

## Acute skin failure: myth or reality?

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Acute organ failure is the domain of physicians and surgeons. Almost all major organs may undergo acute failure; heart failure, respiratory failure, renal failure, hepatic failure, and so on! Does skin fail also? Do dermatologists confront with the situation of a failing skin, just akin to cardiac and renal failure?

It indeed does! The largest organ of body may fail to function and thus jeopardize human life. It may seem unbelievable to most of the medical fraternities, but it is a reality [1].

Skin is not merely an organ for beautification and medium for social interactions. Almost imperceptibly it functions since birth till death maintaining body temperature, conserving body water and other electrolytes; like a sentry it rejects all noxious stimuli, repels harmful microbes and save the internal milieu of the body. Failure to perform these constant activities constitutes 'acute skin failure'[2].

How can skin fail to function? Yes, there are myriad of primary cutaneous disorders which may give rise to such a situation. Drug reactions like Stevens Johnson syndrome and toxic epidermal necrolysis, immuno-bullous disorders like pemphigus, scaly disorders like psoriasis and various dermatitis top the list of the etiologies.

There is extensive epidermal detachment or loss in the above-said conditions. Body can no more maintain the core temperature; hypothermia sets

in. There is oozing of fluid and electrolytes through the denuded body surface, giving rise to hypovolemia and electrolyte imbalance; the consequence is acute renal shut down. In long-standing erythroderma, there is persistent cutaneous vasodilatation leading to increased venous return, higher cardiac output, and heart failure in patients with already compromised cardiovascular system. Erythrodermic patients may also develop capillary leak syndrome giving rise to pulmonary edema and 'adult respiratory distress syndrome'. Acute skin loss precipitates hypoproteinemia and malnutrition as it is a protein-rich (keratin) organ. Last but not the least; microorganisms invade the barrier-less body through multiple points resulting in septicemia. The ultimate result in a neglected case is 'multi-organ failure'[3].

Skin does not beat like heart; unlike lungs, it can not breathe; neither does it calculate like the brain. However, its incessant function keeps all these majestic organs safe and secure. Hence, when it fails, the whole human body is at risk.

'Acute skin failure' is no more a myth; it used to occur without much awareness among the clinicians, and will continue to do so, but now we are aware about it. Skin is a silent performer; so are the dermatologists. Hence, unlike other organ failure, there is not much ado about it.

### References

1. Irvine C. 'Skin failure' – a real entity: discussion paper. *J R Soc Med*, 1991; 84:412-413.
2. Inamadar AC. Dermatological emergencies: general considerations. In: Inamadar AC, Palit A, Editors. *Critical care in dermatology*. New Delhi: *Jaypee Brothers Medical Publishers (P) Ltd*, 2013; 1-12.
3. Inamadar AC, Palit A. Acute skin failure: concept, causes, consequences and care. *Ind J Dermatol Venereol Leprol* 2005; 71:379-85.

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