

## GOLFER'S VASCULITIS

# Exercise-induced vasculitis on the feet of a male golfer

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Exercise-induced vasculitis (EIV) is a small vessel vasculitis that commonly affects the lower extremities after strenuous activity. EIV is not an uncommon condition but is under-recognized. We present a case of EIV to bring awareness to this interesting diagnosis.

## Case description

A previously healthy 51-year-old male presented with a painful, warm and spotted rash on his bilateral feet, which intermittently flared after physical exertion, such as long walks or playing golf, with the worst flare occurring after a day's-worth of walking around Washington D.C. Interestingly, the patient could play hockey and participate in triathlons without any flaring of the skin. He had no systemic or intestinal symptoms during these episodes, and the skin was without pruritus or bullae formation. His prior treatments included triamcinolone 0.01% cream and ibuprofen, which helped shorten the duration and intensity of symptoms. The rash always resolved on its own after approximately 5 days. Cutaneous examination revealed scattered, deeply pink, non-blanchable macules, small patches, and thin papules across the dorsal aspect of his feet and extending onto the ankles bilaterally (Figure 1). A clinical diagnosis of exercise-induced vasculitis was made, and he was treated supportively.

## Discussion

Exercise-induced vasculitis (EIV) is a small vessel vasculitis of the lower extremities induced by exercise, typically lengthy walks, especially in hot conditions.<sup>1</sup> As extensive walking is the most common trigger, EIV is also referred to as golfer's rash, golfer's vasculitis, or the Disney rash. It occurs most commonly in healthy indi-



FIGURE 1

(A) Scattered, deeply pink macules and small patches on the dorsal foot; (B) extension to the ankle.

viduals over the age of 50;<sup>2</sup> however, it has been reported in children in association with sporting activities.<sup>3</sup> While many types of cutaneous vasculitis may be exacerbated by activity, EIV is induced by physical activity with complete skin clearance outside of the exercise. Kelly et al. studied 17 subjects with suspected exercise-induced vasculitis; the researchers found that most (15/17 patients, 88%) developed the rash

after golfing. Notably, most of these golfers were involved in other physical activities, such as tennis, downhill/cross-country skiing, etc., without development of the rash. The authors attributed golf as the most common physical trigger because of the extensive walking over prolonged periods of time and because it is commonly played in warm weather.<sup>2</sup> The first case of EIV was described in 1996 in a woman with

urticarial vasculitis after physical exercise.<sup>4</sup> Since then, EIV has been increasingly recognized and reported.<sup>1</sup>

The pathogenesis is poorly understood and EIV is commonly misdiagnosed.<sup>1</sup> The diagnosis is clinical and laboratory investigation is typically normal, and therefore, unnecessary. Symptoms resolve spontaneously within 10 days and cases can be treated supportively. A trial of compression stockings, light clothing, topical or oral corticosteroids may be considered, but have no proven benefit in symptom reduction.<sup>1,2</sup> Other preventative measures include oral hydroxychloroquine, colchicine, or dapsone.

This case illustrates a classic presentation of EIV with a few uncommon features. EIV stereotypically presents on the lower legs, sparing areas compressed by socks.<sup>1-3</sup> A study of 23 patients diagnosed

with EIV reported a female-predominance (22/23 patients) and only one patient with foot involvement.<sup>1</sup> However, here we show that the sock cuff and feet can be involved. Certain terrains, lack of shoe support, length of activity, and type of physical activity can trigger symptom onset, which is likely patient dependent, as illustrated by our patient case, where participating in hockey and triathlons did not trigger a rash. Studies have shown that most cases of EIV occur after a certain threshold of activity is met, such as 18 holes of golf or 3 hours of activity.<sup>2</sup>

We present this case to bring awareness to this benign, under-recognized, and interesting condition. Clinicians should consider EIV in any patient presenting with a skin eruption induced by physical activity, regardless of age, anatomic location, or type of physical trigger. **MM**

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