Use of Kutapressin® in the Treatment of Severe Sunburn

HOWARD W. HEYWOOD, M.D., *Dayton, Ohio*

Reprinted from CLINICAL MEDICINE, Volume 3, Number 8, August, 1956

Use of a Selective Vasoconstrictor* in the Treatment of Severe Sunburn

Severity of symptoms is reduced and recovery is hastened by constriction of abnormally dilated capillaries and decrease of abnormal capillary permeability

HOWARD W. HEYWOOD, M.D., *Dayton, Ohio*

During the summer months many persons over-expose themselves to the sun to such degree as to require medical treatment. Ordinarily these patients are seen the day following over-exposure, with their condition aggravated by home treatment.

To the erythema, burning, tenderness to the touch, pain, irritability and restlessness, edema and feverishness, may be added nausea, vomiting, vertigo and headache. Sequelae may include vesiculation, desquamation, secondary infection with probable scarring, urticaria, conjunctivitis and irregular pigmentation. The urticaria may follow after a week or 10 days and last for another week or 10 days.

*Kutapressin®, Kremers-Urban Co., Milwaukee, Wis.

From 60 to 85% of the body may be involved. The areas of skin over the extensor surfaces of the arms and legs, back and chest are equally susceptible to actinic rays. Small children tolerate about one-half the dose of adults. Light-pigmented, fair haired adults are more susceptible than are those of dark type.

Sunburns develop more insidiously than ordinary thermal burns, and symptoms reach maximum severity several hours after exposure. The inflammation is not a result of histamine release in the tissues. Sunburn dilates the peripheral blood vessels, and increases capillary permeability. The end result is erythema, edema, and blistering, slight or severe.

As Surgeon in the 9th Air Force in North Africa and Europe during World War II, the author saw the symptoms and sequelae of sunburn of all degrees of severity.

Sunburns are seldom incapacitating. Fatalities from sunburns are generally complicated by heat exhaustion and shock. Second degree burns with serious secondary infections may result in severe scarring.

During the last two summers, Kutapressin was used successfully in a group of 18 patients who sought medical help primarily for relief of sunburn and also in 2 cases of severe burns resulting from over-exposure to ultra-violet lamps. The series included 8 males and 12 females, age 10-45.

METHOD

The usual treatment consisted of two (2 cc. each) injections of Kutapressin intramuscularly in the first 24 hours (6 to 8 hours between injections), and a third injection in the second 24 hours. Occasionally, a fourth injection is necessary. The dose is the same whether the area affected is small or large.

In severe cases an anesthetic ointment was used during the first 24 hours. It was seldom necessary to use any powder, cream or lotion.

Patients were advised not to overeat, to limit water intake, and to refrain from alcoholic beverages.

RESULTS

The symptoms subside soon after treatment. There is relief from burning and tenderness and less erythema within two hours. There is almost complete disappearance of surface edema and discomfort after 24 hours. This treatment limits the amount of serous exudate ar reduces the vesiculation, desquam tion and itching. There is le chance of secondary infection. The is good tanning with even distrib tion. Healing which ordinarily wou require 10 days to two weeks o curs in five to seven days.

CASE REPORTS

A girl, 18, severely sunburne was given 2 cc. in the morning a another 2 cc. in the afternoon (tv injections in all). Pain was notic ably relieved in about one-half ho after the first injection. Only tv small blisters were formed.

A girl, 21, with sunburn so seve that she felt that she could not wo the next day, was given one inje tion and lost no time at work. S went on to tanning with some slig desquamation as the only sequala.

A boy with his soles so severe sunburned that he could not wa was given 2 cc. in the afternoon a returned the following morning. F shoes were laced and he walk with comfort.

OTHER MEDICATIONS

While the usual topical medic tions may also be used, they ha been found to be almost unnece sary. An anesthetic ointment m be useful during the first 12 to hours. Subsequently, the usual to ical medications appear to be unne essary.

DISCUSSION

The treatment outlined represen a systemic approach to the tre ment of severe sunburn, in contra to the symptomatic topical approa using powders, lotions and crean to which patients often develop h persensitivity. The patient may o

tain as much relief within 24 hours as he would get in 3 to 5 days using ordinary methods and there is less vesiculation, desquamation and itching.

The drug is well tolerated at the site of injection and no unpleasant side effects have been observed over a 5-year period. The beneficial effects are apparently produced by the normalizing of the peripheral blood vessels injured by over-exposure to actinic rays. Abnormally dilated capillaries are constricted and abnormal capillary permeability is decreased.

SUMMARY

During the last two years the author has treated 18 patients with severe sunburn, many with less severe sunburn and two patients with burns due to over-exposure to ultraviolet lamps.

1. Patients were generally given two injections (2 cc. each) intramuscularly in the first 24 hours, and a third injection during the second 24-hour period. Occasionally, a fourth injection was required.

2. Symptoms subside soon after the first injection of Kutapressin. Within two hours there was relief from burning and tenderness and less erythema. Within 24 hours there was marked or complete relief from edema and distress. Less exudate is formed, and there is less vesiculation and injury to the epithelium.

3. The incidence of general symptoms, urticaria, secondary infections with possible scarring, and irregular pigmentation following severe sunburn is greatly reduced.

4. The usual topical medications may be used, but are seldom necessary. An anesthetic ointment may be used during the first 12-24 hours in the more severe burns.

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