



2021 Annual Spring Virtual Meeting | Abstract Submission

Capecitabine-Induced Palmoplantar Erythrodysesthesia

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A 90-year-old female presented to clinic with a painful rash on her hands and feet. She had been taking 150mg capecitabine twice daily for metastatic breast cancer and claimed that her rash worsened after administration. On examination, her palms and soles were erythematous with cracking of the fingertips and scaling on the soles that spared the web spaces. Washing dishes exacerbated her symptoms and moisturizing did not prove beneficial. Treatment with Triamcinolone Acetonide 0.1% cream twice daily was initiated. The patient was advised to discuss her chemotherapy with the oncologist.

Palmoplantar erythrodysesthesia (PPE) is a reaction to various chemotherapeutic agents including capecitabine. It presents with dysesthesia and erythema in the hands and feet that may progress to burning pain, desquamation, and ulceration.¹ Its pathogenesis and management are still being studied. Two existing hypotheses of pathogenesis include damage in deep capillaries triggering a COX inflammatory reaction, and reaction from enzymes involved in capecitabine metabolism.² Patients with minimal changes are typically managed symptomatically such as with topical steroids, however more severe PPE requires chemotherapy modification such as interruption or decreased dosage to avoid recurrence.³ Studies investigating capecitabine use in colorectal cancer and metastatic breast cancer suggest that modification does not impair its efficacy.⁴ Other treatments that have been studied for capecitabine-associated PPE include topical use of the competitor uridine and oral vitamin E. Preventative measures such as avoiding heat, chemical contact, and friction are central to management.^{3,5} Early recognition, patient education, and multidisciplinary communication are important to improve patient quality of life.

Figures:



Fig.1. Bilateral Palmar Erythema



Fig. 2. Cracking of Fingertips



Fig.3. Bilateral Plantar Erythema and Scale

References:

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