

MEDICINE

Recovery of 114 Burn Victims Effected With Sulfadiazine

Revolutionary Treatment May Eliminate the Need for Skin Grafting and Plastic Surgery to Efface Scars

SPRAYING sulfadiazine, one of the new miracle sulfa drugs, directly onto burns is being hailed as the most effective method of treating burns yet devised.

At the Johns Hopkins Hospital 114 badly burned patients were swiftly healed by the new method announced by Dr. Kenneth L. Pickrell, of the hospital's surgical department, in a report to the *Bulletin of the Johns Hopkins Hospital*.

Burned areas "healed more rapidly than with any form of treatment previously used at the Johns Hopkins Hospital," surgeons on the hospital staff declare. Some of them believe the sulfadiazine method will revolutionize the treatment of burns, eliminating the need for skin grafting and plastic surgery to efface scars and correct deformities.

No infection occurred in any of the 100 patients with second degree burns involving no more than one-fifth of the body surface who were treated in the out-patient department of the hospital. In only two of the 15 patients so badly burned they had to be admitted to the hospital was there any evidence of infection.

Toxic effects of the drug were seen in only one case, a four-year-old child brought to the accident room at the point of death with the entire body burned except for parts of the feet and ankles. This child, who died 48 hours later, was the only patient in the 115 who failed to recover.

No preliminary washing or cleaning of burned areas is needed in the new treatment. The nurse starts spraying the sulfadiazine while the surgeon is scrubbing his hands in preparation for removal of blisters and loose tissue. The sulfadiazine allays a great deal of the patient's pain and a narcotic may not be needed.

Patients with only second degree burns who do not have to be kept in the hospital are kept in the accident room for two hours during which the spray is frequently used. Before being sent home

their burns are covered with either sterile vaseline gauze or a sulfadiazine ointment. The patients return for more spraying and new dressings until the burns have healed.

In the more serious cases, the patients are treated for shock and put to bed on sterilized sheets under a heat cradle to keep them warm. The sulfadiazine spray is continued, every hour at first, for four days. By this time a thin transparent scab forms through which the doctor can watch the healing of the burn and the growth of new skin tissues. The scab, though pliable, is strong and tough enough so that it does not break and the patient is encouraged to exercise and to use his arms, legs or other burned parts of the body. This keeps the skin and tissues from being pulled down or shrunk into the disfiguring and sometimes deforming scars called contractures.

After about 10 days the edges of the scab begin to loosen and separate from

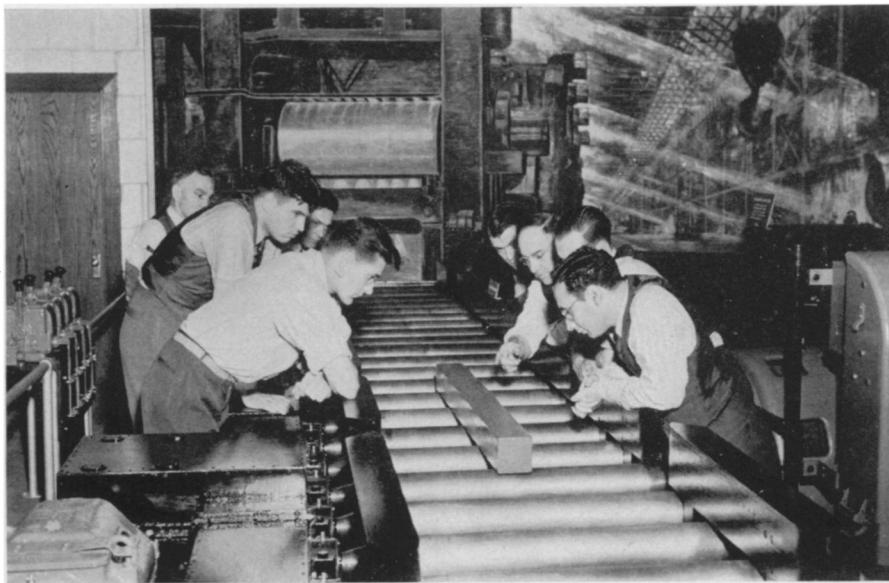
the skin beneath. At this time sulfadiazine compresses can be applied and in many cases sterile mineral oil sprays followed by salt solution compresses allow the scab to be removed in large sheets. In third degree burns the scab is left in place for at least two weeks.

Infection is a serious complication of burns which doctors have long tried to prevent, Dr. Pickrell points out. Among the preventive methods previously used are local application of tannic acid; gentian violet, a purple dye; and a combination of gentian violet, with two other dyes, brilliant green and neutral acriflavine.

The great effectiveness of the sulfa drugs in combating infection suggested to Dr. Pickrell that they might prove useful in preventing infections in severe burns. Use of sulfadiazine was started last January "with results which were so gratifying that this method has been applied routinely to the treatment of all burns that have since come to this hospital," he reports.

"This method of treatment has been found to be much superior to any of the other methods of treatment previously used here."

The sulfadiazine for the spray is used in a solution of 3.5% sulfadiazine in 8% triethanolamine. The ointment for covering burns in patients not requiring hospitalization consists of 5% sulfadia-



MODEL USED FOR TRAINING

This model steel mill manipulator which was operated by many visitors to the Westinghouse exhibit of the New York World's Fair, is now contributing to the defense program by serving for instruction in a defense training class at Buffalo's Seneca Vocational High School.