Dry Dressing for Epidermal Sloughing after Subcutaneous Azacitidine Injection in a Myelodysplastic Syndrome

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The myelodysplastic syndromes can be characterized by the conditions from which myeloid malignancy arises due to ineffective hematopoiesis resulting in several possible forms of progressive cytopenia and occasionally, in acute myeloid leukemia. To date, the myelodysplastic syndromes have been known to have poor prognoses even with allogeneic hematopoietic stem cell transplantation, which can only modify the progression of disease and rarely achieve a complete cure. Age accounts for the difficulty with allogeneic hematopoietic stem cell transplantation in most patients, and azacitidine is known to show a significant improvement in survival over other conventional care regimens such as supportive care, low-dose cytarabine, and intensive chemotherapy [1].

A 76-year-old male patient, who had gout and hypothyroidism, had been diagnosed with a myelodysplastic syndrome seven months before presentation to our department. He received a first cycle of 75 mg/m²/day of azacitidine subcutaneously for 7 days, and no additional cycles were administered. Redness was observed at the injection site 10 days after finishing the first cycle of azacitidine injection (Fig. 1A). The lesion was progressively extending to the adjacent area, and profuse discharge with skin sloughing and hemorrhagic bullae developed 19 days after the injection (Fig. 1B). No mucosal lesions were noted. A biopsy showed marked inflammatory cell infiltration with eosinophils and subepidermal bullae (Fig. 2). The wound failed to heal after treatment with a 9-day course of glucocorticoids, antihistamines, antibiotics, and moisture polyurethane foam dressing. Dry dressing was started 29 days after injection. We applied a meshed silicone sheet (Mepitel One, Mölnlycke Health Care, Göteborg, Sweden) on the raw surface to conserve the exposed dermis and covered the sheet with an alginate dressing (SeaSorb, Coloplast, Peterborough, United Kingdom) to increase discharge absorption. Thereafter, the discharge decreased gradually. The wound had mostly healed 37 days after injection without any surgical intervention (Fig. 1C). At a 4-month follow-up visit, the wound had completely healed with hyperpigmentation (Fig. 1D).

Azacitidine has been the treatment of choice for patients with high-risk myelodysplastic syndromes [1]. Some adverse cutaneous reactions associated with azacitidine, such as erythema on the injection site, rash, pruritus, pyoderma gangrenosum, and Sweet’s syndrome, have been reported [2].
A moist wound environment enhances wound re-epithelialization; however, excessive wound moisture can cause wound maceration and can result in a delay in wound healing. In our case, a 9-day course of glucocorticoids, antihistamines, and antibiotics did not improve the condition of the wound; however, the refractory wound then improved after changing to dry dressing. Moist desquamation after radiation therapy also shows similar histological features to our case, and it has been reported that moist wound dressing with hydrogel delays wound healing relative to dry dressing in cases of moist desquamation after radiation therapy [5].

When any adverse skin reaction occurs after anticancer drug administration, stopping the inducing drug and thoroughly evaluating the patient is most important. However, proper skin wound management is also important to avoid unnecessary surgical intervention in a cancer chemotherapy patient who may take a long time to heal.

The case presented here shows that subcutaneously injected azacitidine may cause severe epidermal sloughing. Proper skin wound management should be started early, and if there is no response with conventional occlusive dressing, switching to dry dressing should be considered.

References
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