle striation within the lesion.*

case, the presentation was on the left side which is rare, as in 75% of the cases, the right side is the most commonly affected side [2]. Conversely, Passarello et al. [8], presented a case of a girl aged 26 days with an enlarged non-tender neck lump at the right side of the neck.

This condition is self-regressing and has a spontaneous nature with complete regression by the age of 2 years in majority of the cases [7]. The size of the mass during the first days initially increases, which then stabilizes gradually and further it is reduced spontaneously at 4-7 months of age [9]. Further, management is usually conservative, surgical intervention and botulinum toxin type-A are rarely needed [7]. Therefore, the presented case was not followed up after diagnosis and was left untreated with conservative management for self-regression.

Most of the time US is the preferred imaging tool to diagnose fibromatosis colli and for the differential diagnosis of this condition from other causes of neck swelling and congenital torticollis due to the previously established reasons [3,5]. Furthermore, it typically shows a mass with a fusiform pattern within the sternomastoid, echogenicity that varies according to the stage. However, other imaging tools including computed tomography and magnetic resonance imaging scans might be needed if the results of US imaging are equivocal or if complications are suspected in the particular case [7,9]. Likewise, in the present case, US examination showed a fusiform mass-like lesion within left sternomastoid muscle which showed similar echogenicity to the muscle and muscle striation within the lesion, and all additional results provided a clear picture of the case, hence, there was no need of imaging tools other than the US.

Cytological findings along with the proper perinatal history could help in the diagnosis of the fibromatosis colli and thus prevent the unnecessary invasive investigations like biopsy [10]. In the present case, the child was a product of spontaneous gestation, born to a healthy mother via natural non-assisted spontaneous delivery at 38 weeks of gestation. In contrast, Passarello et al. [8], presented a case of a 26 days old girl with fibromatosis colli, who was delivered via vacuum delivery at 41 weeks of gestation.

Thereby, pediatricians should be aware that both clinical findings and imaging, particularly US that could help in differentiating this condition from other causes of neck swelling and congenital torticollis, to avoid unnecessary and invasive investigation and also to reduce anxiety of parents.

Conclusion

Although fibromatosis colli is a rare condition but it is a common cause of congenital torticollis and neck masses, which could be easily diagnosed by US and can easily be managed conservatively without surgical interventions as it is self-regressing till the age of 2 years.

List of Abbreviations

US Ultrasound

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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Consent for publication

Written informed consent was obtained from the participant.

Ethical approval

Ethical approval is not required at our institution to publish an anonymous case report.

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