

## Severe Redness and Peeling

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A 33-year-old female fell asleep for several hours in the mid-day Mexico sun on a recent vacation. She presents to your office in tears because her skin is red, painful and peeling.

### *What is your diagnosis?*

A sunburn is an acute inflammatory reaction from excessive ultraviolet radiation, be it from the sun, tanning beds, or phototherapy. It is typically considered a first-degree burn. Initially, there is erythema due to vasodilation, followed by mast cell release of histamine, serotonin and tumour necrosis factor, resulting in the synthesis of prostaglandins and leukotrienes. Eventually, lymphocytes and neutrophils enter the picture and epidermal keratinocytes and Langerhans cells undergo apoptosis.

*Most cases resolve with minimal sequelae, though severe cases are at risk of secondary infection and several days of serious discomfort.*

Sunburns are a common problem and the risk increases:

- closer to the equator,
- at high altitudes and
- in those with fair skin.

Sunburns are more common in men and in children. Most sunburns resolve with minimal sequelae, though severe cases, such as this one, are at risk of secondary infection and several days



Figure 1. Severe redness and skin peeling.

of serious discomfort. In the long-term, the risk of skin cancer, especially melanoma, is increased.

Sunburn treatment involves the use of cool compresses and cool baths, as well as around the clock NSAIDs or ASA until symptoms subside. Fluid replacement may need to be considered. Occasionally, systemic steroids (0.5 mg/kg to 1 mg/kg) for five days can be helpful, although infection must first be ruled out. With deeper burns, such as this case, the risk of infection is too high; thus, systemic steroids were avoided. Most cases resolve within one week with the final endpoint of skin desquamation. The skin is sensitive for some time after a burn and should be well-protected as the threshold for another burn is lower in the following few months.

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