Short Communication

Multifocal fixed drug eruption to azithromycin

Sir, fixed drug eruptions (FDE) are one of the commonest adverse drug reactions encountered by dermatologists in day to day practice. Though usually not fatal, FDE can cause enough cosmetic embarrassment especially when they recur on the previously affected sites leaving behind residual hyperpigmentation. Brocq in 1984, coined the term 'fixed eruption' to describe a pattern of skin eruption due to antipyrine. Azithromycin is one of the commonest antibiotics prescribed by doctors and dermatologists in skin and soft tissue infections. Of late it has gained popularity in the treatment of acne vulgaris as a weekly pulse therapy. We report a case of multifocal FDE to this highly safe drug.

An 18-year-old male student presented with multiple itchy lesions on the body associated with burning sensation in the oral cavity of three days duration. Patient was on weekly pulse therapy with azithromycin in view of his acne. There was no other drug intake other than azithromycin. Cutaneous examination revealed multiple violaceous to hyperpigmented plaques on the face, upper limbs (**Figure 1**), glutei, shaft of penis and thighs (**Figure 2**). Some of the lesions had an edematous centre. Oral cavity showed multiple oral erosions.

In view of the history and clinical findings a diagnosis of fixed drug eruption to azithromycin was entertained and patient was started on short course of oral steroids with advice regarding avoidance of azithromycin and other macrolides in future.

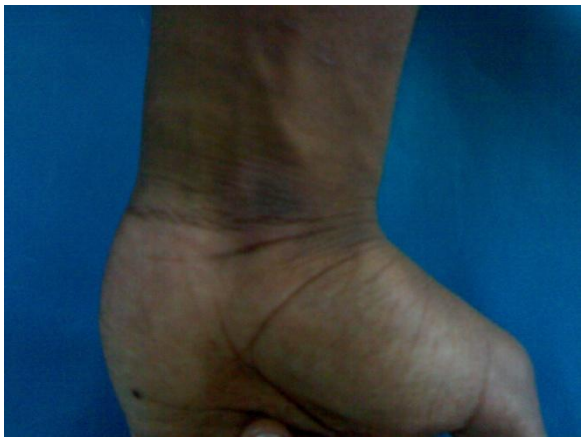

Figure 1 Violaceous plaque in front of left wrist.

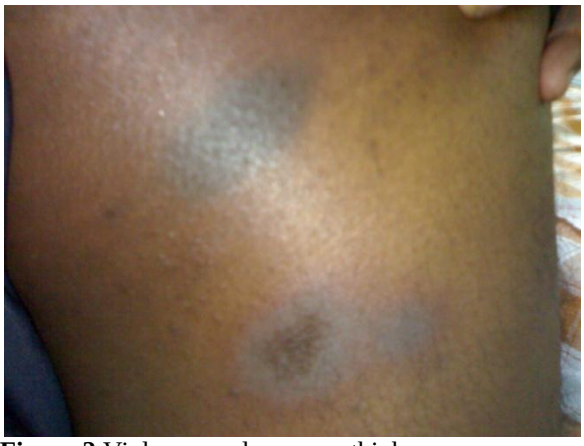

Figure 2 Violaceous plaques on thigh.

Discussion

FDE is characterized by sudden onset of sharply marginated round to oval itchy erythematous and edematous macules that evolve into dusky violaceous plaques on the skin and or mucosa arising precisely over the area of an earlier reaction due to the same drug. After an initial acute phase lasting days to weeks, a residual grayish or slate-colored hyperpigmentation develops. On subsequent exposure to the culprit drug or a chemically similar drug, few to numerous new lesions may appear which sometimes may become generalized.[4] The reappearance of the lesions over the previously

affected sites on rechallenge with the offending drug is considered to be a diagnostic hallmark.[5]

Usually the interval between intake of the drug to appearance of lesions is shorter with each episode. Acute lesions develop 30 min to eight hours after re-administration of the incriminating drug. Various morphological types of lesions that may occur are morbiliform, scarlatiniform, erythema multiforme-like, Stevens-Johnson syndrome-like, eczematous, urticarial, nodular, vesicular, bullous (may become toxic epidermal necrolysis-like in severe cases), non-pigmenting and diffuse hypomelanosis.[4]

The pathogenetic mechanism underlying FDE is still enigmatic. The most commonly accepted hypothesis is the persistence of memory T cells in the affected skin.[1] CD8+ cells phenotypically resembling effector memory T cells have been shown to be greatly enhanced along the epidermal basal layer in FDE and these have the capacity to produce large amounts of IFN-gamma which is likely to play a significant role in the development of FDE.[2,3]

Confirmation of diagnosis requires re-challenge with the incriminated drug by oral and or topical provocation (in the form of patch test) of which oral provocation test is considered superior but unsafe especially in patients with generalized lesions.[4] Patch testing at the site of a previous lesion yields a positive response in up to 43% of patients[6], while the reliability of topical provocation on uninvolved skin is variable.[7]

An extensive literature search revealed only one case of FDE to azithromycin by Gahalaut *et al*.[8] In our case the clinical findings and the temporal association to the drug intake without any doubt established azithromycin to be the culprit in causing the FDE. In contrast to the earlier case reported, our patient had a multifocal involvement thus making this the first case of multifocal FDE to azithromycin. Oral rechallenge and patch testing with azithromycin was refused by the patient who was already in distress in account of his acne and cutaneous lesions of FDE. This case is being reported to highlight that a drug as safe as azithromycin, may also be associated with serious cutaneous reactions and to make physicians worldwide aware of this extremely rare presentation.

References

1. Shiohara T, Nickoloff BJ, Sagawa Y *et al*. Fixed drug eruption. Expression of epidermal keratinocyte intercellular adhesion molecule-1 (ICAM-1). *Arch Dermatol* 1989; **125**: 1371-6.
2. Shiohara T, Mizukawa Y, Teraki Y. Pathophysiology of fixed drug eruption: the role of skin resident T cells. *Curr Opin Allergy Clin Immunol* 2002; 4: 317-23.
3. Shiohara T, Mizukawa Y. Fixed drug eruption: A disease mediated by self-inflicted responses of intraepidermal T cells. *Eur J Dermatol* 2007; **17**: 201-8.
4. Sehgal VN, Srivastava G. Fixed drug eruption (FDE): changing scenario of incriminating drugs. *Int J Dermatol* 2006; **45**: 897-908.
5. Ada S, Yilmaz S. Ciprofloxacin-induced generalized bullous fixed drug eruption. *Indian J Dermatol Venereol Leprol* 2008; **74**: 511-2.
6. Barbaud A, Reichert-Penetrat S, Trechot P *et al*. The use of skin testing in the investigation of cutaneous adverse drug reactions. *Br J Dermatol* 1998; **139**: 49-58.
7. Ozkaya-Bayazit E. Topical provocation in fixed drug eruption due to metamizole and naproxen. *Clin Exp Dermatol* 2004; **29**: 419-22.
8. Gahalaut P, Alexander E. Azithromycin in ACNE: A protagonist for fixed drug reaction? *Indian J Dermatol* 2008; **53**:100-1

Vandana Mehta, Sudhir Nayak, C. Balachandran
Department of Skin and STD, Kasturba Hospital, Manipal 576104, Karnataka, India

Address for correspondence
Dr. Vandana Mehta,
Associate Professor,
Department of Skin and STD,
KMC, Manipal.

Eccrine porocarcinoma: a rare sweat gland tumor

Sir, eccrine porocarcinoma or malignant poroma is a rare potentially aggressive appendage tumor with eccrine differentiation. It may start de-novo; however it usually develops in a long standing eccrine poroma.[1] It was first described by Pinkus and Mehregan in 1963 as "epidermotropic eccrine carcinoma".[2] Since then about 250 cases of Eccrine porocarcinoma were reported[3] and very few had been reported from India.[4] Here we present a case of Eccrine porocarcinoma which is extremely rare in this part of world.

A 47-year-old female patient presented with a slowly growing partially ulcerated, verrucous plaque in the left thigh for last 8 months. It was firm, painless, non-tender and freely movable over the underlying tissue (**Figure 1**). There was no evidence of involved lymph node or distant metastasis. The lesion initially started as small erythematous nodular mass which later became verrucous. It became ulcerated and crusted for last two months. There was history of purulent discharge. Our initial clinical differential diagnosis included Bowen's disease and squamous cell carcinoma. Her routine investigations including blood counts, chest X-ray and ultrasonography of abdomen were within normal limit. We performed an incisional biopsy for histopathology from the edge of the lesion. Hematoxylin and eosin staining of the biopsy sample revealed features of eccrine

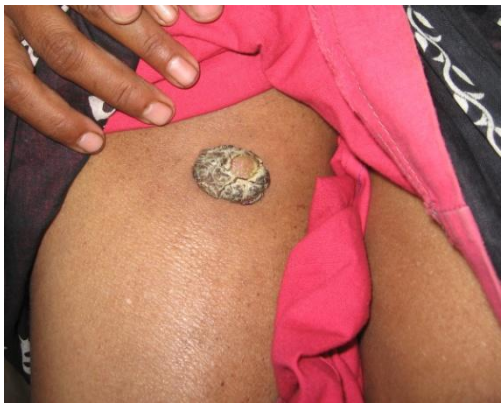

Figure 1 Partially ulcerated, verrucous plaque in the left thigh.

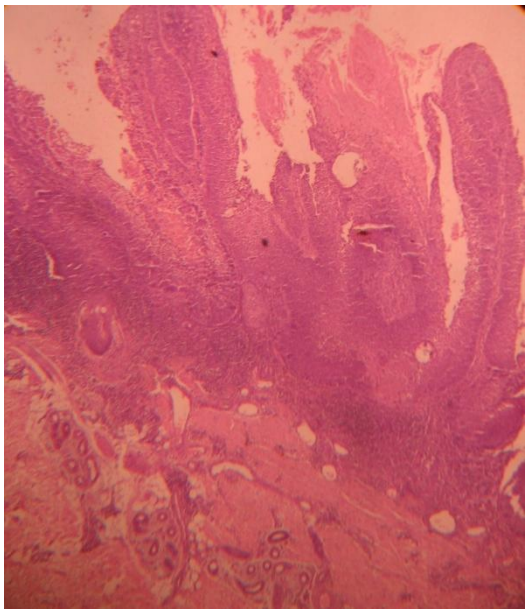

Figure 2

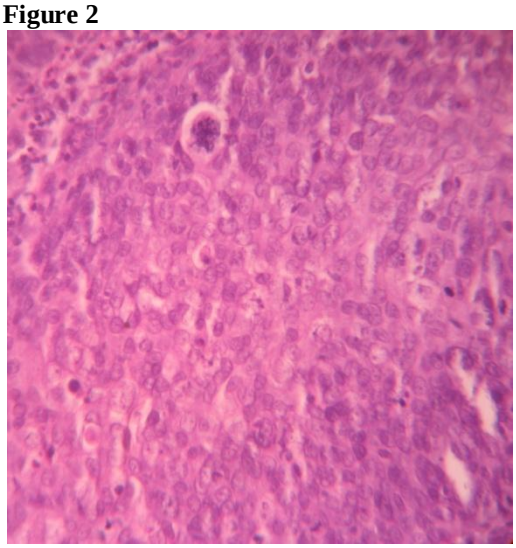

Figure 3 Large and hyperchromatic nuclei, cellular atypia and increased mitotic activity.

porocarcinoma with ulcerated epidermis and proliferation of small uniform poroid cells extending into the dermis (**Figure 2**) Some tubular structures were seen. Cells had large and hyperchromatic nuclei. Cellular atypia and brisk mitotic activity were noted (**Figure 3**).

Eccrine porocarcinoma, previously known as malignant eccrine poroma or eccrine adenocarcinoma, is a rare malignant tumor arising from the intraepidermal portion of the eccrine sweat gland duct epithelium.[5] EPs accounts for about 0.005-0.01% of all cutaneous tumors.[3] It was previously thought that the majority of porocarcinomas are found on the palms and soles, reflecting the high concentration of sweat glands. However, the distribution of these lesions appear to have no correlation with sweat gland density; around 50 percent occur on lower extremities, a further 20 percent on head and neck and upper limbs and 12 percent on the trunk and the abdomen.[6] These tumors originate from cells of the eccrine duct epithelium, usually in the region of the dermoepidermal junction.[7] They metastasize readily, via lymphatics in the dermis.[8] The local recurrence rate after excision is high, in the range of 11-20 percent.[9]

Because of the rarity and nonspecific appearances of EP, the tentative clinical diagnosis would never be correct, and might be misdiagnosed as squamous cell carcinoma, squamous cell carcinoma in situ (Bowen's disease), pyogenic granuloma, basal cell carcinoma, seborrheic keratosis, amelanotic melanoma, verruca vulgaris or metastatic adenocarcinoma. The diagnosis of EP is rendered on histopathologic features of intraepidermal ductal differentiation and as either an invasive architectural pattern and/or significant cytologic pleomorphism.[3]

Wide excision of the primary tumor is the therapy of choice, and the curative rate was reported to be 70–80%.[10] Mohs micrographic surgery may also be an effective treatment for eccrine porocarcinoma.[11]

We report a case of eccrine porocarcinoma which was reported extremely rarely from this part of world.[4] We treated the patient with wide excision and after a follow up period of three months there was no recurrence.

References

1. Robson A, Greene J, Ansari N *et al*. Eccrine porocarcinoma (malignant eccrine poroma): a clinicopathologic study of 69 cases. *Am J Surg Pathol* 2001; **25**:710-20.
2. Pinkus H, Mehregan AH. Epidermotropic eccrine carcinoma. A case combining features of eccrine poroma and Paget's dermatosis. *Arch Dermatol* 1963, **88**: 597-606.
3. Chang NC, Tsai KB. Eccrine porocarcinoma of the auricle: a case report. *Kaohsiung J Med Sci* 2009; **25**: 401-4.
4. Burra UK, Singh A, Saxena S. Eccrine porocarcinoma (malignant eccrine poroma): a case report. *Dermatol Online J* 2005; **11**: 17.
5. Shaw M, McKee PH, Lowe D *et al*. Malignant eccrine poroma - a study of 27 cases. *Br J Dermato*l 1982; **107**: 675-80.
6. Perna C, Cuevas J, Jimenez-Heffernan JA *et al*. Eccrine porocarcinoma (malignant eccrine poroma). *Am J Surg Path* 2002; 26: 272-4.
7. Moussallem CD, Abi Hatem NE, El-Khoury ZN. Malignant porocarcinoma of the nail fold: a tricky diagnosis. *Dermatol Online J* 2008; **15**; 14(8):10.
8. Grosshans E, Vetter JM, Capesius MC: [Malignant eccrine poromas (poro-epitheliomas, porocarcinomas)]. *Ann Anat Pathol* (Paris) 1975, **20**: 381-94.
9. Perna C, Cuevas J, Jimenez-Heffernan JA *et al*. Eccrine porocarcinoma (malignant eccrine poroma). *Am J Surg Pathol* 2002 **26**: 272-4.
10. Goel R, Contos MJ, Wallace ML. Widespread metastatic eccrine

porocarcinoma. *J Am Acad Dermatol* 2003; **49**: S252-4.
11. Wittenberg GP, Robertson DB, Solomon AR, Washington CV. Eccrine porocarcinoma treated with Mohs micrographic surgery: A report of five cases. *Dermatol Surg* 1999; **25**: 911-3.

Abhishek De, R C Gharami, P K Datta, Abanti Saha

Department of Dermatology, Medical College, Kolkata, India

Address for Corresponding
Dr. Abhishek De, Flat number C- 14, 87B Cossipore Road Kolkata- 700002
E-mail: dr_abhishek_de@yahoo.co.in