

Psoríase Inaugural Após Tratamento com Docetaxel

Joana Lima¹, Marta Sousa², Pedro Andrade^{3,4}

¹Médica Interna de Oncologia Médica, Serviço de Oncologia, Centro Hospitalar de Trás-Os-Montes e Alto Douro EPE – Vila Real, Portugal

²Assistente Hospitalar de Oncologia Médica, Serviço de Dermatologia, Centro Hospitalar de Trás-Os-Montes e Alto Douro EPE – Vila Real, Portugal

³Assistente Hospitalar de Dermatovenereologia, Serviço de Dermatologia, Centro Hospitalar de Trás-Os-Montes e Alto Douro EPE – Vila Real, Portugal

⁴Assistente Hospitalar de Dermatovenereologia, Serviço de Dermatologia, Hospital Pedro Hispano, ULS Matosinhos EPE – Matosinhos, Portugal

RESUMO – O docetaxel é um taxano de segunda geração utilizado frequentemente no tratamento de várias neoplasias malignas avançadas, nomeadamente no carcinoma da mama. Apresentamos o caso clínico de uma doente de 67 anos com diagnóstico de carcinoma ductal invasivo da mama esquerda sob quimioterapia adjuvante com docetaxel, que desenvolveu lesões psoriáticas típicas no tronco e nos membros; a lesão mais representativa localizava-se na proximidade do acesso venoso utilizado para administração do fármaco. Não eram conhecidos antecedentes pessoais ou familiares de psoríase. A doente iniciou e manteve tratamento com acitretina oral e dipropionato de betametasona/calcipotriol tópicos durante cerca de oito meses, com regressão quase total das lesões cutâneas.

A psoríase fármaco-induzida é uma entidade rara. Os fármacos classicamente associados incluem beta-bloqueantes, interferão e os antipalúdicos, entre outros. Demonstramos com o presente caso que o docetaxel deverá ser incluído no grupo de agentes farmacológicos potencialmente indutores de psoríase.

PALAVRAS-CHAVE – Antineoplásicos/efeitos adversos; Erupções por Medicamentos; Psoríase/induzida quimicamente; Taxoídes/efeitos adversos.

Postirradiation Multiple Minute Digitate Porokeratosis: Case Report

ABSTRACT – Docetaxel is a second-generation taxane commonly used in the treatment of advanced malignant tumours such as breast adenocarcinoma. We describe the case of a 67-year-old female undergoing adjuvant chemotherapy with docetaxel for invasive ductal carcinoma of the left breast presenting with typical psoriatic lesions on the dorsum and limbs - the most representative of them arising close to the venous access for docetaxel infusion. No personal or family history of psoriasis was reported. The patient started and maintained treatment with oral acitretin and topical betamethasone dipropionate/calcipotriol for nearly eight months, with almost complete regression of cutaneous lesions. Drug-induced psoriasis is a rare condition. The most commonly reported drugs include beta-blockers, interferon and antimalarials. In this case we demonstrate that docetaxel should be included in the group of drugs that can potentially induce psoriasis.

KEYWORDS – Antineoplastic Agents/adverse effects; Drug Eruptions; Psoriasis/chemically induced; Taxoids/adverse effects.

INTRODUCTION

Docetaxel is a semi-synthetic taxane widely used in the treatment of several malignant diseases, namely breast cancer, non-small cell lung carcinoma, prostate cancer, gastric

adenocarcinoma and advanced head and neck cancer. It induces apoptosis and G2/M cell cycle arrest by inhibiting microtubule dissociation, acting as a potent antineoplastic agent with recognized anti-angiogenic and anti-inflammatory effects.

Correspondência: Pedro Andrade
Serviço de Dermatologia - Hospital Pedro Hispano, ULS Matosinhos EPE
R. Dr. Eduardo Torres
4464-513 Senhora da Hora, Portugal
Email: pedrodesousaandrade@gmail.com
DOI: <https://dx.doi.org/10.29021/spdv.75.4.798>

Recebido/Received
04 Maio/May 2017
Aceite/Accepted
08 Outubro/October 2017

Caso Clínico



Figure 1 - A) Generalized psoriasisiform plaques distributed throughout the trunk and limbs. B) Detail of the larger and most typical psoriasisiform plaque on the right forearm.

CASE REPORT

We describe the case of a 67-year-old female, observed in September 2014 with a progressive and generalized cutaneous eruption, which had become apparent two weeks prior to the visit. The patient had been diagnosed with invasive ductal carcinoma of the left breast in April 2014 and had consequently been submitted to a Madden-type left mastectomy and adjuvant chemotherapy. Chemotherapy consisted of three initial cycles of 5-fluorouracil, epirubicin and cyclophosphamide and three subsequent cycles of docetaxel monotherapy; each treatment was administered every three weeks. Cutaneous lesions were noticed approximately one week after the second docetaxel infusion, consisting of multiple asymptomatic erythematous plaques with psoriasiform desquamation, mainly distributed throughout the trunk and proximal limbs (Fig. 1). The larger and most typical lesions affected the anterior aspect of the right forearm, close to the venous access for docetaxel infusion (Fig. 1). No personal or family history of psoriasis was reported by the patient, who was otherwise healthy and not taking any other medication.

The histopathological examination of a skin biopsy taken from the right forearm lesion revealed acanthosis, parakeratosis and hypogranulosis, overlying a discretely fibrotic dermis with perivascular mononuclear cell

infiltrate – these findings were consistent with the clinical diagnosis of plaque-type psoriasis (Fig. 2). Further complementary diagnostic exams were negative or within normal range.

The diagnosis of docetaxel-induced psoriasis was assumed and the patient started treatment with oral acitretin 20 mg daily, combined with topical calcipotriol/betamethasone dipropionate (o.d.), with a very significant regression of cutaneous lesions and no significant adverse effects were observed, apart from discrete cheilitis.

Due to the potential risk of psoriasis aggravation, the patient did not complete the remaining planned docetaxel cycles. Despite the possibility of cross-reactivity, an alternative regimen consisting of three weekly cycles of paclitaxel and adjuvant radiotherapy was prescribed, with no significant impact on psoriasis, which remained stable under specific treatment.

As no signs of active neoplastic disease were detected after completing chemotherapy and radiotherapy, hormonal treatment was promptly started with anastrozol 1mg daily. Four months later, following the detection of pleural and nodal metastatic disease, the patient started palliative chemotherapy with capecitabine and died in May 2015. Throughout this period, the patient was kept on acitretin 20 mg daily with satisfactory control of the dermatitis.

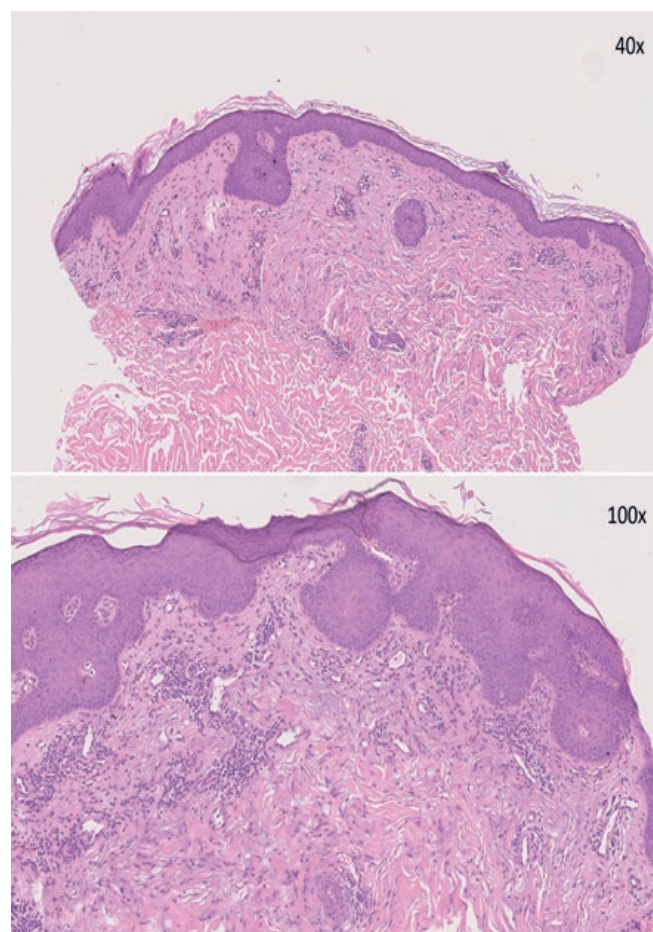


Figure 2 - Histopathological examination detail (H&E, A – 40x, B – 100x): discrete dermal fibrosis and perivascular mononuclear cell infiltrate, underlying an acanthotic and parakeratotic epidermis.

DISCUSSION

Cutaneous adverse events have been described in up to 50% - 70% of patients treated with docetaxel.¹ Apart from stomatitis, alopecia and hypersensitivity rashes (which are equally described both with docetaxel and paclitaxel),² acral erythema/erythrodisesthesia,² nail changes,² scleroderma-like lesions² and photosensitive eruptions²⁻⁴ have been consistently reported in patients under docetaxel chemotherapy.

Drug-induced psoriasis is classically associated with the use of antimalarials, beta-adrenergic blockers, lithium salts, tetracyclines or non-steroidal anti-inflammatory drugs. Cytotoxic agents, when used, are generally beneficial in patients suffering from psoriasis. Docetaxel-induced psoriasis is a very rare cutaneous adverse event – it has been previously described in three patients with breast adenocarcinoma^{5,6} and squamous cell lung carcinoma.⁷ None of the other cytostatic drugs used in this patient have been previously described as triggers in psoriasis; topical and intralesional 5-fluorouracil have in fact been used successfully in the treatment of plaque psoriasis,^{8,9} and cyclophosphamide has been anecdotally

reported in combined treatment of arthropatic psoriasis.¹⁰ Therefore, in our case the emergence of typical psoriatic lesions is most likely associated with docetaxel, even though we cannot exclude the possible triggering role of the other administered drugs and their vehicles. Both the clinical course of the disease, namely the consistent chronological gap between the two events, and the available published data validate this association. Also, the exuberance of the psoriatic lesions overlying the peripheral venous access area on the right volar forearm, which is probably explained by local amplification of cutaneous effects of the administered drug following vascular extravasation, is a strong evidence of the drug's imputability in the activation of this patient's psoriasis.

Interestingly, taxanes (mostly paclitaxel, which has a similar chemical structure and clinical effects to those of docetaxel¹¹) have been bashfully reported as potential alternatives in topical or systemic treatment of psoriasis.¹² Nevertheless, this case demonstrates that docetaxel is, in fact, amongst the drugs that might induce psoriasis, and this might represent a major limitation in the use of taxanes as a valuable treatment for psoriasis.

Conflitos de interesse: Os autores declaram não possuir conflitos de interesse.

Suporte financeiro: O presente trabalho não foi suportado por nenhum subsídio ou bolsa.

Confidencialidade dos dados: Os autores declaram ter seguido os protocolos do seu centro de trabalho acerca da publicação dos dados de doentes.

Proteção de pessoas e animais: Os autores declaram que os procedimentos seguidos estavam de acordo com os regulamentos estabelecidos pelos responsáveis da Comissão de Investigação Clínica e Ética e de acordo com a Declaração de Helsínquia da Associação Médica Mundial

Conflicts of interest: The authors have no conflicts of interest to declare.

Financing Support: This work has not received any contribution, grant or scholarship.

Confidentiality of data: The authors declare that they have followed the protocols of their work center on the publication of data from patients.

Protection of human and animal subjects: The authors declare that the procedures followed were in accordance with the regulations of the relevant clinical research ethics committee and with those of the Code of Ethics of the World Medical Association (Declaration of Helsinki).

REFERENCES

1. Donati A, Castro LG. Cutaneous adverse reactions to chemotherapy with taxanes: the dermatologist's point of view. *An Bras Dermatol.* 2011; 86:755-8.
2. Heidary N, Naik H, Burgin S. Chemotherapeutic agents and the skin: An update. *J Am Acad Dermatol.* 2008; 58:545-70.
3. Chen M, Crowson AN, Woofter M, Luca MB, Magro CM. Docetaxel (taxotere) induced subacute cutaneous lupus

Caso Clínico

- erythematosus: report of 4 cases. *J Rheumatol*. 2004; 31:818-20.
4. Vasudevan B, Sawhney MP, Sharma N. Docetaxel-induced photolichenoid eruption. *Indian J Pharmacol*. 2009; 41:203-4.
 5. Kerob D, Le Maignan C, Vignon-Pennamen MD, Lebbe C. Docetaxel-induced psoriasis. *Ann Dermatol Venereol*. 2010; 137:738-40.
 6. Mapelli ET, Gualandri L, Menni S, Cerri A. Diffuse psoriasis induced in a 62-year-old woman with breast carcinoma. *G Ital Dermatol Venereol*. 2016; 151:309-10.
 7. Allende I, González-Hermosa R, Lázaro M, Díaz-Pérez JL. Docetaxel-induced psoriasis. *Actas Dermosifiliogr*. 2009; 100:629-30.
 8. Ceilley RI. Mechanisms of action of topical 5-fluorouracil: review and implications for the treatment of dermatological disorders. *J Dermatolog Treat*. 2012; 23:83-9.
 9. Wang TS, Tsai TF. Intralesional therapy for psoriasis. *J Dermatol Treat*. 2013; 24:340-7.
 10. Higgins LC Jr, Thompson JG. Psoriasis with arthritis: chemotherapy with cyclophosphamide, nitrogen mustard and 6-mercaptopurine. *South Med J*. 1966; 59:1191-3.
 11. Xiucong F, Jinjin C, Qi S. Docetaxel-nicotinamide complex-loaded nanostructured lipid carriers for transdermal delivery. *Int J Pharm*. 2013; 458: 296-304
 12. Ehrlich A, Booher S, Becerra Y, Borris DL, Figg WD, Turner ML, Blauvelt A. Micellar paclitaxel improves severe psoriasis in a prospective phase II pilot study. *J Am Acad Dermatol*. 2004; 50:533-40.