



NAIL DISORDERS

## CHEMOTHERAPY-RELATED NAIL MALALIGNMENT

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This case is a 58 – year –old female patient with no previous medical history. In 2014 she presented with a breast cancer treated with chemotherapy consisting of 4 cyclophosphamide and doxorubicin cycles and 4 docetaxel cycles. Subsequently, she presented mild edema and erythema of periungual tissues with diffuse pigmentation of all finger and toenails. Later, the big toenails grew with lateral deviation over a few months, a condition that was not evident before the onset of her breast cancer.

The patient had no history of trauma, surgery or medications. Two fungal cultures were negative.

Samman in 1978 described “a great toenail dystrophy” and one year later Baran coined the term “congenital nail malalignment” .

Actually there are three main types of nail malalignment: Congenital malalignment of big toe or other lesser toes, traumatic nail malalignment and iatrogenic malalignment of the nail.

In this condition, the nail plate is deviated laterally with regard to the longitudinal axis of the distal phalanx. This results in a thickened, shortened and discolored nail with transverse ridges.

Ingrown toenail, onychomycosis, bacterial infection, onycholysis and onychogryphosis are the most common complications.

Secondary malalignment is described in two publications. De Becker reported in 1998 the development of malalignment of the nail following lateral longitudinal biopsy in seven patients. Wollina in 2017, reported one case of nail pigmentation and malalignment of the great toenail in a cancer patient, however, in this case, the author believed the condition might be a consequence of trauma.

In relation to our patient, we believe that malalignment might be due either to the toxic or inflammatory effect of some of the chemotherapeutic agents on the nail matrix.

References: Samman PD. Great toenail dystrophy. Clin Exp Dermatol 1978;3:81-82.

Baran R et al. Congenital malalignment of the big toenail. Clin Exp Dermatol 1979;4:359-60.

Baran R. Haneke E. Etiology and treatment of nail malalignment. Dermatol Surg 1998;24:719-21.

De Becker D. Baran R. Acquired malalignment: A complication of lateral longitudinal nail biopsy. Acta Derm Venereol 1998;78:468-70.





Wollina U. Tchernev G. Subungual nail pigmentation and malalignment of the great toenail in a cancer patient- A diagnostic challenge. Open Access Maced J Med Sci 2017 Jul 25;5(4):467-469

