



PHOTO CLINIC

Cytarabine Induced Palmar Erythrodysesthesia in a Case of Lymphoma

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A 22-year-old female, a case of precursor T-Cell lymphoblastic lymphoma was admitted to receive Hyper-CVAD chemotherapy COURSE 1B (continuous intravenous infusion of methotrexate (MTX) 1000 mg/m² with leucovorin rescue and high dose cytarabine (4400 mg, over 2 hours, q12 hour on days 2, 3) in a sun protected dark, clean room. She had also received Hyper-CVAD regimen COURSE 1A about a month ago without any serious complication. One day after completion of cytarabine, she developed bilateral palmar erythrodysesthesia (Figure 1).

Treatment with olive oil, oral hydroxyzine along with dexamethasone was initiated. Palmar pain and edema was markedly diminished after 12 hours; whereas erythema took about one week to resolve.

Palmar-plantar erythrodysesthesia or hand-foot syndrome is chemotherapy induced acral erythema, swelling, numbness and desquamation of palms and soles that can occur after chemotherapy. Acral erythema typically disappears within a few weeks after discontinuation of the offending drug.^{1, 2}

Hand-foot syndrome has been reported in 6-42% of patients treated with systemic chemotherapeutic agents such as 5-fluorouracil and its analogues, doxorubicin, cytarabine, cyclophosphamide, vinorelbine and those treated with targeted therapies such as sorafenib and

sunitinib.³⁻⁸

Ankur Jain et al. reported cytarabine induced acral erythema in a case of mantle cell lymphoma who was treated with oral pyridoxine (100 mg per day), hydroxyzine (25 mg thrice daily) and cold compression of palms which subsided with occurrence of desquamation over 7 days.⁹

Various supportive modalities including limitation of the use of hot water over hands and feet, having cool showers, avoiding heat including saunas and suntan, administration of pyridoxine, hydroxyzine, topical anti-inflammatory



Figure 1: Swelling and erythema of palm.

medications such as corticosteroids, topical pain relievers such as lidocaine, topical moisturizing exfoliant creams and topical Dimethyl-sulfoxide (DMSO) have been recommended for the treatment of chemotherapy induced hand-foot syndrome in the literature.⁹⁻¹²

Conflict of Interest: None declared.

References

1. James W, Berger T, Elston D. *Andrews' diseases of the skin: clinical dermatology*. (10th Ed.). Elsevier Health Sciences; 2006.
2. Rosenbeck L, Kiel PJ. Images in clinical medicine. Palmar-plantar rash with cytarabine therapy. *N Engl J Med*. 2011; 364(3):e5. doi: 10.1056/NEJMicm1006530. PubMed PMID: 21247311.
3. Agha R, Kinahan K, Bennett CL, Lacouture ME. Dermatologic challenges in cancer patients and survivors. *Oncology (Williston Park)*. 2007; 21(12):1462-72; discussion 1473, 1476, 1481 passim. PubMed PMID: 18077993.
4. Lipworth AD, Robert C, Zhu AX. Hand-foot syndrome (hand-foot skin reaction, palmar-plantar erythrodysesthesia): focus on sorafenib and sunitinib. *Oncology*. 2009; 77(5):257-1. doi: 10.1159/000258880. PubMed PMID: 19923864.
5. Scheithauer W, Blum J. Coming to grips with hand-foot syndrome. Insights from clinical trials evaluating capecitabine. *Oncology (Williston Park)*. 2004; 18(9):1161-84. PubMed PMID: 15471200.
6. Lokich JJ. The three most common chemotherapy-related skin reactions. *Oncology (Williston Park)*. 2007; 21(12):1473-6.
7. Heo YS, Chang HM, Kim TW, Ryu MH, Ahn JH, Kim SB, et al. Hand-foot syndrome in patients treated with capecitabine-containing combination chemotherapy. *J Clin Pharmacol*. 2004; 44(10):1166-72. doi: 10.1177/0091270004268321. PubMed PMID: 15342618.
8. Lacouture ME, Reilly LM, Gerami P, Guitart J. Hand foot skin reaction in cancer patients treated with the multikinase inhibitors sorafenib and sunitinib. *Ann Oncol*. 2008; 19(11):1955-61. doi: 10.1093/annonc/mdn389. PubMed PMID: 18550575.
9. Jain A, Malhotra P, Prakash G, Varma S. "Red hand syndrome" due to cytarabine in a case of mantle cell lymphoma. *Indian J Hematol Blood Transfus*. 2016; 32(Suppl 1):364-5. doi: 10.1007/s12288-016-0634-6. PubMed PMID: 27408439. PubMed Central PMCID: PMC4925545.
10. Fabian CJ, Molina R, Slavik M, Dahlberg S, Giri S, Stephens R. Pyridoxine therapy for palmar-plantar erythrodysesthesia associated with continuous 5-fluorouracil infusion. *Invest New Drugs*. 1990; 8(1):57-63. PubMed PMID: 2345070.
11. Yoshimoto N, Yamashita T, Fujita T, Hayashi H, Tsunoda N, Kimura M, et al. Impact of prophylactic pyridoxine on occurrence of hand-foot syndrome in patients receiving capecitabine for advanced or metastatic breast cancer. *Breast Cancer*. 2010; 17(4):298-302. doi: 10.1007/s12282-009-0171-3. PubMed PMID: 19789949.
12. Lopez AM, Wallace L, Dorr RT, Koff M, Hersh EM, Alberts DS. Topical DMSO treatment for pegylated liposomal doxorubicin-induced palmar-plantar erythrodysesthesia. *Cancer Chemother Pharmacol*. 1999; 44(4): 303-6. doi: 10.1007/s002800050981. PubMed PMID: 10447577.