A Triangular Alopecic Patch on the Right Frontotemporal Scalp of a 42-year-old Man

Ching-Po Wang  Pa-Fan Hsiao  Yu-Hung Wu  Yang-Chih Lin

CASE REPORT

A 42-year-old man presented with a triangular to lancet-shaped alopecic patch which appeared on his right frontotemporal scalp since 5-year-old (Fig. 1). The alopecic patch remained stable and hadn’t enlarged or regressed in the following years. The involved scalp was not inflamed. There was no atrophy, no erythema and no follicular plugging. Neither black dot nor “exclamation point” hair was noted. There was no similar condition in his family, and he denied any trauma or chemical injury. He had been treated with topical steroid ointment and intralesional steroid injection, but in vain. Laboratory investigations, including complete blood cell count, anti-nuclear antibody, thyroxine (T4) and thyroid stimulating hormone, were within normal limits.

Two 4 mm punch biopsies revealed non-inflammatory dermis and epidermis. Most terminal hairs were miniaturized and became vellus hairs. The total hair number was normal, but the vellus hairs increased prominently.

Fig. 1
A triangular to lancet-shaped alopecic patch on right frontal scalp.

Fig. 2
Transverse section of isthmus level. The total hair number is normal. Most hairs were miniaturized. There are 13 vellus hairs(hair shaft diameter<0.03 mm),5 intermediate hairs(diameter between 0.03 and 0.06 mm)and 2 terminal hairs(diameter > 0.06mm, pointed with arrows).(4 mm punch biopsy, x20, H & E stain)

Fig. 3
Transverse section of lower segment level. The deep dermis is clear without peribulbar inflammation. (4 mm punch biopsy, x20, H & E stain)

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DIAGNOSIS: Temporal Triangular Alopecia

DISCUSSION

Temporal triangular alopecia (TTA) was first described by Sabouraud in 1905 as “alopecia triangularis congenitale de la temp.” This condition, once considered congenital, is acquired in the majority of cases. TTA is an asymptomatic, non-scarring, and non-progressive form of alopecia which onsets mostly between 3 to 6 years of age. Most of the cases are unilateral and there is no sexual preference. It presents with discrete triangular, lancet-shaped or oval alopecic patches overlying the frontotemporal scalp. The scalp is not inflamed. Neither skin changes, such as erythema, atrophy, follicular plugging, precede the onset of alopecia, nor scarring follows.

Clinically, TTA should be differentiated with other localized alopecia which includes alopecia areata, traction alopecia, prepubertal nevus sebaceous in its early stage, trichotillomania, postoperative (pressure-induced) alopecia, alopecia mucinosa, tinea capitis, and trauma or chemical injury. TTA is commonly misdiagnosed as alopecia areata (AA), but the differentiation is not difficult. Lesion in TTA remains stable after it appears whereas the AA lesion will spontaneously enlarge or regrow hair. The TTA lesion has a characteristic shape and location whereas AA can occur anywhere on the scalp and is usually circular. As for the treatment, TTA does not respond to steroid whereas AA does.

The histopathological finding in typical TTA includes normal epidermis, normal dermis and normal hair density. The overall architecture of the follicular units is maintained and most hairs are vellus hairs. The differential diagnoses are hair disorders with miniaturization, such as end-staged AA and androgenetic alopecia (AGA). AA is characterized by peribulbar inflammation, trichomalacia and pigment cast in the subacute stage, and prominent increase of catagen hair in chronic stage; those are not observed in TTA. However, the exhausted lesions of AA may show miniaturized hairs in majority with minimal inflammation and is difficult to differentiate with TTA. In this condition, clinical history is necessary to establish the diagnosis of TTA. AGA had its distinct clinical picture which could be easily differentiated with TTA.

Unlike AA, TTA does not respond to steroid. If treatment of TTA is contemplated, hair grafting or excision may be considered.

REFERENCES

Resident Forum

A Large Elevated Tumor on the Back of a 78-year-old Man

Chia-Mao Tsai   Tsen-Fang Tsai*   Yu-Fu Chen   Chih-Ming Hung

CASE REPORT

A 78-year-old long term bed-ridden man presented with a progressively enlarged tumor on lower back for two years. He has underlying disease of cerebro-vascular accident and respiratory failure for three years. The skin lesion was asymptomatic. It presented with red to violaceous color and cerebriform surface in appearance. The tumor measured $53 \times 47 \times 3$ mm in size. On physical examination, the elevated plaque was soft, oval shaped, and papillomatous, with sharply demarcated edges and scaly lesions (Fig 1). A skin biopsy was performed on the lateral margin of the lesion.

Fig. 1
An oval shaped, well-defined, red to violaceous colored, cerebriform surfaced big tumor on lower back.

Fig. 2
Low magnification shows marked acanthosis, focal parakeratosis, and elongated intervening rete ridges. (H&E, x40)

Fig. 3
Closer view reveals much pallor keratinocytes. Dilated vessels and infiltration of inflammatory cells in papillary dermis were found. (H&E, x100)

Fig. 4
Clear epidermal cells are positive to periodic acid-Schiff reaction. (PAS stain x200)

Fig. 5
The cryotherapeutic wound had healed with peripheral hyperpigmentation. There is no recurrence six months later.

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**DIAGNOSIS: Giant Clear Cell Acanthoma**

**DISCUSSION**

明亮細胞棘皮瘤通常發生在中年到老年人身上，男女的發生率並無差異。典型的臨床症狀是單一的腫瘤呈圓形、向外生長、紅棕色的外觀，像是貼在皮膚的外觀，環繞著項頭狀鱗屑，表面可能有些痂皮，也常帶有微血管擴張小點，典型的位置好發在下肢，尤其以小腿最多，大小小於兩公分。而其他尚有稀見的型態，例如呈多發性者或界定大於40mm的巨大型態者。病理上，明亮細胞棘皮瘤具有獨特的病理表現，其在表皮層具有較大且透亮的角質細胞，表皮增生且網狀增融合，有角化不全和輕度海綿樣水腫，且有擴張的微血管，而嗜中性球可能會侵犯表皮層(Fig 2, 3)。而透亮細胞因含肝糖而呈PAS陽性反應(Fig 4)。

明亮細胞棘皮瘤在本質上是個良性的腫瘤，無自然痊癒傾向，然而，有文獻指出明亮細胞棘皮瘤因其細胞的增生性質可能有潛在的惡性變化。一般而言，治療上以切除為主。然而巨大形態或是多發性者，則常需要考慮其他治療方式。搜尋相關文獻，僅報告過六位巨大明亮細胞棘皮瘤，針對病患狀況及治療方式，與此案例列表比較(Table 1)。

不論是電燒或是二氧化碳雷射汽化方式，其作用機制乃是對腫瘤細胞直接破壞，以治療局部消炎和血液瘀滯，並避免術中的極度疼痛。而治療時因避免了神經末梢和小淋巴管，術中血流不順，使得術後疼痛較低且傷口水腫。然而對於大面積的腫瘤，除了麻醉劑的考量外，針對腫瘤病患，治療工具無法或不便攜帶，成了另一項問題。在吾人案例中，考量病患行動不便，採以冷凍療法進行。冷凍療法的機制在於以低溫直接對細胞造成冷凍的傷害和導致血管叢縮效果。進行冷凍療法不需注射局部麻醉劑，而且冷凍治療後 Jouarre 進行治療。雖然可以預期會有疼痛、水腫、起水泡、滲液，也有可能需要數次的治療。不過，以冷凍療法會對組織及基質產生選擇性破壞，提供了治療後傷口癒合恢復的骨架，且膠原蛋白纖維對冷凍的抗性使傷口有較佳的癒合，是較較佳的治療方式。我們的案例，以一次治療達到不錯的效果，而半年後追蹤未有局部復發(Fig 5)。不可置喙，冷凍治療是快又安全的方式且低成本，尤其在醫療體系法規規範有所限制時的一種好選擇。

回顧文獻，而國內外未有以冷凍療法處理巨大明亮細胞棘皮瘤的文獻。吾人以冷凍療法治療巨大明亮細胞棘皮瘤獲良好結果是為治療參考。

**REFERENCES**


**Table 1. Literature review of giant clear cell acanthoma.**

<table>
<thead>
<tr>
<th>Reference (year of publish)</th>
<th>P’t age (yrs/sex)</th>
<th>The longest diameter</th>
<th>Location condition</th>
<th>Duration</th>
<th>P’t general</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duperrat et al. (1966)</td>
<td>N.A.</td>
<td>45mm</td>
<td>Leg</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Grossin et al. (1983)</td>
<td>90/M</td>
<td>70mm</td>
<td>Left knee</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Royzman et al. (1983)</td>
<td>83/M</td>
<td>50mm</td>
<td>Right leg</td>
<td>35 years</td>
<td>DM, varicos vein</td>
<td>Shave excision</td>
</tr>
<tr>
<td>Langtry et al. (1989)</td>
<td>87/F</td>
<td>40mm</td>
<td>Left buttock</td>
<td>2 years</td>
<td>Not mentioned</td>
<td>Curettage and electrocoagulation</td>
</tr>
<tr>
<td>Murphy et al. (2000)</td>
<td>78/F</td>
<td>60mm</td>
<td>Buttock</td>
<td>12 year</td>
<td>Psoriasis, heart disease</td>
<td>Complete excision</td>
</tr>
<tr>
<td>Murphy et al. (2005)</td>
<td>6/F</td>
<td>50mm</td>
<td>Right leg</td>
<td>1 month</td>
<td>Local stab injury</td>
<td>CO2 laser</td>
</tr>
<tr>
<td>Our case</td>
<td>78/M</td>
<td>53mm</td>
<td>Low back</td>
<td>2 years</td>
<td>Respiratory failure, CVA</td>
<td>Cryotherapy</td>
</tr>
</tbody>
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