

Neonatal Occipito-Linear and Temporo-Fronto-Parietal Alopecia: Can Non-Marginal and Marginal forms of the Transient Neonatal Hair Loss be Found Together?

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Abstract

We presented a one year-old-boy with a linear hypotrichotic area over the occipital region that was extending to the temporo-parietal regions bilaterally. There were also bilateral localized triangular alopecic areas of diminished hair over the fronto-temporo-parietal regions. Based on the clinical examination findings of all the hypotrichotic patches, the diagnoses of “occipito-linear and triangular fronto-temporo-parietal alopecia” was made. We also discuss whether the two different lesions can be found in one patient as a combined form of neonatal occipital alopecia or not.

Keywords: Alopecia; Neonatal; Occipital; Linear; Triangular

Introduction

The probable cause of the non-scarring localized alopecia in children are alopecia areata, tinea capitis, trichotillomania, traction alopecia and especially in neonates, temporal triangular alopecia and Transient Neonatal Hair Loss (TNHL) Or Neonatal Occipital Alopecia (NOS) [1,2].

Case

A one year-old-boy was presented with linear and a transverse hairless area over the occipital region that was extending to the temporo-parietal regions bilaterally. There were also bilateral and triangular localized areas of diminished hair over the fronto-temporo-parietal regions. Both types of the lesions have been present since birth and there has been no change in the appearance of hairless areas. According to the history, the child was born by cesarean section and there was no history of any intrauterine pressure, or of obstetric or acquired trauma. No cutaneous defect was seen at the site of alopecia. The family history was unremarkable. On dermatological examination, there were 9×10×12 cm, less and fine hairy triangular alopecic patches, over both fronto-temporo-parietal regions. The bases of the triangles were 9 cm, and settled fronto-temporals and apex of the triangles were extended posterior. Additionally there was a linear, band-like line over the occipital area. The width of the line (2.3 cm) was gradually increasing toward the temporo-parietal regions bilaterally and joined together with the temporo-fronto-parietal patches. There was also a fringe between the triangular areas and frontal region (Figure 1). On the dermatoscopy, a few terminal hairs were seen on the whole alopecic areas. Most of the hairs were vellus and hair density was decreased. No scaling, erythema, scarring or induration were seen on the alopecic areas. Hair pull test was negative. Exclamation mark hairs were also absent. The other dermatological and neurological examinations and the remaining physical examinations were normal. The patient did not have any additional congenital abnormalities. The routine laboratory tests were within normal limits. Trichogram or scalp biopsy could not be performed because the parents of the patient did not give consent. Due to the triangular shape of the lateral alopecic regions, absence of exclamation mark hairs, lack of any additional inflammatory finding such as erythema, scaling or induration we thought that the name of the triangular lesions might be called “triangular fronto-temporo-parietal alopecia”. On the other hand, the band-like lesion had the same morphological and dermatoscopic characteristics as the triangular

lesions except its shape, so, the diagnosis of the band-like lesion was made as “occipito-linear alopecia”.

Discussion

In neonates, different patterns of transient hair loss have been identified. Non-marginal occipital alopecia or Neonatal Occipital Alopecia (NOA) is observed in the occipital area of infants after 8-12 weeks postnatally, which was first described by Brocq in 1907 [1]. Its shape may be linear or oval. Even though NOA is relatively common (its prevalence is approximately 9-12%), there have been few epidemiological reports of this entity. It occurs more often in Caucasian infants [2]. For many years, the etiology of NOA has been thought to be friction caused by the neonate's sleeping position. However, in recent years it has been considered that it might be due to physiological hair shedding [2,3]. In addition, it is thought that the condition is not an acquired alopecia but a synchronized telogen effluvium after a prolonged anagen phase which began in prenatal period. Kim et al.



Figure 1: (a) Lateral view of the left triangular alopecic lesion. (b) Top view of the scalp. (c) Back view of the occipito-temporal alopecic band like lesion.

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detected that this condition was higher in the group younger than 35 years at parturition, in the group not undergoing a Caesarean-section delivery, and in the group delivered after 37 weeks of gestational age [2]. Another form of TNHL is marginal, often band-like alopecia of the fronto-temporal region of the scalp [1-3]. It may be confused with alopecia areata but in the latter case, hair pull-test is positive [1]. Recently, Neri et al. proposed a new classification of TNHL: 1-Neonatal type is rare and appears in the first 4 weeks of life with a frontal-temporal pattern. 2- Classic type is more common than the first and appears at 8-12 weeks of life with a predominant occipital pattern [4]. On the other hand, Temporal Triangular Alopecia (TTA) is a well-circumscribed triangular or lancet-shaped area of non-cicatricial hypotrichosis positioned in the fronto-temporal area [5,6]. TTA rarely involves large temporoparietal region [7]. It usually appears sporadically and mostly manifests after two years of age when the vellus are replaced by terminal hair. It is usually unilateral but bilateral involvement may also occur [5,6]. It may occur within families as a paradigmatic trait or may reflect a mosaicism. Sometimes it may also be a part of multisystemic birth anomalies [6-8]. The anterior margin can be separated from the lesion by a small fringe of normal hair [8]. The alopecic lesions of our patient had been noticed at birth because he was born with terminal scalp hair. Due to the presence of the bilateral big triangular alopecic patches, and the presence of a hair fringe between the frontal and parietal areas, we first thought that the lesions might be big congenital TTA. However, the patches were not confined to the temporal areas and they situated on the fronto-temporo-parietal regions. This appearance was not a typical clinical shape of the TTA. On the other hand, it did not fully comply with the classical band-like description of the marginal TNHL either. Therefore, we thought that the triangular patches could have been a triangular variant of the marginal form of TNHL. Additionally, although the child was born with Caesarean-section, considering the mother's age was 33, and she gave birth in the thirty-eighth week of the pregnancy, the condition was compatible with the etiologies of the TNHL. On the other hand, alopecia of a linear shape is very rare. There are only a few cases of linear-shaped alopecia on the scalp that have been reported [9,10]. Rhee et al. had reported two cases of linear alopecia on the occipital scalp. However, there after they realized that the lesions compatible with a linear scleroderma [10]. Due to the lack of any epidermal or dermal changes other than the alopecia, we thought that the linear lesion was compatible with the non-marginal, occipital and linear form of TNHL. Considering the age of the patient, absence of exclamation mark hairs, negativity of hair pull test, lack of any additional inflammatory findings, absence of any changes in the appearance of the bandlike alopecic lesions since birth, the diagnoses of trichotillomania, traction alopecia, tinea capitis and alopecia areata were excluded. On dermatoscopy, TNHL is characterized by the presence of wide spread thin hair [2,4]. There is a synchronised telogen shedding [2]. In the TTA, mostly vellus hairs are present in the affected area, and occasionally a few terminal hairs are retained. The number of follicles is normal but the follicular size is abnormal and diminished

[8,11]. Because we could not do a scalp biopsy, we do not know histopathological features of the follicles. However, the diagnosis of TTA is usually made based on clinical features and typical location not on biopsy results [7]. The diagnosis of the previous cases of TNHL have also been made based on clinical and dermatoscopic findings [2-4]. Due to the hair density was decreased on the dermatoscopy of lateral alopecic patches, our diagnosis more compatible with a TNHL than a TTA. Where as the TTA have no specific treatment and it is a permanent condition TNHL is self-limited and transient disease, and it does not require any treatment [2,3,6,7,10,11]. In conclusion, we think that the linear and fronto-temporo-parietal alopecic lesions of our patient might be a combination of the two forms of NOA or TNHL. Additionally, we also think our patient's triangular fronto-temporo-parietal patches might be a triangular variant of the marginal form of them. And, we suggest that when faced with an non-scarring regional scalp alopecia in neonatal period, to avoid the unnecessary treatment, a diagnosis of NOA or TNHL must be kept in mind.

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