



## Ectopic erythema migrans in an adolescent with a skin disorder

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### Abstract

*Red and white circular lesions of the buccal and labial mucosa were observed in an adolescent. Periodically, these nontender patches would resolve and move to other oral sites. Detection of ectopic erythema migrans aided in the diagnosis of a bothersome skin condition. (Pediatr Dent 22:63-64, 2000.)*

### Case history

During a routine oral examination, multiple red and white patches were observed on the buccal and labial mucosa in a healthy 16 year-old African-American female. Review of her medical history was positive for environmental allergies, chronic sinusitis, and eczema. Hypoallergenic soaps and lotions, loratadine, naproxen and oral contraceptives were the medications used by this teenager. Intraoral examination revealed oval to circinate red patches with slightly raised white margins on the mandibular labial mucosa (figure 1) and bilateral, coalescing, red patches of the anterior buccal mucosa (figures 2 a, b). The patient was aware of increased surface roughness at these sites, but denied having any oral tenderness. These recurrent oral lesions would resolve in a couple weeks and then reappear at different mucosal sites. Except for localized gingivitis and a coated tongue, no other intraoral soft tissue abnormalities were observed. Mildly pruritic, hyperpigmented papules and plaques with scaly surfaces were noted around the hairline, hands and elbows.

### Clinical impression

Based on the clinical presentation and history, these oral lesions are most consistent with ectopic erythema migrans, also known as geographic stomatitis, ectopic geographic tongue and migratory stomatitis. This benign inflammatory condition primarily affects the tongue with infrequent involvement of other mucosal sites, in particular, the buccal and labial mucosa and soft palate. Unlike the present example, concurrent tongue involvement usually is observed when other mucosal lesions develop. Although the cause of this condition is unknown, when it occurs on the tongue, it is observed more frequently in children with atopy, psoriasis, seborrheic dermatitis and Reiter's syndrome. When erythema migrans affects other mucosal sites, there is a stronger correlation with cutaneous psoriasis but this association remains controversial.

Erythema migrans of the tongue occurs in up to 2% of the general population but is 4 to 5 times more common in children than adults. In contrast, ectopic mucosal lesions are a rare condition that primarily affects adults. The characteristic mucosal lesions are well demarcated, circular, red patches that are



Fig 1. Ectopic erythema migrans presenting as a circinate red and white lesion of the mandibular labial mucosa.



Fig 2 a. Ectopic erythema migrans appearing as coalescing, red patches of the anterior buccal mucosa, bilaterally.

surrounded by a yellowish-white, slightly elevated border. The outline of the lesion border has a curvilinear to scalloped appearance that tends to fade away or change forms when the lesion resolves and migrates to another site. Similar to the



Fig 2 b. Ectopic erythema migrans appearing as coalescing, red patches of the anterior buccal mucosa, bilaterally.

tongue lesions, the lesion site and pattern is frequently changing. Although often asymptomatic, most individuals are aware of mucosal roughness, while tenderness and a burning sensation may accompany this condition. Spicy or acidic foods and beverages and certain oral hygiene products may be irritating when the lesions are present.

### Diagnosis

Diagnosis of this oral disease is made clinically. If the pattern is atypical and other chronic mucocutaneous conditions cannot be excluded, then an incisional biopsy is recommended for a definitive diagnosis.

### Treatment

Management of erythema migrans depends on the presence of symptoms. If tenderness is associated with this condition, palliative treatment may be indicated, in addition to avoiding aggravating substances. For mild to moderate symptoms, topical or systemic antihistamines provide temporary pain relief. Judicious, short-term use of topical corticosteroids is reserved for painful cases. If topical corticosteroids are used, monitoring for a secondary candidal infection is recommended. In addition, there are reported cases of successful management of erythema migrans, when systemic retinoic acid is prescribed for the treatment of cutaneous psoriasis.

### Differential diagnosis

Other mucocutaneous diseases that may mimic erythema migrans include erythema multiforme, erythematous candidiasis, lichen planus, lupus erythematosus, and hypersensitivity reaction to dentifrices. The most common of these conditions

is erythematous candidiasis, which tends to produce mildly tender, diffuse, red patches of the dorsal tongue and palatal mucosa. Angular cheilitis often accompanies the mucosal lesions. The remaining conditions are associated with significant oral discomfort when there is a prominent erythematous component. Sudden swelling and ulceration of the lips are the classic features of erythema multiforme, along with target lesions of the hand and feet. Lichen planus and lupus erythematosus may occur in children, especially adolescents, and are characterized by white striations against a red or ulcerated mucosal background. There is a predilection for lichen planus to occur on the posterior buccal mucosa, while the vermilion of the lips and hard palatal mucosa are the preferred sites for lupus erythematosus. Hypersensitivity reactions to toothpastes are associated with a burning sensation when the offending product is being used. The oral lesions are most obvious along the occlusal plane of the buccal mucosa and the lateral border of the tongue. Patchy, persistent erythema and/or white adherent plaques are the usual presentation, along with angular cheilitis and chapped lips. Discontinuation of the offending oral hygiene product results in rapid resolution of the signs and symptoms.

### Pediatric significance

Ectopic erythema migrans is an unusual chronic mucosal disorder in children, which is often an incidental finding. If concurrent cutaneous lesions or arthritis are observed, referral to the child's pediatrician is recommended because of the association of this oral condition with psoriasis and Reiter's syndrome. Childhood psoriasis is a chronic cutaneous disorder with a marked predilection for the face, scalp and flexor surfaces. Not only does it tend to be more pruritic at this age, but also it is a cosmetic concern because the lesions are so visible. An important complication of this skin disease is psoriatic arthritis, which may affect the temporomandibular joint. Reiter's syndrome is an uncommon, immunologically mediated disease that has a predilection for adolescent and young adult males. Nongonococcal urethritis, arthritis and conjunctivitis are the classic features of this disorder. In the present case, the detection of the oral lesions prompted a referral for the symptomatic skin condition, which was diagnosed as psoriasis and appropriate treatment was initiated.

### References

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