Alvaro J Rodriguez et al., J Clin Exp Dermatol Res 2017, 8:4 (Suppl)
DOI: 10.4172/2155-9554-C1-060

Toxic erythema of chemotherapy: A single center retrospective review

Alvaro J Rodriguez[1], Manrup K Hunjan[2], Lauren Bonomo[1], Alina G Bridges[2], Shahrukh K Hashmi[2] and **Rokea El-Azhary[2]**
[1]Icahn School of Medicine at Mount Sinai, USA
[2]Mayo Clinic, USA

Background: Toxic erythema of chemotherapy (TEC) is a relatively new term used to describe a spectrum of clinical cutaneous entities that occur after initiation of cytotoxic chemotherapeutic agents such as antimetabolites (i.e. cytarabine) and anthracyclines (i.e. doxorubicin). Typically, it presents as a severe skin reaction manifesting as acral erythema, edema and dysesthesias of the hands and feet. The goal of this study is to more clearly define various clinical and histological presentations of TEC and identify the most common causative agents.

Methods: We retrospectively reviewed the charts of 500 patients who had undergone allogeneic or pe-ripheral stem cell transplant from January 2010 to December 2015 and were receiving chemotherapy. Out of 500 patients, only 39 had cutaneous manifes-tations consistent with TEC. Each patient's skin bi-opsy was reviewed with a dermatopathologist to con-firm features of TEC. Data extracted included age, gender, distribution and morphology of rash, chemo-therapy used, timing and resolution of drug reaction, underlying malignancy and histopathological fea-tures.

Results: The incidence of TEC in our cohort was 7.8% with the majority of cases occurring in patient with acute myeloid leukemia (41%). Out of the 39 cases, 24 were males (61%) and 15 were females (39%); the mean age of the patients was 44.1 years. Mean time to onset of the rash from administration of offending chemotherapeutic agent was 13.3 days. Mean time to resolution was 29.0 days. The most common implicated drug was cytarabine, followed by clofarabine (see Table 1). The most common clinical presentation was bilateral erythema, edema and pain in the palm and soles with varied intertriginous in-volvement. Other significant coexisting variations included dermatomyositis-like features, hyperpig-mentation, bullous and violaceous erythema with li-chenoid papules. The most common histological find-ing was vacuolar interface dermatitis and dysmatura-tion of keratinocytes.

Conclusion: We conclude that rather than having an exponential number of terms to describe toxic reac-tions to cytotoxic chemotherapy agents, consolidating the clinical and histological features into a singular term as TEC. We believe this will aid in timely recognition, diagnosis and referral onto dermatology specialists for subsequent management.

Table 1. Chemotherapy Agents in TEC*

Implicated Chemotherapy Agents	Patients (n)
Cytarabine	18
Clofarabine	11
Idarubicin	8
Carboplatin	7
Cyclophosphamide	7
Floxuridine	4
Melphalan	4
Mitoxantrone	4
Methotrexate	3
Busulfan	2
Etoposide	2
Flavopiridol	1
Rituximab	1
Sorafenib	1

Biography

Alvaro J Rodriguez, MD, is currently a Medicine Resident Physician at the Icahn School of Medicine at Mount Sinai West. He is the author of recently published textbook. "Dermatology for the USMLE". He has dedicated a major part of his medical career to teaching and helping students prepare for the USMLE, including teaching re-view courses. His interest in dermatology includes DRESS syndrome, toxic erythema of chemotherapy, atopic dermatitis, psoriasis and infectious skin disorders.

Alvaro.Ramos-Rodriguez@mountsinai.org