

MEDICINE

One-Day Impetigo Cure

Sulfathiazole, in form like fresh white mud, is applied to the distressing sores and next day they are gone. No new sores develop.

➤ A ONE-DAY, one-treatment cure of impetigo, unpleasant, contagious and sometimes dangerous skin disease likely to be especially prevalent under war conditions, has been achieved by a new white-mud sulfa drug treatment.

Success with the treatment, which also promptly stops the spread of impetigo, is announced by Dr. T. N. Harris, of the University of Pennsylvania (*Journal, American Medical Association*, Feb. 6).

Sulfathiazole is the drug Dr. Harris used, though he suggests other sulfa drugs could also be used with the new method. Instead of giving sulfathiazole by mouth or using an ointment or ordinary powder of the drug, as has been done heretofore in impetigo cases, he uses a microcrystalline form of sulfathiazole in a 20% suspension in water.

A drop or two of this suspension, which looks like milk of magnesia, is put on a gauze dressing. As the water seeps into the gauze to a greater extent than the sulfathiazole crystals, a small collection of pure crystals in water, looking like fresh white mud, is left on the gauze.

Advantages of the microcrystalline sulfathiazole are that it does not cake on the impetigo sores, as powdered sulfa drugs do, and does not form a crust with the matter oozing from the sores, as sulfa drug ointments do. Instead the white mud-like sulfa crystals on the dressing get right into the fluid in and about the sores where they can act more effectively to stop the infection.

When the dressing is removed the following day, a dry pink spot is present where the impetigo sore had been. New skin grows in and the pink color fades within a few days without further treatment. No new sores developed in any of the 15 children treated, nor did any new cases develop in the two outbreaks after the first ones had had their single white sulfa mud treatment.

Besides this rapid healing and prompt checking of the contagion, Dr. Harris points to another advantage of the new treatment. Impetigo in children past infancy is generally regarded as unimportant so far as the patient's general health is concerned, but numerous cases

have been reported in which impetigo was the forerunner of serious kidney disease.

The microcrystalline form of sulfathiazole on which the new treatment depends for success was developed less than a year ago for surgical use by Dr. L. A. Chambers and associates of Philadelphia.

Science News Letter, February 13, 1943

MEDICINE

Sulfanilamide Used For Rheumatic Fever

➤ FRESH HOPE that sulfanilamide may prove an effective weapon in fighting off recurrent attacks of rheumatic fever appears in a report from Dr. Caroline A. Chandler and Dr. Helen B.

Taussig, of the Johns Hopkins Hospital and School of Medicine, to the *Bulletin* of the Johns Hopkins Hospital (Jan.).

They gave small doses of this drug daily during two winters and springs to two groups of rheumatic fever patients, 16 the first season and 25 the second. Similar groups of patients who did not take the drug served as controls for judging the value of the treatment.

Of a total of 41 patient-seasons over two years, only one patient receiving sulfanilamide developed any sign of a return-attack of rheumatic fever, and that was questionable, consisting only of a faint heart murmur which not all who examined the patient heard. Among the patients who did not get sulfanilamide, there were five recurrences of rheumatic fever out of a total of 41 patient-seasons, or more than 10%. Two of the attacks extended into the second season.

The number of patients, the doctors point out, is too small for the findings to have statistical significance. The study had been planned to extend for five years with more patients being added to the group, but has had to be discontinued. Coming after similar results with sulfanilamide treatment previously reported by other doctors, how-



NEW HELLDIVER—This new Curtiss A-25 is a two-place, mid-wing monoplane powered with a 1700-horsepower Wright Cyclone Engine and equipped with a three-bladed Curtiss electric propeller and retractable landing gear. Just what it can do is kept secret, but the manufacturer claims that it has greater speed, range and striking power than any other dive-bomber now in action. Quantity production on a continuously moving assembly line is now under way.

ever, the results on even this small number of patients seem encouraging.

Sulfanilamide cannot be considered a cure for rheumatic fever, on the basis of work so far reported. But if it can ward off further attacks after the first one, it will improve the outlook for patients who survive a first attack. This disease, which attacks children chiefly, damages the heart. Each attack after the

first one threatens further damage to the heart, and each year thousands of children and young men and women die of heart trouble caused by this disease.

The question of whether to give sulfanilamide to ward off further attacks of rheumatic fever should, of course, be determined in every case by the patient's doctor. The drug is not given during attacks.

Science News Letter, February 13, 1943

MILITARY SCIENCE

Armored Trains a Success

Bearing batteries of light and medium field guns and large numbers of machine and anti-aircraft weapons, Russians have found them powerful.

► ARMORED TRAINS, bearing batteries of light and medium field pieces and large numbers of machine and anti-aircraft guns, have been operating successfully in the Russian campaigns, *Infantry Journal* (February) states; and its editor recommends a careful study of this weapon for possible adoption by the American Army.

Not much information is available about Russian armored trains, and a considerable part of the little we have comes from enemy sources. The Germans belittle them, but the cheers they send up when they succeed in destroying one of them belie their own propaganda. Nazi sources state that the Red Army possessed in all about 100 of these trains, of which they claim to have destroyed 30. If this is anywhere near accurate, the Russians must think rather well of this means of fighting, to have made so heavy an investment of materiel and men in them.

As a rule, the *Infantry Journal* states, the trains have been used in support of attacking infantry, as a kind of highly mobile artillery that can rush up, pour in a heavy volume of fire, and then get out before enemy batteries can range on them. Sometimes, however, they are sent out on independent missions, just as bodies of tanks are nowadays. They are, however, seldom used to cover a retreat—there is too much danger of being cut off and captured.

Armored trains have been likened to tanks on rails, but this simile is not as accurate as it might at first seem. For one thing, heavier guns can be used on trains than are practicable in tanks, and the rail-carried gun platforms

make for much steadier fire. Moreover, telephonic inter-communication throughout the length of the train enables one command to control and concentrate all the fire rapidly on a single target. Regulation range-finders can be used if desired. A more apt comparison would be to say that an armored train is a light cruiser on wheels.

It might seem at first thought that binding so much fire power to the rails would be a bad tactical investment, with war flowing all over the countryside as it does nowadays. However, the whole story of the Russian campaign has been a struggle for cities and towns, as witness the constant recurrence of the phrase "captured inhabited localities" in Soviet communiqués. No matter how the war may wander, in the end it heads toward the railroad junction—or breaks forth from there.

Needless to say, all artillery pieces on an armored train are turret-mounted, to give all-round command. They can thus fire on either broadside when the battle line runs more or less parallel to the track, or be trained well "forward of the beam" when it crosses the right-of-way up ahead.

It would seem desirable, in the latter case especially, to have at least part of the guns capable of howitzer-type fire, should it be necessary to lob the shells right over the engine. The American 105-millimeter piece, or the British 25-pounder "gun-how" would seem well adapted for this kind of action.

Defense against armored trains is admittedly a pretty severe problem. As outlined by the Germans, it takes two forms: destroying the track ahead of

the train if possible, or direct fire with the heaviest type anti-tank guns. In the German case, the dual-purpose 88-millimeter gun, with its high velocity and heavy projectiles, is the only weapon that is at once quick enough to hit an armored train and strong enough to make the hits count.

Armored trains have been used in military operations, at least in an experimental way, almost since the beginning of railroading. They appeared on both sides during the Civil War in this country, but have not been much in evidence during our later military operations.

Of course, the huge railway guns of World War I days have no relation to the armored train: they were merely a means of getting highly immobile ordnance into firing position, fired only from far behind the front lines at targets deep within enemy territory, and they carried no armor at all.

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Corn is an essential war crop because it produces more feed per acre than most crops, and it is convertible into meat on the farm.

It has been found that the *radio beam* used to guide airplanes may wander as much as 10 degrees from its normal positions during severe snowstorms, returning to normal position with the abatement of the storm.



TO THE FRONT — Here is the blood you donated to the Red Cross on its way to the front lines in New Guinea. It is carried on litters made by the Papuan natives.