

186. R. Antimonii et potassii tartratis, gr. ij.
Aquaë, f. $\frac{3}{4}$ viij. M.
A wineglassful every fifteen minutes till free vomiting is induced.

The convalescence is aided by quinine.

Arsenicum. In various forms, arsenic has enjoyed a high repute in serpent bites in India. It is given as Fowler's solution, or as the *Tanjore pill*:

187. R. Acidi arseniosi, gr. iv.
Piperis nigri, ℥ij.
Acaciæ, q. s. M.
Make sixty pills.

These are given up to the limit of tolerance.

Baptisia Tinctoria. The wild indigo plant is a popular remedy for rattlesnake bite among the mountains of the Middle Atlantic States. The leaves are applied as a poultice to the part.

Ipecacuanha. The following is a favorite treatment for rattlesnake bite in Guiana:

188. R. Pulveris ipecac., gr. xx-xxx.
Pulveris capsici, gr. v. M.
Make one dose.

Aid the vomiting and diaphoresis by abundance of warm water. After the emesis ceases, alcohol should be given to the extent of slight inebriation. Local means are not employed.

Pareira. In Brazil, the root of *Pareira brava* is used in the bites of poisonous serpents. A vinous infusion is taken internally, while the bruised leaves of the plant are applied to the wound.

Simaba Cedron. This plant, indigenous to Central America, has a considerable reputation as a specific antidote for venomous bites. The fruit, a sort of bean, is the part used. Sufficient has been said of it to justify further and more ample trials than have yet been made of its merits.

Tabacum is an antidote to many poisonous bites, and is popularly used in the South and West for this purpose. A poultice of tobacco is applied to the bitten part, and sufficient is swallowed to nauseate the patient. It is considered that the sufferer is safe, so long as he can be kept nauseated.

VI. LESIONS FROM HEAT AND COLD.

Burns and Scalds (Scalds of the Glottis and Larynx)—Lightning Stroke—Sun Stroke—Frost Bite and Frozen Limbs.

BURNS AND SCALDS.

MR. T. HOLMES, ENGLAND.

The treatment of burns and scalds is directed, first, to the immediate lesion; and, second, to its after consequences. At the time of the accidents, the main indications are: 1. To exclude the air from the burn and surface by some local application. 2. To allay pain. 3. To bring about reaction by the judicious use of stimulants.

The exclusion of air can be accomplished in a variety of ways. Common flour dredged on the part is a very good and handy application in superficial scorches. Carron oil and oil of turpentine are valuable when the surface of the skin is quite destroyed. Probably nothing is better than swathing the part in thick layers of cotton-wool, which is prevented from sticking to the burnt surface by covering this with folds of soft linen, anointed with ceratum calaminæ or other simple ointment. After a few days, when the discharge becomes foul, this should be renewed and the wound dressed with carbolized oil, beginning with a weak solution, as:

189. R. Acid. carbolic., ℥j.
Olei olivæ, f. $\frac{3}{4}$ iij. M.

This may be increased in strength as required. As the sloughs separate, they should be removed at once, so that the fetor be diminished.

At the time of the accident, opium should be liberally given, and brandy to the extent of bringing about a gradual reaction. Diarrhœa must be checked by opiates, and vomiting by creosote and prussic acid. Burns ought not to be dressed frequently; at the same time, the surgeon must guard against fetor and the accumulation of pus.

DR. JOHN MORRIS, OF BALTIMORE.

Various judicious suggestions are given by this writer in reference
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to the immediate treatment of burns. (*The Sanitarian*, December, 1874.)

The first step is to remove the clothing carefully by cutting it from the body, and then to wrap the patient in hot blankets or large masses of cotton. To allay the pain, chloroform or ether should be administered to partial or complete unconsciousness, and opium given in full doses.

The dressing should be applied while the patient is under the influence of the anæsthetic. Dr. MORRIS condemns carron oil as useless. In bad scalds of children, he places the patient in a bed of loose bran, so that the child is entirely covered with it. This has the advantage of not requiring change each day; as the moist particles fall off, they can be replaced with fresh bran without disturbing the patient. He severely condemns frequent changes of dressings. As a local anæsthetic and deodorant, he has found the following to give relief to the patient:

190. R.	Liquor. sodæ chlorinatæ, Morphiæ sulphatis, Aquæ,	f. ℥j. gr. iij. Oj.	M.
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Apply locally on soft rags.

Or the following:

191. R.	Acidi carbolicæ, Morphiæ sulphatis, Olei oliivæ,	f. ℥j-iv. gr. ij. f. ℥vj.	M.
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Apply locally.

After the free application of one of these, the parts may be wrapped in cotton batting. For superficial burns, simple cold or warm-water dressing is often enough.

For the treatment of the shock, alcoholic drinks are not advisable. The best stimulant that can possibly be given is strong, hot coffee, to which a little brandy may be added if manifestly needed.

Labarraque's solution has also been highly extolled by Prof. L. A. DUGAS, M. D., of Georgia. He states that it possesses the rare virtues in such cases of immediately arresting all pain, and also of preventing suppuration when the whole thickness of the skin has not been destroyed. From half an ounce to one ounce, to a quart of water, will be usually of the proper strength, and the affected surface should be covered with old linen, which is to be kept wet with it, and not to be removed for 24 to 48 hours, according to circumstances, as it is im-

portant to avoid tearing away the cuticle. In cold weather, and when the burn involves a large surface, so as to render wet applications objectionable, he is in the habit of mixing the chloride with linseed oil, in the proportion of $\frac{1}{2}$ oz. or 1 oz. to 8 oz. of oil, and using this in lieu of the aqueous mixture above described. As a guide in regulating the strength of either of these prescriptions, it is sufficient to say that whenever the application gives pain instead of relief, it is too strong, and should therefore be weakened.

PROFESSOR THEODOR BILLROTH.

The treatment of burns of the first and second degree looks more toward alleviating the pain than to any more particular end.

If there are any vesicles, it is not advisable to remove the loosened epidermis, but to open the vesicle by a couple of needle punctures, and carefully press out the serum to remove the tense feeling. Numerous remedies are used whose only effect is to cover perfectly the inflamed skin. Mashed potatoes, starch and collodion are popular. The two former are soothing and agreeable, but Dr. BILLROTH has not been satisfied with collodion, as it cracks readily, and the skin in the cracks becomes sore and sensitive.

When all three degrees of burns are combined, Professor B. particularly recommends the nitrate of silver treatment.

192. R.	Argentæ nitratis, Aquæ,	gr. x. f. ℥j.	M.
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This to be painted over the burnt part, and compresses wet with it to be constantly applied.

At first the pain from this cauterization of the parts, denuded of epidermis, is occasionally very great; but a thin, blackish-brown crust soon forms, and the pain then ceases entirely. The treatment should be continued until the eschar is completely detached.

The healing of the wound is often very slow, requiring months. Of the remedies for promoting cicatrization, Dr. BILLROTH especially recommends the compression of the wound by strips of adhesive plaster.

In the treatment of *cicatricial contractions*, resulting from these burns, compression of the cicatricial bands by adhesive plaster is one of the most important remedies, and it should always be tried persistently before resorting to excision of the cicatrix or to plastic operations.

Where the burn is of the greater part of the body, our whole attention must at first be devoted to the general condition of the patient,

and we must try to prevent collapse by the use of stimulants, such as wine, hot drinks; hot baths, ether, ammonia, etc. Professor HEBRA praises the treatment of such extensive burns by the continued warm bath, which, under proper circumstances, may be kept up for weeks.

DR. E. R. SQUIBB, OF BROOKLYN, N. Y.

This practitioner (*Druggists' Circular*, August, 1868,) believes that for burns of the second degree the best application is:

193. R. Creosoti, ζ ss. M.
Aqua, Oj.

When the cuticle is not broken, he uses it of double this strength. Rags or cotton should be saturated with it, and fixed on the parts, taking care to keep them constantly moist.

DR. J. F. KENNEDY, OF IOWA.

194. R. Pulv. aluminis, ζ j.
Olei olivæ, f. ζ ij.
Adipis, ζ iv.
For an ointment.

Having first painted the parts with a mixture of equal parts of olive oil and white of eggs, thoroughly beaten together, Dr. K. applies the above ointment on soft cloths. The relief experienced he describes as immediate and almost magical. (*Medical and Surgical Reporter*, June, 1870.)

PROF. S. D. GROSS.

The favorite application of this surgeon is *white lead paint*:

195. R. Plumbi carbonatis, ζ ij.
Olei lini, q. s.
To make a fluid of the consistency of thick cream.

This remedy is more particularly applicable to the milder forms of these injuries. If vesicles exist, they must be evacuated with a fine needle, and the surface thoroughly dried, or the paint will not adhere. The paint should be applied freely with a soft brush, and the dressing completed by covering the painted surface with a layer of carded cotton or old muslin, supported by a moderately firm roller. There is no danger from lead-poisoning in using this application, no matter how extensively it is applied.

DR. JOHN H. BRINTON, OF PHILADELPHIA.

196. R. Aquæ calcis, f. ζ viij.
Olei amygdal. amar., gt. ij-ijj.

Beat up f. ζ ij of this with ζ iv of well-washed lard, and apply freely over the burned surface, on soft cotton cloth, changing twice a day.

DR. I. H. POOLEY, ENGLAND.

197. R. Ferri sulphatis, ζ j. M.
Aqua, Oj.
Apply about three days after the burn or scald has taken place, when the suppurating stage has commenced.

DR. MADISON MARSH, LOUISIANA.

198. R. Aluminis, ζ j. M.
Aqua, f. ζ viij.
This is a saturated solution of alum. It is an excellent application to fresh burns and scalds. Cloths should be soaked in it and applied to the wound.

PROF. GORDON BUCK, M. D., OF NEW YORK.

199. R. Acaciæ pulveris, ζ iv.
Tragacanthæ pulveris, ζ ij.
Syfupi fusci, Oj.
Aqua bullientis, q. s. M.
To make a mixture of the consistency of honey.

The mixture was long popular in some of the New York hospitals, as a local application in burns.

MR. CHARLES RICE, OF PHILADELPHIA.

200. R. Best white glue, ζ xv.
Cold water, Oj.
Soften, melt, and add—
Glycerine, ζ ij.
Carbolic acid, ζ ij.
Heat in a water-bath.

This can be applied with a broad brush. It hardens in about two minutes, leaving a smooth, flexible, transparent skin.

DR. A. D. BINKERD, OF PENNSYLVANIA.

201. R. Cerae flavæ, ζ j.
Olei lini, f. ζ ij.
Acidi tannici, ζ j.
Bismuthi subnitratris, \mathcal{D} j.
Heat the wax, add the oil and stir; when cold, add the acid, and last the bismuth. Apply on lint or rags.

202. R. Pulveris iodoformi, ℥ij-iv. M.
Cerati, ℥j.
A soothing anæsthetic ointment, in burns and scalds. Five or six drops of carbolic acid may be added.

203. R. Chlorali hydrati, ℥j-iss.
Glycerinæ, f. ℥ss.
Aque destillatæ, f. ℥vj. M.
A soothing application to burns, etc., when there is a fetid discharge. It smarts at first, but soon produces local anæsthesia and diminution of fetor.

MR. EDWARD KENTISH, LONDON.

The plan of treatment in severe burns recommended early in this century by this surgeon has lately been revived with much success. The injured surface is first washed with *oil of turpentine*, and then an ointment is made by thinning basilicon ointment with turpentine, which is applied to the burned surface on soft rags.

W. R. E. SMITH, M. D., INSPECTOR-GENERAL, BRITISH ARMY.

When suppuration has commenced, the parts should be cleansed, washed with carbolated oil, and then dusted from a flour dredger with the following:

204. R. Zinci oxidi, āā ℥j.
Magnesiæ carbonatis, āā ℥ij. M.
Pulveris amyli, ℥ij.

This forms a firm incrustation, like a scab, under the protection of which the parts heal rapidly. It should be applied whenever the moisture appears.

SCALDS OF THE GLOTTIS AND LARYNX.

This accident is not infrequent, especially in children, from the swallowing of scalding fluids, or in adults from breathing flame in conflagrations or swallowing corrosive fluids. It is dangerous, and requires the utmost attention. The peril arises from the subsequent œdema and spasm of the glottis.

Leeches should be applied frequently to the external surface of the throat, followed by large poultices. Remedies to prevent the inflammation must be energetically exhibited.

205. R. Vini antimonii, gtt. xxiv-xlvij.
Tincturæ aconit., gtt. xij-xxiv.
Aque, f. ℥ij. M.

A teaspoonful at first every quarter of an hour, then every half hour, and afterwards a longer intervals.

If spasm supervenes, the patient should be cautiously etherized, the mouth fully opened, and the œdematous parts around the fauces freely scarified. (Mr. T. HOLMES.)

The mode of treatment in these cases advocated by Dr. BEVAN, of Dublin, is to give the patient at once small quantities of olive oil to drink, or to place in the mouth morsels of fresh, unsalted butter. The air breathed should be heavily charged with moist, warm vapor by covering the head with a canopy, under which a steam jet should be conducted. Leeches should be applied to the sternal notch, and the following powder laid on the tongue every two hours:

206. R. Hydrarg. chlor. mitis, gr. j.
Antim. et potas. tart., gr. ʒ.
For a child.

The upper portion of the sternum should be covered with a blister if there arise signs of broncho-pneumonia.

RÉSUMÉ OF REMEDIES.

Alumen, in strong solution or ointment, is an excellent application. (F. 198.)

Acacia. Apply a thick coating of gum arabic mucilage, and then dust well with the dry powder. This is a favorite treatment in the Boston hospitals.

Argenti Nitras. This has been lauded by many as the best of all substances in burns. The eminent surgeon, Mr. SKEY, recommends in all recent burns painting the part with:

207. R. Argenti nitratis, gr. xx.
Aque, f. ℥j. M.

This alleviates the pain and diminishes the subsequent ulceration. In the sores which follow burns, the local use of the silver nitrate is often called for to hasten the healing process.

Bismuthi Subnitratis. Dr. T. G. RICHARDSON, of Louisiana, recommends subnitrate of bismuth, mixed with glycerine to the thickness of paint, and brushed freely upon the part.

Boracicum Acidum. This is used as follows:

208. R. Boracic acid in fine powder, 1 part.
White wax, 1 part.
Paraffin, 2 parts.
Almond oil, 2 parts.

Melt the wax, paraffin and oil with a gentle heat; then add the acid, and continue stirring until it remains of uniform consistence. Before using, it should be reduced to a soft mass by rubbing it in a cold mortar.

Calcis Aqua, with olive or linseed oil, is a standard remedy.

Calcis Glyceritum. The following glycerite of lime has been found valuable:

209. R.	Calcis,	ʒi.	
	Glycerinæ,	f. ʒvj.	
	Chloroformi,	ʒj-ij.	M.

For local application.

Carbolicum Acidum, in dilute solution or ointment, is a popular and valuable application.

Carbo Ligni. Powdered charcoal dusted on the burned surface is said to be an extremely soothing, disinfectant and healing application.

Collodion, painted over light burns subdues inflammation.

Creosotum, as a solution, is preferred by Dr. SQUIBB. (F. 193.)

Creta. At St. Thomas' Hospital, London, the favorite preparation for children is:

210. R.	Acidi acetici,	1 part.	
	Aquæ,	12 parts.	
	Cretæ (whiting)	q. s.	M.

Make a thick cream and apply lightly with a brush.

Ferri Sulphatis. Added in small quantities to water dressings, or to warm baths for the burnt parts, this has been found an excellent application. For a lotion, ʒj to aquæ Oj.

Fuligo Ligni. Dr. JOSEPH A. KYLE, of Ohio, writes that after an experience of thirty years, he can confidently recommend a preparation consisting of three parts of lard and two parts of soot, or equal parts, in the treatment of all scalds and burns. Pain is allayed, and the skin, after healing, remains smooth.

Iodoform is a soothing adjunct. (F. 202.)

Oakum. Picked oakum is an excellent dressing for the suppurating sores resulting from burns. Not only does it prevent the offensive smell and hasten the healing process, but, according to Mr. ROBERT L. SNOW, of London, the resulting cicatrices *do not contract*. The oakum must be wetted with cold water several times a day, and need not be changed more than once in three or four days.

Oleum Menthæ, applied by pencil or cloth to the wound, gives prompt ease from pain. It may be diluted with glycerine.

Plumbi Acetas. Solutions of acetate and subacetate of lead are valuable for their cooling and sedative properties.

Plumbi Carbonas is recommended beyond other things by Professor GROSS. (F. 195.)

Sodii Bicarbonas. There is hardly any better remedy for recent scalds and burns of the first and second degree than to dust the part thoroughly with finely-powdered bicarbonate of soda. The pain is promptly allayed and healing greatly hastened. Other neutral alkalies might answer as well.

Sodæ Chlorinate Liquor is highly praised by Drs. MORRIS and DUGAS. (F. 190.)

Terebinthinæ Oleum. Kentish ointment, *linimentum terebinthinæ*, U. S. Ph., enjoys a just reputation in the treatment of burns.

Unguentum Petrolei is a soothing application.

Zinci Oxidum, in ointment, especially with carbolic acid added in small quantity, is a soothing and healing application.

LIGHTNING STROKE.

A stroke of lightning usually produces the effect of a shock and a burn. The indications for the treatment of the first of these are thus laid down by Sir BENJAMIN BRODIE: "Expose the body to a moderate warmth, so as to prevent the loss of animal heat, to which it is always liable when the functions of the brain are suspended or impaired; and inflate the lungs, so as to imitate the natural respiration as nearly as possible."

If, after recovery from the immediate effects, there remains a partial loss of cerebral power, Mr. T. HOLMES recommends galvanism in a mild form, continued for a very long time, combined with small doses of strychnia and other tonics.

The burns should be treated in the same manner as those from any other cause.

B. W. RICHARDSON, M. D., LONDON.

In severe cases of lightning stroke, Dr. RICHARDSON urgently advocates immediate bleeding from the arm. He writes as follows. (*Medical Times and Gazette*, Aug., 1874:)

"Our forefathers were satisfied as to the good effects of blood-letting in cases of lightning-shock. Dr. MACAULAY, an able naval surgeon of last-century education, has left on record the history of a man who, struck down on deck by lightning, and being entirely insensible, was brought to consciousness and recovery by the rapid extraction of over forty ounces of blood. I have not myself had the opportunity of treating a case of lightning-shock in the human subject, but an experience of another kind bears directly upon the value of the remedy in such cases. In experimenting with the great induction coil at the Polytechnic College, I tried to kill large animals—sheep—painlessly, by an electrical discharge derived from a Leyden battery set 'in cascade,' and presenting ninety-six feet of surface. The shock is identical with the fatal, intense shock of lightning, and by passing it once through the body of a sheep, it rendered the animal instantaneously unconscious—to all appearance dead, and, as I found by one line of experiment, actually dead, if nothing were done to the animal. But in another line of experiment, the animals, so soon as they were stricken, were removed by the butcher, and were subjected to division

of the vessels of the neck in the usual manner of killing in the slaughter-house. At first blood flowed very slowly from the operation, but in a short time the current became freer; and as it became free, the phenomena of active life, previously suspended in the animals, returned. There was return of consciousness, of motion, of struggle for liberty, and all those proofs of life that an animal passes through, previous to convulsion, when it is submitted to slaughter without shock.

"If we connect the experience of those of our predecessors who have successfully employed blood-letting for the cure of lightning stroke with the experimental facts I have here adduced, the inference is, I think, as fair as inference can be, that blood-letting is *the remedy* for the effects of the shock of lightning."

SUNSTROKE.

DR. WALLER, INDIA.

Undoubtedly the most important remedial measure in sunstroke is that first suggested, we believe, by the above-named surgeon, to wit, the *hypodermic injection of quinine*. His formula is the following:

211. R.	Quiniæ sulphatis,	gr. x.	
	Acid. sulph. dilut.,	℥ x.	
	Aquæ,	ad ℥ c.	M.

To be used in three injections, at short intervals, until reaction supervenes.

The value of this application is fully borne out by the testimony of many British surgeons in India, besides the authority of Dr. WALLER, (*India Medical Gazette*, July, 1869,) who has had a large experience in India, as a specific in this affection, whether the skin is hot and dry or cool and moist, and whether or not muscular spasm be present. It rapidly diminishes the stupor and spasm, restores consciousness, and cures the attack. He gives quinine at every stage of the attack, either by the mouth (gr. xx at first, and gr. x every successive hour,) or, if the patient be unable to swallow, hypodermically, (gr. iss injected in each arm.)

For the intense and persistent headaches which follow sunstrokes, *blistering* to the nape of the neck and full doses of *bromide of potassium*

have proved most useful. Where the symptoms point to slow inflammatory action at the roots of the pneumogastric, a gentle course of *mercury* is indicated. The confusion, dullness of mind, loss of memory and extreme nervousness, which are some of the distressing sequelæ of sunstroke, are, according to Dr. J. C. PETERS, most successfully combated by the free use of *dilute phosphoric acid*.

DR. THOMAS G. HERRON, OF CINCINNATI.

The treatment pursued by this physician is by *hot water*. (*Medical and Surgical Reporter*, October, 1868.) He applies very warm water to the head, by large wet towels, frequently changed, and pours the water, hot as the hand can bear it, freely over the head and neck. The feet should also be placed in hot salt water, and moderate stimulation be practiced as soon as the patient can swallow.

Dr. HERRON claims that one noticeable feature attends these cases, to wit, that with returning strength the vigor and activity of the mind and memory are preserved, and those mental impairments, which so frequently attend recovery under the cold-water treatment, are not noticed.

A writer in the *Canada Lancet*, August, 1878, says: "As the three most urgent wants in sunstroke are the cooling of the body, increase of perspiration, and removal of listlessness and oppression, it will at once be evident that upon no hypothesis are alcoholic stimulants admissible, but hot applications to the head, hydrobromic acid, bromide of ammonia and copious draughts of hot infusion of tea."

DR. HENRY HARTSHORNE, OF PHILADELPHIA.

This writer considers it important to distinguish between *heat apoplexy* and *heat exhaustion*. For the former, cupping or leeching the back of the neck or behind the ears should generally be the first remedy, after the application of ice or iced water freely to the head. The head and shoulders should be kept raised. A purgative enema should be administered, and sinapisms applied to the lower limbs.

Heat exhaustion requires different treatment. Local depletion should be avoided. Cold to the head and body should be alternated with revulsives (as sinapisms) to the epigastrium, spine and limbs. Syncope must be combated with ammonia. Where restlessness is a prominent symptom, the hypodermic use of morphia is called for.

SIR JOSEPH FAYRER, K. C. S. I.

The rules laid down by Sir JOSEPH FAYRER, K. C. S. I., and quoted in the *British Medical Journal*, August, 1876, may be briefly summarized thus: First, removal to cooler locality, the cold douche, (but not too much prolonged), or the administration of stimulants, and in general, as for syncope from other sources. Second, where the person is struck down suddenly by a hot sun, the patient should be removed into the shade, and a cold douche of water allowed to fall in a stream on the head or body, for the object of reducing the temperature of the overheated centres, and to rouse them into action. Third, mustard plasters and purgative enemata may be useful. Fourth, should the recovery be imperfect, other treatment may be necessary, according to indications. In cases of thermic fever, bleeding should be avoided, good results being produced by the hypodermic injection of morphia and of quinine, by their influence on the vaso-motor nerves, and their power in retarding tissue change. The most severe symptoms having subsided, the febrile condition that follows should be treated by salines and aperients, with mild diet. If meningitis set in, iodide of potassium and counter-irritants may be used to advantage. In every case removal to a cooler climate is essential, and the sufferer should not, for a long period at least, return to a hot or tropical climate. Undue exposure to heat, work, mental anxiety or stimulants should be carefully guarded against.

The treatment recommended by Dr. C. BLISS (*Medical Record*, N. Y.,) is similar in most respects, but there are one or two points worthy of note—for instance, that a condition necessary to the success of any plan or treatment is that it must be applied before the patient's temperature has reached 108° or 109° F. The doctor advocates the free use of water at its ordinary temperature in preference to ice, and when consciousness is restored, the patient should be dried with gentle friction, placed in bed, and covered with a light blanket; light liquid diets and saline aperients, if required.

PROF. WILLIAM AITKIN, M. D., EDINBURGH.

This writer recommends the following line of treatment of Dr. BARCLAY:

In the class of cases in which death tends to occur suddenly, from *syncope*, there is little opportunity afforded for relief; but the measures

indicated are: the *cold douche*; keeping the surface wet and exposed to a current of air, or assiduously fanned; exclusion of light, as far as possible; the immediate employment of stimulants, external and internal, by the rectum as well as by the mouth. *Depletory measures of any kind are not to be thought of.*

In the less-rapidly decisive cases, prompt treatment is of the greatest use, while delay is fraught with the greatest danger. The patient must be immediately stripped of his outer clothing, placed in a semi-recumbent position, and the cold douche applied, from a height of three or four feet, over his head and along his spine and chest, while his extremities are sponged with cold water. Relaxation of the pupil is the first favorable symptom under this treatment, which may require to be repeated several times, on account of returning insensibility. If there is any evidence of failure of the pulse, this treatment must be discontinued, for application of cold to the head is then all that can be borne. The hair is to be cut short as soon as possible, and a blister applied to the nape of the neck. When the first violence of the attack is subdued, increasing confidence in the ultimate result may be indulged in so soon as vesication takes place; and in cases where insensibility recurs after an interval of ten or twelve hours, it may be removed by the application of a second blister to the vertex. A blister may also be applied along the spine in the worst cases. Stimulation by the *electro galvanic current*, with the moist sponges applied along the sides of the neck, chest and epigastrium, ought also to be employed. *Sinapisms* ought generally to be applied to the extremities, and to the chest or sides.

In cases where the breathing is much oppressed, and the bronchial tubes loaded with mucus, the patient should be turned occasionally over on his face and side.

In the convulsive form of the disease, where the greatest irritability of the nervous system prevails, the douche is found to be inadmissible, from the agony which it occasions. In such cases, Dr. BARCLAY has found great benefit from the inhalation of *chloroform*. Great care is necessary in its employment, and the cases in which it is indicated are rare.

Dr. A. P. MERRILL, of New York, and others, have recommended the use of *chloroform* internally.

DR. WHITEHILL, OF ST. LOUIS.

This surgeon has had a large experience with sunstroke, having