A Letter

**Capecitabine Induced Onycholysis**

Krishnamani Kalpathi

Department of Medical Oncology, American Oncology Institute, Hyderabad, India

Corresponding author email: kkvkmani@gmail.com

Received: 29 Jun., 2015
Accepted: 30 Jul., 2015
Published: 07 Sep., 2015

Copyright © 2015 Krishnamani K.V. This is an open access article published under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Preferred citation for this article:

**Abstract**

A 61 year old gentleman with metastatic gastric carcinoma received palliative chemotherapy with Epirubicin, Oxaliplatin and Capecitabine. While on capecitabine maintenance he developed serous discharge from the toenails and ultimately painless loss of the nails. A diagnosis of capecitabine induced onycholysis was made and after symptomatic treatment and discontinuation of the drug his symptoms improved. Capecitabine induced onycholysis has not been reported very often in literature and the identification and diagnosis of this entity is important in patients who are treated with this commonly prescribed drug.

**Keywords**

Capecitabine; Nail changes; Onycholysis

**Case Summary**

A 61 year old gentleman presented with mass per abdomen, epigastric pain, anorexia and weight loss of 4 kg of one month duration. He denied history of malena or other systemic complaints. Physical exam was significant for a hard 3x2 cm left supra clavicular node and a vague epigastric mass. Further evaluation with Upper Gastrointestinal Endoscopy and Contrast enhanced Computed Tomography (CECT) of the abdomen was suggestive of a nodular friable ulcerated growth in the antrum and diffuse gastric wall thickening respectively. Histopathology was suggestive of moderately differentiated adenocarcinoma. In view of metastases to supra clavicular nodes he was diagnosed as metastatic gastric carcinoma and was advised chemotherapy with palliative intent. Epirubicin (50 mg/ m² D1), Oxaliplatin (130 mg/m² D1) and Capecitabine (625 mg/m² BD x 21 days) was started from 1.11.2014. He tolerated the chemotherapy well with the notable side effects being grade 2 Hand foot syndrome (HFS) on the palms and soles. No nail changes were observed at the end of six cycles of multi agent chemotherapy. After six cycles there was stable disease and in view of good performance status (PS) and minimal toxicity due to chemotherapy it was planned to continue him on single agent capecitabine at a dose of 625 mg/m² BD continuous dosing. After three cycles of maintenance capecitabine he developed serous discharge from the underside of the nails of both the big toes (Figure 1). There was no warmth or erythema or tenderness. Microbiologic examination yielded no results. Subsequently there was desquamation with lifting of the nail bed and finally painless loss of the nails. A diagnosis of onycholysis was made secondary to capecitabine toxicity. Capecitabine was subsequently stopped and he was treated with sertaconazole (2%) local application and urea cream. The lesions healed in 4 weeks’ time with growing of the nail and stoppage of any further discharge. Capecitabine was then re started at 75 % of the original dose. He has thus far completed a total of 4 maintenance cycles with the 75% dose administered for 45 days without any further toxicity.

**Discussion**

Capecitabine is an oral fluoropyrimidine prodrug of 5′deoxy 5′fluorouridine which is converted to 5′ fluorouracil (5FU) intratumorally. It is a widely used
anti neoplastic agent in colon, gastric and breast cancers. Compared to 5FU which needs prolonged infusion capecitabine has the advantages of oral administration. The frequent side effects observed with capecitabine have been diarrhea, fatigue, hand foot syndrome (HFS) and hematologic side effects. HFS is seen in approximately 50% patients. Other uncommon dermatologic manifestations include dermatitis, stomatitis and nail changes. Capecitabine induced nail changes have been reported scarcely in literature (Chen et al., 2001; Piguet and Borradori, 2002; Maino et al., 2003).

Chemotherapy induced nail changes include hyperpigmentation, Beau’s lines, nail loss, onychodystrophy, edema and onycholysis (Susser et al., 1999). A number of chemotherapy agents commonly used in breast, gastric, colon and testicular cancer like bleomycin, etoposide, 5 fluorouracil, docetaxel, doxorubicin and cyclophosphamide have been implicated in causing onycholysis (Susser et al., 1999). The etiology is supposed to be chemotherapy induced immunosuppression and subsequent colonization of the nail bed leading to changes in the nail plate like thinning, subungula edema and lifting of the nail plate off the nail bed, effects of chemotherapy on vasculature and changes in the cellular matrix (Chen et al., 2003). The nail toxicity seen in our patient was mostly due to direct nail toxicity and subsequent infection. The onycholysis observed in these patients has a sunset appearance; hence it is called sunset onycholysis (Vaccaro et al., 2008). Other nail changes observed with capecitabine may include onychomadesis, hyperkeratosis and paronychia (Maino et al., 2003).

Reference
http://dx.doi.org/10.1046/j.1365-2133.2003.05272.x
http://dx.doi.org/10.1046/j.1365-2133.2001.04391.x
http://dx.doi.org/10.1046/j.1365-2133.2002.05000_6.x
http://dx.doi.org/10.1016/S0190-9622(99)70488-3
http://dx.doi.org/10.1111/j.1365-2125.2008.03174.x