Auricular granuloma annulare

Sir,

Granuloma annulare, first described by Colcott and Fox in 1895, and formally named in 1902 by Radcliffe-Crocker, is a common noninfectious granulomatous cutaneous condition.[1] Granuloma annulare has several sub-types, including localised, generalised, sub-cutaneous, macular or patch and various atypical morphologies. Granuloma annulare localised to the external ear is very rare. Herein, we report a case of auricular granuloma annulare with dermoscopic manifestations.

A 49-year-old male presented with a 6-month history of multiple asymptomatic firm skin-coloured to erythematous papules involving both auricular antihelixes [Figures 1a and b]. There was no history of trauma, insect bite, or excess solar exposure. The patient was in good health and stated no prior medical history. On dermoscopy (JD801D, Jiangsu Jieda Technology Co., Ltd, Jiangsu, China), the right auricular lesion presented a daisy pattern comprising a central yellow crust with peripheral linear and hairpin vessels on a white background [Figure 2a]; and the left auricular lesion revealed a central yellowish-orange structure-less area with surrounding capillary network [Figure 2b]. A lesional skin biopsy and histopathological examination from the right ear revealed palisading infiltration of histiocytes and lymphocytes around degenerated collagen fibres in the dermis [Figure 3], suggestive of granuloma annulare. After three months of topical 0.05% halobetasole cream, the lesions resolved without any recurrence at 1-year follow-up.

Granuloma annulare is a common non-infectious granulomatous cutaneous condition classically presenting as annular grouped skin-coloured to erythematous papules on the extremities. Although the exact pathogenesis remains unclear, cell-mediated hypersensitivity reaction is one of the proposed explanations for its development.[2] It may occur as an isolated idiopathic entity, however, some reports have associated it with diabetes, hyperlipidemia, malignancy, thyroid disease and systemic infections.[2] Several triggers of granuloma annulare have been reported, such as lightning strikes, tattoos, insect bites, contact dermatitis, vaccination, isomorphic response and medication.[2]

Granuloma annulare is more prevalent in females, with a female-to-male ratio of 2:1, and onset commonly occurs before 30 years age.[3] It has varying morphologies and sub-types, and the common subtypes include localised, generalised, perforating and sub-cutaneous granuloma annulare. Other rare subtypes are linear, palmar, patch, pustular and giant granuloma annulare. Histopathology is a confirmatory diagnostic tool, characterised by dermal collagen degeneration, mucin deposition and either a palisaded or interstitial histiocytic infiltrate. The common dermoscopic features of granuloma annulare include multiform whitish areas, yellowish-orange structureless areas, and unfocused vessels (dotted, linear and branching) with an evident pinkish-reddish background.[4,5] Whitish areas probably result from collagen degeneration and mucin deposition in dermis, while the granuomatous infiltrate is depicted by yellowish-orange structureless areas.[4] Other dermoscopic features include pigmented structures, whitish scaling, rosettes, and crystalline leaf venations.[4,5] Apart from the common dermoscopic features of granuloma annulare, we observed a special daisy pattern in our patient, which has also been described in chondrodermatitis nodularis helicis.[6]

Granuloma annulare localised to the external ear is very rare. To date, a total of 12 cases of auricular granuloma annulare have been reported in the literature.[7–16] While granuloma annulare has female predilection, all patients with auricular granuloma annulare were male. Table 1 summarizes the cases of auricular granuloma annulare reported in literature [Table 1]. Although the exact reason for granuloma annulare on the external ear is unknown, trauma seems to be related, as reported in five patients. The lesions of auricular granuloma annulare commonly involve bilateral helixes or/and antihelixes, or occasionally ear lobe, and present as multiple skin-coloured, yellow, or erythematous papules and nodules. The majority of auricular granuloma annulare are asymptomatic, while occasional slight tenderness may be present. The histopathologic features are consistent with typical granuloma annulare. Farrar reported a case of auricular granuloma annulare with perforating features, and the lesions presented on extra-auricular sites.[12] In 10 patients, the lesions were localised to the ear [Table 1]. Auricular granuloma

How to cite this article: Zhang L, Jiang C, Wang W, He L, Chen T. Auricular granuloma annulare. Indian J Dermatol Venereol Leprol 2022;88:800-3.

Received: February, 2021 **Accepted:** July, 2022 **EPub Ahead of Print:** October, 2022 **Published:** November, 2022

DOI: 10.25259/IJDVL_197_2021 **PMID:** 36331829

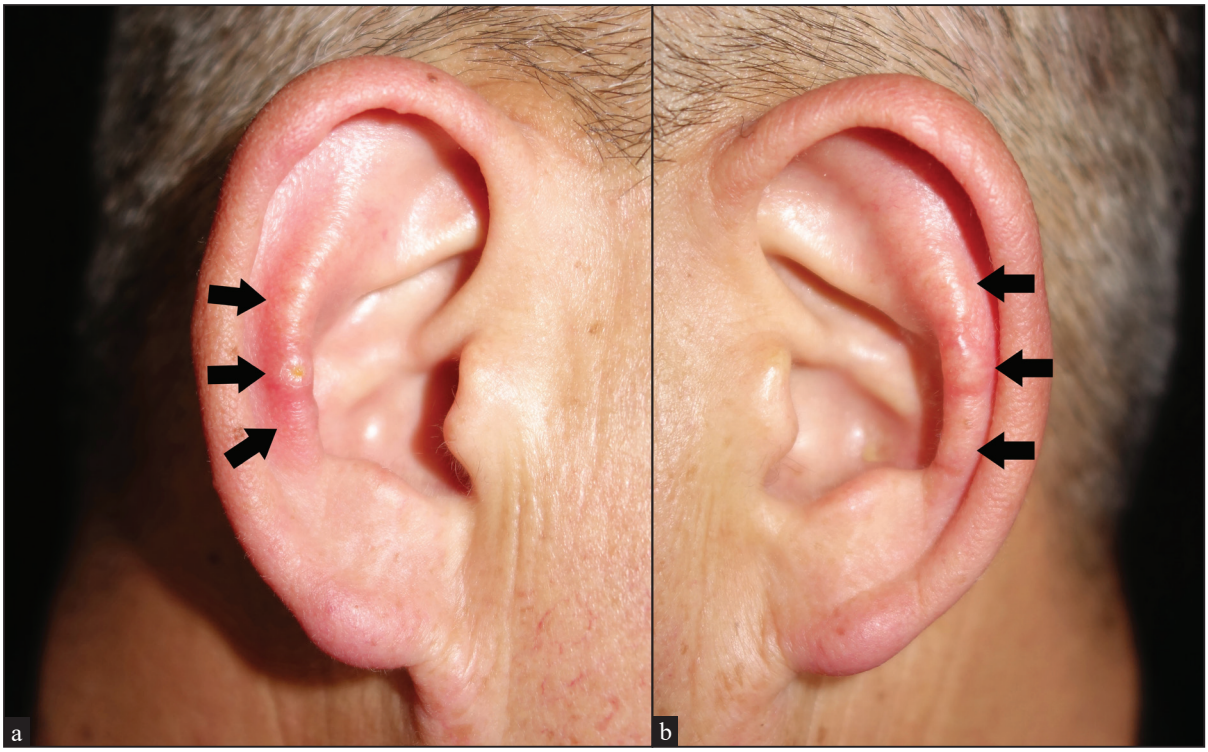

Figure 1a and b: Multiple firm skin-colored papules (arrows) on the bilateral antihelixes: (a) right, (b) left

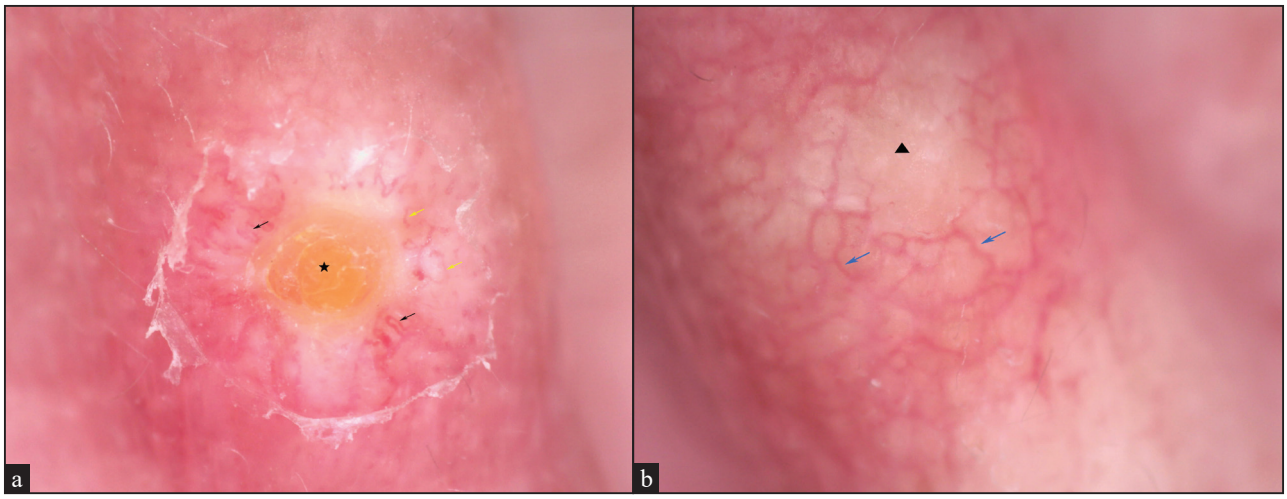

Figure 2a and b: (a) The right lesion showed central yellow crust (pentagram) and peripheral linear (yellow arrows) and hairpin vessels (black arrows) on a white background. (non-contact polarised dermoscopy, ×50); (b) the left lesion showed central yellowish-orange structureless area (triangle) with the peripheral capillary network (blue arrows). (non-contact polarised dermoscopy, ×50)

annulare usually resolves with treatment, and only one patient presented with local recurrence in the literature.[15] The effective management options include trauma avoidance, topical glucocorticoids or calcineurin inhibitors, cryotherapy and excision.[7,8]

The differential diagnoses of granuloma annulare include rheumatoid nodules, chondrodermatitis nodularis helicis, auricular pseudocyst, sarcoidosis and epidermal cysts. Rheumatoid nodules are well-demarcated, flesh-coloured, sub-cutaneous lumps or masses, usually encountered on extensor surfaces, pressure and trauma-prone areas, in patients with rheumatoid arthritis. Typical histologic features include necrobiosis, with fibrin deposition and palisading epithelioid histiocytes.[17] The dermoscopic findings comprise a pink or pink and white mixed homogeneous background, reticulate pigmentation, and fewer vessels.[5] Chondrodermatitis nodularis helicis typically presents as a tender round nodule with raised edges with a central ulcer or crust, involving the helix or antihelix. Histopathology reveals epidermal ulceration with surrounding acanthosis, orthokeratosis, dermal inflammation and hyalinised eosinophilic material overlying

Table 1: The clinical features of 11 cases auricular granuloma annulare

Case	Sex	Age, year	Course	Clinical features	Sites	Possible induce-ment	Treatment	Prognosis	Author
1	M	36	Several months	Single tender nodule	Left ear lobe	Trauma	Excision	No recurrence	Mills, 1992
2	M	21	6 months	Multiple nodules	Both helixes and anti-helixes	Trauma	Excision	Not described	Mills, 1992
3	M	27	3 years	Yellow papules	Both inner helixes	None	Cryotherapy	Improved	Farrar, 2002
4	M	40	5–6 years	Multiple nodules	Left antihelix	Trauma	Not described	Not described	Raghava, 2004
5	M	28	1 year	Skin-coloured papules	Both antihelixes	None	Topical steroid And pimecro-limus	Improved	Kim, 2009
6	M	26	5 years	Yellow papules	Both antihelixes	None	Cryotherapy, excision	No recurrence	Dias, 2010
7	M	31	18 months	Skin-coloured papules	Right antihelix	Trauma	Avoid trauma	Spontaneous regression without recurrence	Shim, 2010
8	M	36	1 month	Skin-coloured papules	Both antihelixes	Trauma	Local injection of steroid	No recurrence	Shim, 2010
9	M	20	10 years	Yellowish tender papules	Left antihelix	None	Excision, topical steroid	Recurrence	Gerdes, 2013
10	M	7	6 months	Skin-coloured papules	Both helixes and antihelixes	None	Topical steroid	Improved	Cho, 2014
11	M	49	6 months	Skin-coloured, reddish papules	Both antihelixes	None	Topical steroid	No recurrence	Our case

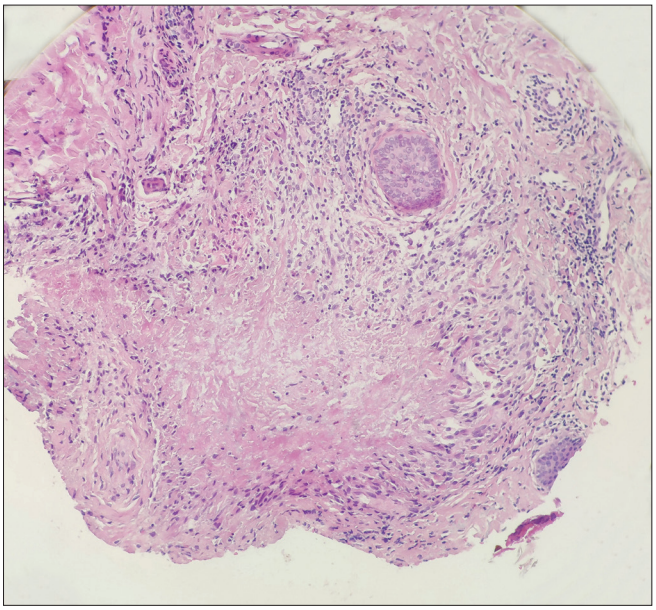

Figure 3: Dermal palisading infiltration contained histiocytes and lymphocytes around degenerated collagen fibres (H&E, ×200)

the cartilage.[18] The dermoscopic feature of chondrodermatitis nodularis helicis is a daisy pattern consisting of thick white lines, radially arranged, converging to a central rounded yellow/brown clod.[6] Auricular pseudocyst is a rare benign condition corresponding to an intra-cartilaginous collection resulting in a non-inflammatory cystic swelling of the ear. Ultrasound is a useful early diagnostic tool for auricular pseudocyst.[19] About 25% of sarcoidosis patients have cutaneous lesions, manifesting as maculopapules, nodules, plaques, sub-cutaneous nodules, infiltrative scars and lupus pernio.[20] Histologic examination of sarcoidosis shows well-demarcated islands of epithelioid cells with occasional giant cell formation and no necrosis.[20] Dermoscopy of sarcoidosis displays translucent, orange or yellowish-orange structureless areas which may be focal or diffuse along with well-focused vessels of different morphologies.[5]

In conclusion, we have reported a rare case of auricular granuloma annulare. Dermoscopy is a useful, non-invasive adjunctive diagnostic tool for auricular granuloma annulare, while histopathology is confirmatory. The dermoscopic findings include a daisy pattern, yellowish-orange structureless area and unfocused multiform vessels.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflict of interest

There are no conflicts of interest.

Li-wen Zhang, Cun-huo Jiang, Wen-ju Wang, Lin He[1], Tao Chen

Departments of Dermatovenereology, [1]Pathology, Chengdu Second People's Hospital, Chengdu, Sichuan, China.

Corresponding author:
Dr. Tao Chen,
Department of Dermatovenereology,
Chengdu Second People's Hospital, Chengdu, Sichuan,
China.
13980427003@163.com

References

1. Piette EW, Rosenbach M. Granuloma annulare: Clinical and histologic variants, epidemiology, and genetics. J Am Acad Dermatol 2016;75:457–65.
2. Piette EW, Rosenbach M. Granuloma annulare: Pathogenesis, disease associations and triggers, and therapeutic options. J Am Acad Dermatol 2016;75:467–79.
3. Wang J, Khachemoune A. Granuloma annulare: A focused review of therapeutic options. Am J Clin Dermatol 2018;19:333–44.
4. Errichetti E, Lallas A, Apalla Z, Di Stefani A, Stinco G. Dermoscopy of granuloma annulare: A clinical and histological correlation study. Dermatology 2017;233:74–9.
5. Chauhan P, Adya KA. Dermatoscopy of cutaneous granulomatous disorders. Indian Dermatol Online J 2021;12:34–44.
6. Garcia-Garcia B, Munguia-Calzada P, Auban-Pariente J, Junceda-Antuna S, Zaballos P, Argenziano G, *et al.* Dermoscopy of chondrodermatitis nodularis helicis. Arch Dermatol Res 2018;310:551–60.
7. Dias Coelho J, Viana I, Correia S. Bilateral granuloma annulare of the external ear. Eur J Dermatol 2010;20:409–10.
8. Cho YS, Kim JI, Song KH, Nam KH, Park J, Yun SK, *et al.* Auricular granuloma annulare in a child. Int J Dermatol 2014;53:e218–220.
9. Vilanova X, Cardenal C. Granuloma annulare of both pavillions of the ear. Actas Dermosifiliogr 1954;45:405–6.
10. Mills A, Chetty R. Auricular granuloma annulare. A consequence of trauma? Am J Dermatopathol 1992;14:431–3.
11. Dompmartin A. Nodules of the external ear. Ann Dermatol Venereol 1999;126:261–6.
12. Farrar CW, Bell HK, Dobson CM, Sharpe GR. Perforating granuloma annulare presenting on the ears. Br J Dermatol 2002;147:1026–8.
13. Raghava N, Mitchard JR, Youngs RP. Granuloma annulare presenting as multiple nodules on the pinna. J Laryngol Otol 2004;118:640–2.
14. Kim JG, Lee SH, Yoon TJ. A case of atypical granuloma annulare involving both ears. Ann Dermatol 2009;21:413–5.
15. Gerdes ML, Blom HM, Van der Laan JS, Vinke JG. Relapsing papules on the antihelix of the left ear. Granuloma annulare (GA). JAMA Otolaryngol Head Neck Surg 2013;139:1071–2.
16. Shim WH, Kim SH, Jung DS, Ko HC, Kim BS, Kim MB, *et al.* Auricular granuloma annulare induced by repeated occupational traumas. Korean J Dermatol 2010;48:616–9.
17. Bang S, Kim Y, Jang K, Paik SS, Shin SJ. Clinicopathologic features of rheumatoid nodules: A retrospective analysis. Clin Rheumatol 2019;38:3041–8.
18. Shah S, Fiala KH. Chondrodermatitis nodularis helicis: A review of current therapies. Dermatol Ther 2017;30.
19. Whittle C, Castro A, Pereira MJ, Cabrera R. Auricular pseudocyst: Sonographic appearance in 17 patients. Ultrasound Q 2020;37:370–3.
20. Bonfioli AA, Orefice F. Sarcoidosis. Semin Ophthalmol 2005;20:177–82.

Primary eccrine carcinoma with polymorphous features in a 20-year-old man

Sir,

Eccrine carcinoma is an extremely rare malignant adnexal neoplasm that accounts for less than 0.01% of diagnosed skin malignancies.[1] At present, only two cases have been reported in young patients in their 20s.[2,3] The clinical presentation is either non-specific or is usually described as a slowly growing papule or plaque on the head or extremities. Eccrine carcinoma usually demonstrates syringoid features in histopathology. The immunohistochemical study can be helpful to exclude other cutaneous neoplasms and visceral adenocarcinomas with skin metastases. We present an unusual case of eccrine carcinoma with multiple histopathologic growth patterns in a 20-year-old male.

A 20-year-old Chinese male presented with a one-year history of a gradually enlarging, tender, but otherwise asymptomatic lesion on his right lower thigh. There was no history of trauma at the local site, nor family history of any malignancy. Physical examination revealed a dark, poorly circumscribed indurated plaque measuring 5 x 3 cm [Figure 1]. There was no erosion or ulceration noted. No lymphadenopathy was detected. On histopathologic examination, the sections revealed a poorly circumscribed infiltrative neoplastic proliferation throughout the dermis and extending to the subcutis [Figure 2a]. The neoplasm was in solid, tubular, and cribriform aggregations that varied in size and shape [Figures 2b–d]. In some areas, the neoplasm was forming ductal and glandular structures [Figure 2e], some appearing syringoid [Figure 2f]. The neoplastic cells were basaloid with hyperchromatic nuclei and scant cytoplasm, some with clear cytoplasm [Figure 2g]. Rare atypical mitosis was present. No perineural involvement was identified. Immunohistochemical studies were performed;

How to cite this article: Xiao Z, Zhang J, Guo Y, Ji C. Primary eccrine carcinoma with polymorphous features in a 20-year-old man. Indian J Dermatol Venereol Leprol 2022;88:803-7.

Received: June, 2021 **Accepted:** May, 2022 **EPub Ahead of Print:** October, 2022 **Published:** November, 2022

DOI: 10.25259/IJDVL_613_2021 **PMID:** 36332086