

Pegylated Liposomal Doxorubicin-induced Palmar-plantar Erythrodysesthesia

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A 44-year-old female, without previously known diseases, underwent a total hysterectomy following the diagnosis of a symptomatic myoma, about 8.4 cm × 7.9 cm. She reported lower abdominal pain and fullness for 2 weeks, without other complaints. The final pathological report revealed a leiomyosarcoma, and the positron emission tomography scan performed subsequently, showed no evidence of metastatic dissemination. The patient started adjuvant single-agent chemotherapy with pegylated liposomal doxorubicin (PLD) at a dose of 50 mg/m². By the fourth cycle, she referred itching, redness, and impaired skin sensitivity on both hands but particularly on both feet. On physical examination, erythema, edema, and desquamation on both feet, and in a milder pattern, both hands were found. Grade 2 hand-foot syndrome or palmar-plantar erythrodysesthesia (PPE) was diagnosed [Figure 1], and the patient was given topic medication – Neo-Cortisone Cream (hydrocortisone 1% and neomycin Sulfate 0.5%) and Doxepin Hydrochloride Cream 5%, 3–4 times/day – and advised to avoid extreme temperatures and excessive pressure or friction to the skin. According to the toxicity grades of PPE and dose modification guidelines,^[1] PLD administration was delayed by 2 weeks, and progressive improvement of the symptoms was seen. Consequently, dose modification was not necessary, having completed the six intended cycles.



Figure 1: Picture showing erythema, edema, and desquamation on both feet. The patient had also milder erythema and complaints such as pruritus, redness, and impaired sensitivity on both hands, being diagnosed with palmar-plantar erythrodysesthesia

PPE, also called hand-foot syndrome, is a relatively common dermatologic toxicity related to chemotherapy.^[1] Although its pathogenesis is unclear, increased drug concentration in the eccrine glands of the palms and soles, the rapid cell division, vascular anatomy, temperature gradients, and gravitational forces, specific of these areas are mentioned factors.^[1-3] The liposome-encapsulated form of doxorubicin is associated with a higher incidence of PPE than the nonencapsulated form, particularly when initial doses >40 mg/m² are administered.^[1,2] PPE of any severity grade is observed in up to 50% of individuals treated with PLD and optimal management remains undefined, making it an important reason for PLD dose modification or treatment withdrawal.^[1-3] Therefore, it is important to be aware of this condition, its classification/grading and management, avoiding whenever possible, modifications in the chemotherapeutic regimen.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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REFERENCES

1. Farr KP, Safwat A. Palmar-plantar erythrodysesthesia associated with chemotherapy and its treatment. *Case Rep Oncol* 2011;4:229-35.
2. Kim RJ, Peterson G, Kulp B, Zanotti KM, Markman M. Skin toxicity associated with pegylated liposomal doxorubicin (40 mg/

m2) in the treatment of gynecologic cancers. *Gynecol Oncol* 2005;97:374-8.

3. Kubicka-Wolkowska J, Kędzierska M, Lisik-Habib M, Potemski P. Skin toxicity in a patient with ovarian cancer treated with pegylated liposomal doxorubicin: A case report and review of the literature. *Oncol Lett* 2016;12:5332-4.

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