

Severe dermatological presentation of graft vs host disease

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A 67-year-old Caucasian female presented to the Surgical Intensive Care Unit (SICU) with an extensive dermatological manifestation of Graft vs. Host Disease (GVHD). She was transferred from the Bone Marrow Transplant (BMT) floor to the SICU for expertise in wound management and burn care. The patient had a past medical history of diffuse B-cell lymphoma for which she had undergone chemotherapy, achieving remission. Unfortunately, a year later she experienced recurrence of her cancer and underwent an autologous stem cell transplant. She subsequently developed an expanding skin rash, which upon biopsy revealed GVHD. Her disease progressed despite treatment with standard outpatient medical management. GVHD occurs when transplanted donor T lymphocytes react to foreign host cells causing a wide variety of host tissue injuries. It remains a major obstacle to safe allogeneic hematopoietic stem cell transplantation. (1)

Upon initial hospital admission, she underwent one round of extracorporeal photopheresis (ECP) on the BMT floor. ECP involves tagging the patient's white blood cells with the medication psoralen making them more susceptible to ultraviolet light and ultimately promoting the death of the diseased/hostile WBC's. There is emerging evidence that ECP is effective for steroid refractory GVHD and has the potential for halting disease prevention. (2) Unfortunately, our patient was unable to continue with further treatments due to hemodynamic

instability and disease progression. It was at this time that she presented to the SICU for resuscitation and wound care management. The illustrations (**Figure 1**) reveal extensive, whole body involvement of her skin secondary to GVHD. Following recommendations made by dermatology, Acticoat dressing was placed on areas of skin breakdown (**Figure 2**). Acticoat is a silver-based wound dressing that has been found to prevent bacterial growth in wounds by blocking entry of external bacteria and by retaining the bacteria in the dressing. (3) In turn, the reduction in the bacterial burden accelerates wound healing. In the remaining areas, Triamcinolone cream of varying strengths was applied. A dry dressing was applied on top of the entire body (**Figure 3**). In order to make the dressing changes tolerable, the patient required large doses of versed, fentanyl, and ketamine. Rather than using rigid weight based guidelines, the regimen was tailored to the patients needs, ensuring satisfactory pain control while maintaining the integrity of her respiratory status. Throughout the ensuing days, despite aggressive medical management, the patients overall status declined. She became less responsive, hypothermic, and hypotensive leading to the use of vasopressors. A second attempt at ECP was made by the oncology service as a salvage therapy, but due to the patient's ongoing hemodynamic instability, it was prematurely terminated and the patient subsequently expired.

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Figure 1.



Figure 2.



Figure 3.



References

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