Lyell–Like Acute Graft–Versus–Host–Disease

Caroline de Lorenzi 1, Yassaman Alipour Tehrany 1, Sébastien Menzinger 1,2

1Division of Dermatology and Venereology, Geneva University Hospitals, rue Gabrielle-Perret-Gentil 4, CH-1205 Genève, Switzerland
2Division of Clinical Pathology, Geneva University Hospitals, rue Gabrielle-Perret-Gentil 4, CH-1205 Genève, Switzerland

ABSTRACT
Stage IV acute cutaneous graft-versus-host-disease (GVHD) is nowadays rarely seen due to tissue typing done before transplant. The first line treatment for acute GVHD grade II–IV is systemic corticosteroids. However, although there is no consensus for refractory cases, literature report diverse therapies to be effective. We report the case of a 34 year-old patient with refractory acute cutaneous graft-versus-host-disease stage IV successfully treated with etanercept.

Case Report
A 34 year-old female patient presented erythematous papules of the neckline, 2 weeks after bone marrow transplantation for B-cell acute lymphoblastic leukemia. Histological analysis of a skin biopsy showed a lichenoid infiltrate with few necrotic keratinocytes, compatible with an engraftment syndrome. The evolution with methylprednisolone 2mg/kg/day (d) was good. One week after, a diagnosis of HHV6 hepatitis motivated tapering of methylprednisolone to 500 mg/day, re-introduced immunoglobulins 1 g/kg for 3 days and added etanercept 50 mg sub cutaneous (SC) injection. After 2 days, we observed a dramatic improvement and initiated extracorporeal photopheresis for short and long-term control of the GVHD.

Acute GVHD (aGVHD) is a common complication of hematopoietic stem cell transplantation. It is induced by the donor immunocompetent T cells that, following an enhanced expression of major-histocompatibility-antigen by actived host-presenting cells, secret IFN-γ, IL-2 and TNF-α, leading to activation of cytokines effector cells with Fas- and perforin-mediated killing mechanisms, and cells of the innate immune system [1]. During all the process, JAKs play an important role [3]. It results in an attack of fast proliferating tissues epithelia (liver, gastrointestinal tract and skin) [1].

The cutaneous aGVHD has a peak incidence around day 30 [1]. It may begin on the posterior auricular or acral skin and can evolve in a confluent maculopapular rash with acral erythema and/or folliculocentric blanching erythema with small macules and papules being suggestive [1]. Conjunctival and mucosal lesions can be associated. In severe cases, it can evolve in an erythroderma with bullae and positive Nikolsky sign, similar to a TEN and potentially fatal. [1, 2] Grading classification depends on the extent of skin lesions (from stage 1 involving 25% of BSA to stage 4 consisting in erythroderma with bullae), liver and intestinal tract involvement [1]. Differential diagnosis with TEN remains difficult [4].

Treatment of aGVHD depends on the severity of the disease. The recommended first line treatment for aGVHD grade II or

*Corresponding author
Caroline de Lorenzi. Division of Dermatology and Venereology, Geneva University Hospitals, rue Gabrielle-Perret-Gentil 4, CH-1205 Genève, Switzerland. E-mail: caroline.delorenzi@hcuge.ch

Received: August 05, 2021; Accepted: August 11, 2021; Published: August 15, 2021
higher is systemic corticosteroids (methylprednisolone). For refractory cases, different therapies are described in the literature as mycophenolate mofetil, JAK 1/2 inhibitors (ruxolitinib 10 mg twice a day), anti-TNF alpha (etanercept) and extracorporeal photopheresis [1,3, 5-7].

**Figure 1:** Erythematous-violaceous of the right palm

**Figure 2:** Erythematous-violaceous of the right sole

**Figure 3:** Confluent macular-papular exanthema with central grey aspect and tense bullae

**Figure 4:** Complete epidermal necrosis with cleavage at the dermal-epidermal junction and necrotic keratinocytes along sweet ducts and hair follicles (haematoxylin and eosin ×50).

**Author contributions:** Caroline de Lorenzi : writing original draft and review and editing, supervision. Yassaman Alipour Tehrany : Writing original draft. Sébastien Menzinger: Writing original draft and review and editing.

**Financial Disclosure:** The authors have no financial relationships relevant to this article to disclose.

**Conflict of Interest:** The authors have no conflicts of interest to disclose.

**References**


**Copyright:** ©2021 Caroline de Lorenzi, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.