INTRODUCTION

- Flagellate erythema is a dermatosis comprised of hyperpigmented, pruritic, linear, & erythematous streaks.
- It has been described in association with bleomycin use¹, dermatomyositis², adult-onset stills disease³, & shiitake mushroom consumption⁴.
- The patient presented here did not encounter or meet the criteria for any of the known etiologies.
- The recognition of this rare diagnostic clue is paramount in discovering its underlying condition as it may have significant health implications for the patient.

CASE PRESENTATION

- 45 yo female with a hx of migraines & excessive sun exposure
- Presents with complaints of a very pruritic rash on her abdomen, buttocks, & lower extremities.
- 2 days prior, took acetaminophen-butilalitral-coffeine & consumed 2 new cooking ingredients: Malanda (Xanthosoma sagittifolium) & bonito (Ipomoea batatas).
- Pt denies any prior occurrences or any other associated symptoms.

- On exam, patient presented with multiple erythematous, hyperpigmented linear streaks scattered on bilateral legs, buttocks, & inferior abdomen consistent with flagellate erythema. Excoriations were diffusely present.
- Histology: a dense, perivascular lymphocytic infiltrate with very few eosinophils & marked dermal edema. Melanin diffusely scattered within epidermal basal layer but not within the dermis. No iron dermal deposition.
- Treatment: Stop all recent medications & cooking ingredients, 40mg of IM triamcinolone acetonide, triamcinolone acetonide 0.1% topical cream BID x 2 wks, & fexofenadine 180mg PO QD
- 2 wks after visit, the patient cooked & consumed food containing melanga & bonito again. She experienced diffuse pruritus, but denied any rash. Pruritus was relieved with diphenhydramine.
- At 3 wk follow-up, pt showed improvement of rash & pruritus, & was instructed to continue her fexofenadine.

CLINICAL & HISTOPATHOLOGICAL IMAGES

- Flagellate erythema is a rare cutaneous phenomenon described as linear erythematous streaks with pruritus & hyperpigmentation. Known etiologies are bleomycin, dermatomyositis, adult-onset stills disease, & shiitake dermatitis. Our patient did not fall into any common etiological category & historically was newly exposed to Butalbitral-acetaminophen-coffeine, melanga, & bonito prior to onset. A thorough literature search on these three compounds showed no evidence of flagellate erythema as an adverse reaction.
- Bleomycin, an antitumor medication, is used as treatment with certain malignancies. Flagellate erythema has been reported as an adverse effect of bleomycin with an incidence rate of 10-20%.² The precise mechanism remains unknown although some speculate that bleomycin induces generalized pruritis leading to scratching. The scratching allows for the drug to exit blood vessels & reacts toxicly with the skin.
- Dermatomyositis is an inflammatory myositis with cutaneous manifestations. Well characterized cutaneous manifestations are heliotrope rash, Gottron’s papules, perungual telangiectasia, &shaw sign. Flagellate erythema has been reported in association with disease activity & may precede muscle symptoms. Dermatomyositis has a 15-25% risk of malignancy.³
- Adult-onset Still’s disease is an inflammatory disease comprised of high spiking fever, arthalgia, hypercarenastia, hepatosplenomegaly & rash. The characteristic rash is a salmon maculopapular erythema that appears during high fevers. Persistent erythematous plaques suggesting flagellate erythema have been reported in few cases.⁵
- Shitake dermatitis, AKA toxicoderma, is caused by the consumption of undercooked shitake mushrooms. Incidence is highest in China & Japan where the mushroom is commonly grown & consumed. Flagellate erythema originates from significant pruritus & the Koebner phenomenon leading to linear grouping of non-pigmented papules. The rash improves on its own within two weeks.

DISCUSSION

- Bleomycin: Linear streaks located on trunk & shoulders. It is unique that these linear streaks are hyperpigmented, devoid of inflammation.¹
- Dermatomyositis: Reddish, linear streaks reflecting strong inflammation commonly on back, lack brown hyperpigmentation seen with Bleomycin.²
- Adult-Onset Still’s Disease: Persistent plaques with linear pigmentation with or without coalescent erythematous plaques.
- Shitake Mushrooms: Widespread, disseminated, very small erythematous papules, no pigmentation, truncal involvement.⁷

TREATMENT

- Discontinuation of offending agent
- Treatment for flagellate erythema is mostly symptomatic: pruritis may be targeted with topical corticosteroids & oral antihistamines while hyperpigmentation usually resolves spontaneously within 2-8 weeks.
- Areas of lasting hyperpigmentation have been treated with intense pulse light therapy & Ethibum 1540nm non-ablative laser.
- Erythematous papules from shiitake consumption have been targeted with short-term balneo-PUVA therapy showing complete clearance of itch & healing of lesions.¹²
- Evaluation for systemic etiology such as dermatomyositis

CONCLUSION

- Flagellate erythema has been reported in association with several systemic diseases & chemical agents.
- A thorough history & evaluation is important in determining the underlying cause.
- Our patient did not appear to have the history or clinical features to indicate any of the known causes for flagellate erythema.
- Thus, this case possibly demonstrates a novel cause of flagellate erythematous to consumption of melanga (Xanthosoma sagittifolium) & bonito (Ipomoea batatas).

REFERENCES