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Treatment of Toxic Epidermal Necrolysis by Plasmapheresis: A Prospective Study

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Introduction & Objectives:

Toxic epidermal necrolysis (TEN) is a severe drug-induced reaction characterized by mucocutaneous involvement and widespread epidermal detachment. Currently, there is insufficient evidence to support the routine use of any specific systemic therapy.

The objective of our study was to evaluate the effectiveness of early treatment with plasmapheresis combined with corticosteroid therapy in the management of TEN.

Materials & Methods:

We conducted a prospective study over a one-year period, from January 2023 to January 2024, in the Dermatology Department of Mohammed VI University Hospital in Oujda. The study included all patients diagnosed with TEN who received early plasmapheresis treatment, with or without concomitant corticosteroid therapy.

Results:

We included 6 patients with TEN. The mean age was 59 ± 14 years, with a female predominance (female-to-male ratio of 2:1). Allopurinol was the most frequently implicated drug (50% of cases), followed by flucloxacillin–amoxicillin combination (16.7%), fenoprofen (16.7%), and spiramycin combined with metronidazole (16.7%). The mean latency period between drug intake and onset of symptoms was 14 ± 10 days. The mean body surface area affected was 46% ± 15, with mucosal involvement observed in 83.3% of patients.

Corticosteroid therapy at a dose of 1 mg/kg/day was administered to 83.3% (5 out of 6) of patients. One patient did not receive corticosteroids due to sepsis. All patients underwent plasmapheresis using fresh frozen plasma, with sessions performed every two days, and an average of 4 ± 2 sessions per patient. A very good clinical outcome was observed in 4 out of 6 patients, with complete re-epithelialization achieved within 15 days of treatment. The mortality rate was 33.3%, with deaths attributed to cardiogenic pulmonary edema in patients with a history of ischemic heart disease.

Conclusion:

Plasmapheresis appears to be a promising therapeutic option in the management of TEN, although current evidence for its efficacy remains limited to isolated case reports and small case series. This technique enables the removal of the offending drug, its metabolites, and immune mediators involved in the inflammatory cascade of TEN. Further studies are needed to confirm its efficacy and establish standardized protocols in the treatment of toxic epidermal necrolysis.