

## RÉSUMÉ OF REMEDIES.

## INTERNAL REMEDIES.

*Aconitum*. This is a powerful depressant and antiphlogistic. Its effects are especially beneficial in gouty and rheumatic inflammations, in high traumatic fever, in erysipelas and the inflammation which sometimes follows vaccination (RINGER.) Where the intestinal mucous membrane is inflamed, aconite is contra-indicated (BARTHOLOW.) In *gonorrhœa* and *orchitis* it is very useful and in the reflex fever which sometimes follows the passage of a catheter or bougie (the so-called *urethral fever*), Dr. H. C. WOOD, Jr., states that the following affords an excellent combination :

19. R.	Tinct. aconiti radicis,	gtt. j.
	Spiritus ætheris nitrici,	f. ʒ ij.
	Misturæ potassii citratis,	q. s. ad f. ʒ j.

This much every two hours for an adult.

*Ammonii acetat.* In acute inflammation, Mr. FAIRLIE CLARKE recommends

R.	Sp. ætheris nitrosi,	f. ʒ ij.	
	Liq. ammon. acetat.,	f. ʒ ij.	
	Aquæ camphoræ,	ad. f. ʒ jss.	M.

*Antimonii et potassii tartar.* As an antiphlogistic, tartar emetic should be given in doses of gr.  $\frac{1}{2}$ – $\frac{1}{4}$ . Its effects are greatly enhanced by the addition of a small quantity of morphia.

*Chloralum hydratum*. As this drug diminishes the coagulability of the fibrin in the blood, and acts as an anodyne, its use is indicated where the temperature is high, and restlessness or delirium present.

*Belladonna* is a most valuable preventive of inflammation, and after its onset will greatly relieve the pain. It may be used both internally and externally.

*Digitalis*, in large doses, used at the commencement of acute inflammations, is said often to cut them short. From f. ʒ ss–j of the tincture is recommended for a dose. Used as a depressant, Professor S. D. GROSS says he has lost confidence in it. In erysipelas, and acute inflammations of the joints and breast, the following fomentation is said to be valuable :

20. R.	Digitalis foliorum,	ʒj.	
	Aquæ bullientis,	ʒj.	
	Apply locally.		M.

*Gelsemium* produces in animals a marked fall of temperature, and has been widely used in sthenic inflammation. Its precise value is not yet ascertained. Dr. E. P. HURD, of Massachusetts, has found it unequalled as a cardiac sedative. (*Boston Medical and Surgical Journal*, Dec., 1870.)

*Hydrargyrum*. Numerous preparations of mercury are used in inflammation. Although doubt has been thrown on its antiphlogistic properties, clinical experience seems to demonstrate them. For the rules of its use see above (pages 22, 31.)

*Ipecacuanha* in small doses is valuable as a depressant.

*Opium*, as an anodyne, is indispensable in the treatment of the pain and restlessness

of inflammation. The alkaloid *Codeia* is that preferred by Professor S. D. GROSS.

*Potassii Acetas* is a useful saline in acute inflammation.

*Potassii Bromidum* is a most valuable remedy in all low forms of inflammation, attended with loss of sleep, unusual nervous excitement and irritable stomach.

*Potassii Nitrus* has been largely given in acute inflammation, under the belief that it defibrinizes the blood, but this action is doubtful. It is, however, a diuretic and diaphoretic of value.

*Veratrum Viride* is an important depressant, see above (page 20.) As a *preventive* of inflammation after any severe injury, it is invaluable.

## EXTERNAL APPLICATIONS.

## COLD.

*Cold* has been employed in inflammation from the earliest times. It is applied in various ways, by cold baths, by streams of cold water, by cold moist sponges and cloths, by bladders filled with ice, and by the evaporation of ether.

*Cold Application.*

21. R.	Nitre,	ʒ ss.	
	Sal ammoniac,	ʒ ij.	
	Vinegar,	ʒ ʒss.	
	Water,	ʒ ʒss.	M.

This solution, applied by means of sponges or cloths to the head and elsewhere, where intense cold is desired, produces a more powerful effect than cold water or pounded ice.

*Cold without Moisture*. When it is desired to apply a freezing mixture to the skin, it may be readily done by applying a mixture of ice and salt in a tumbler or a lamp glass covered with a piece of bladder.

*Hydropathic Belts*. A hydropathic belt consists of a bandage five or six inches wide, and long enough to pass two or three times around the body. It is dipped into cold water, carefully wrung out, wound around the trunk, and covered by a wider and larger dry band. About every hour, or as often as it becomes dry, it is to be changed. A bandage may be applied in the same manner upon various parts of the body, and particularly over the joints attacked by rheumatism. An eruption of the skin is usually produced by this application, which is frequently of service.

*Ice Poultice*. Spread a layer of linseed meal, three-fourths of an inch thick, on a cloth of proper size, and upon this, at intervals of an inch or more, place lumps of ice the size of a marble. Sprinkle with meal, cover with another cloth, folding in the edges, and apply the *thick* side to the wound.

*Manner of applying Cold Affusion*. The patient, stripped naked, is to have from three to five gallons of water, at 50° F. or 60° F., in the winter, and 60° or 70° in the summer, thrown over him. Simple water, or vinegar and water, or salt and water, may be used. The safest time for the application during fever is when the exacerbation is at its height, or immediately after its declination

has begun. From six to nine o'clock in the evening is the hour usually chosen.

*Cautions in the Use of Cold Affusion.* 1. It should never be employed where there is any sense of chilliness, although the thermometer indicates a morbid degree of heat. 2. It should never be employed in the cold stage of fever, nor when the heat measured by the thermometer is less than, or equal to, the natural heat, ( $98\frac{1}{2}^{\circ}$  F.), even though the patient is not chilly. 3. It should never be employed when the body is in a profuse perspiration; nor in fever complicated with any visceral inflammation. The patient should always immerse his hands for a few moments in the water before it is applied to any other part of the body; this prevents the shock from being too violent. The earlier in the disease it is resorted to, the better the effects of cold affusion; but in the more advanced stages it will be found to moderate the symptoms.

## ELECTRICITY.

Dr. G. E. WEISFLOG has strongly recommended the use of faradaic currents of electricity in the treatment of traumatic inflammation. He maintains that it possesses well-marked antiphlogistic powers, that it alleviates pain, and that it effects the absorption of inflammatory products, whether these are of a serous, purulent or sanguinolent nature. The affected limb is most advantageously immersed in a water-bath, the temperature of which may vary considerably, in some instances rising as high as  $100^{\circ}$  F., into which one electrode of the apparatus is immersed; the other electrode must be applied to some healthy part of the body. He speaks of having obtained successful results in various cases of phagedænic ulcers, burns, acute and chronic joint affections, and pleurisy; whilst faradaic currents will also cure iritis, keratitis, &c. (*The Lancet*, June 9th, 1877.)

## FRICTION.

*Rubbing, Massage* or ordinary friction is very useful in chronic inflammation depending on the relaxation of the vessels of the part, or where there is effusion. The friction should be in such a direction as to excite venous circulation. Often a stimulating liniment may be advantageously rubbed in.

## HEAT.

*Modes of Application.* Flannel highly heated in an oven, or before the fire, may be employed to apply dry heat; but it cools quickly. *Hot sand*, though heavy, and therefore for many purposes contra-indicated, retains its heat for a long time. It should be heated over the fire in an iron pan, and put in a warm linen bag of the proper shape for the object in view. *Chamomile flowers* are lighter than sand, but more quickly lose their warmth. They are to be heated and placed in a linen bag, in the same manner as the sand. A thin piece of *flat tile*, when it can be procured, can often be used with advantage. It is lighter than sand, and when heated in an oven and wrapped in a flannel, retains its warmth for a considerable time. A heated *brick* wrapped in flannel may sometimes be employed; so also may *bottles filled with hot water*. Dr. DA COSTA frequently recommends the use of *hot salt* in a bag, applied to the back of the neck in congestive headache, &c.

*Fomentation* is the application of warmth and moisture to the surface of the body by means of a flannel or soft cloth. *Steaming* consists in exposing a part to the vapors arising from a piece of flannel wrung out in boiling water; it is often employed in affections of the eyes.

*An ordinary Fomentation.* Immerse a piece of flannel in boiling water, remove it and put it in a wringer made by attaching stout toweling to two rollers. The wringer is twisted around the flannel very strongly, till as much as possible of the water is pressed away. The wringer is useful, as the flannel is too hot when first removed from the boiling water to be grasped by the hand. When wrung as dry as possible, fomentations prepared in this way may be applied very hot without fear of scalding or blistering the skin. The flannel when applied to a part should be covered with a piece of oiled silk or rubber cloth, and changed before it becomes cold. On the removal of the fomentation the skin should be at once gently dried and covered with a piece of dry flannel. If the precaution of covering the fomentation with oiled silk, muslin, or paper, or a rubber cloth, be neglected, the warm, comforting flannels will be converted in a few minutes into cold, clammy, wet ones, disagreeable and hurtful to the patient.

*Turpentine Fomentation.* Steep a piece of lint or linen in oil of turpentine, place it over the part and immediately apply over it flannel heated as hot as it can be borne. This is frequently more effectual than a mustard plaster.

*Turpentine Fomentation.* Sprinkle the flannel wrung out of hot water in the manner just described, with a tablespoonful of turpentine. This will act as a counter-irritant, rapidly reddening the skin and relieving pain in many cases.

*Opium Fomentation.* Instead of turpentine employ laudanum as directed in the preceding receipt. Used to relieve pain.

*Mustard Fomentation.* Add a quarter of a pound of mustard to a pint of boiling water. Wring the flannel cloths out in this solution in the manner above directed. This fomentation quickly reddens the skin, and is frequently useful in allaying pain.

## LOTIONS.

These are especially called for after *sprains, bruises, and blows* which do not break the skin, but are followed by ecchymosis, suggillation, swelling and pain. For this purpose, those which are cooling and discutient are the most useful.

22. R. Acidi tannici, ʒj.  
Tincturæ opii, f.ʒij.  
Aquæ, f.ʒvj. M.

Astringent and sedative.

23. R. Liquoris plumbi subacetatis, f.ʒj.  
Alcoholis, f.ʒvj.  
Extracti opii, gr.x.  
Aquæ, f.ʒx. M.

Astringent and sedative.

24. R. Ammonii chloridi, ʒv.  
Acidi aceticæ, f.ʒx.  
Alcoholis, āā f.ʒx.  
Aquæ, ad f.ʒx. M.

Evaporating and discutient. Highly esteemed in the London hospitals.

25. R. Sodii boratis,  $\bar{3}j.$   
Alcoholis diluti,  $f. \bar{3} \text{ iss.}$   
Aquæ destillatæ,  $f. \bar{3} \text{ ij.}$  M.  
To be applied in lotion several times a day, on bruises with excoriated skin.
26. R. Liquoris ammoniæ acetatis,  $f. \bar{3} \text{ ss.}$   
Aquæ,  $f. \bar{3} \text{ iss.}$   
Use as a refrigerant lotion.
27. R. Extracti conii,  $\bar{3}j.$   
Liquoris plumbi subacetatis diluti,  $f. \bar{3} \text{ xij.}$  M.  
As a cooling and anodyne lotion.

The following are useful lotions:

28. R. Ammonii chloridi,  $\bar{3} \text{ ijss.}$   
Camphoræ,  $\bar{3}j.$   
Saponis,  $\bar{3} \text{ iss.}$   
Alcoholis diluti,  $f. \bar{3} \text{ v.}$  M.  
Immerse a piece of flannel in this solution, and retain it upon the painful joint by means of a bandage.
29. R. Ammonii chloridi,  $\bar{3} \text{ ij.}$   
Spirittus vini rectificatæ,  $\bar{a}\bar{a}$   
Aquæ,  $f. \bar{3} \text{ ij.}$  M.  
An excellent cooling and discutient application in sprains, bruises, orchitis, and local external inflammations generally.
30. R. Arnicæ florum,  $\bar{3}j.$   
Aquæ bullientis,  $\text{Oj.}$  M.  
This preparation is preferable to the tincture of arnica as a vulnerary, as the latter is occasionally followed by eczema.
31. R. Tincturæ capsici,  $q. s.$   
A strong tincture of capsicum is said to act like a charm on discolored bruises, "black eyes," &c.
32. R. Acidi sulphurosi,  $\bar{a}\bar{a}$   
Aquæ,  $\text{partes equales.}$   
The marks of bruises, it is said, may be prevented or quickly removed by this lotion.

#### POULTICES.

*When Employed.* In the beginning of inflammations, to arrest them and prevent the formation of pus; also after suppuration, to facilitate the passage of the matter to the surface, and its expulsion, and limit the spread of inflammatory action.

*Hints and Cautions.* It is important that poultices should be applied as hot as can be borne, and frequently changed, the old poultice not being removed before the new one is at hand to replace it. In the treatment of boils, it is good practice to cover the boil with a piece of opium plaster with a circular hole.

and to apply the poultice only over the plaster, or to smear the contiguous surface to the boil with zinc ointment; the object being to protect the adjacent tissues from the action of the poultice, which has a tendency to develop fresh boils. (RINGER.) The principal materials of which poultices are made are linseed-meal, oatmeal, bread, starch, charcoal, yeast, carrots and potatoes.

*Linseed-meal Poultice.* Rinse a bowl or basin with boiling water, to heat it, then pour in sufficient boiling water; with one hand sprinkle into the bowl the meal, while with the other stir the mixture constantly with a spoon or spatula, till sufficient meal has been added to make a thin and smooth dough. This should be done rapidly, otherwise the poultice will be almost cold when made. The meal should always be added to the water with constant stirring, as here directed, for if the water be poured over the meal, the two ingredients are not well blended, and a lumpy, knotty mass is the result. The dough thus made should be spread quickly and evenly over a folded piece of warm linen cut ready to receive it.

The following is the formula of the British Pharmacopœia for this poultice:

33. R. Lini,  $\bar{3} \text{ iv.}$   
Olei olivæ,  $f. \bar{3} \text{ ss.}$   
Aquæ bullientis,  $f. \bar{3} \text{ x.}$  M.

This is a compact and only slightly porous poultice, and retains heat and moisture longer than any other kind except oatmeal. It is also more tenacious than a bread poultice, and therefore less liable to break and fall about. But the acrid matter which the linseed contains sometimes irritates a delicate skin, in which case an oatmeal or bread poultice should be substituted.

*Slippery Elm Poultice.* Prepared from the powdered bark of the slippery elm, moistened with hot water. It is very light and demulcent, well adapted for burns, excoriations and irritable sores.

*Bread Poultice.* Cut the bread in thickish slices, put it into a basin, pour some boiling water over it, and place the soaking mass by the fire for five minutes; then pour off the water, replacing it with fresh boiling water, and repeat this process; afterwards pour off the excess of water, and press the bread, beat up with a fork and make into a poultice.

*Another Bread Poultice.* Cut stale bread into thick slices, and pour enough boiling water over it to cover it; place the whole by the fire, and allow it to simmer for a short time, then strain off the excess of water, and prepare the poultice. The first of these is a porous poultice, the second a more compact poultice, resembling a flaxseed poultice.

*Carrot Poultice.* Scrape the raw carrots into a pulp, or boil them until they are soft, and then mash them to a pulp. Either can be used as a stimulant cataplasm in sluggish inflammations.

*Cataplasm of Fucus Crispus.* Spread out evenly a sheet of carded wadding, and pour on it a concentrated mucilaginous infusion of *Fucus crispus* (Irish moss.) Cover with another sheet of carded wadding, and beat lightly with a soft brush, to cause the jelly to be evenly absorbed. Then dry at a moderate

temperature. When used, place the sheet in a large plate and moisten with boiling water.

*Starch Poullice.* Add a little cold water to the starch, and blend the two into a pap; then add sufficient boiling water to make a poullice of the required consistence, which must be spread on linen in the manner already described for linseed poullice. The starch poullice is useful in skin eruptions attended with much heat and pain, and in general when a soothing application is required.

*Carbolic Acid Poullice.* Make a linseed poullice, but substitute the carbolic acid lotion (acidi carbo. cryst. gr. j, aquæ ℥ 50,) for one-half of the water. (*London Fever Hospital.*)

*Charcoal Poullice.* The charcoal may either be mixed with the ingredient of the poullice, or sprinkled over the part and covered with a simple poullice, or the following formula of the British Pharmacopœia may be employed:

34. R.	Carbonis ligni,	℥ss.	
	Panis,	℥ij.	
	Lini,	℥iiss.	
	Aquæ,	℥x.	M.

Used as a disinfectant to putrid wounds, &c.

*Yeast Poullice.* There are two ways of making a yeast poullice. In the first, the yeast and water are added to flour till ordinary dough is made, and the dough is applied while fermentation is going on. In this case, we have simply an application of rising dough. In the other way, warm yeast is spread over the surface of a simple bread poullice.

The following is the formula of the British Pharmacopœia:

35. R.	Beer yeast,	℥vj.	
	Flour,	℥xiv.	
	Water at 100°,	℥vi.	M.

Used as a stimulant to sluggish or sloughing wounds, &c.

*Potato Poullice.* Dr. McCALL ANDERSON recommends in eczema, attended with much inflammation and sensation of heat, the sprinkling over a cold potato poullice of a camphorated absorbent powder, of which the formula is as follows:

36. R.	Pulveris camphoræ,	℥ss.	
	Zinci oxidi,	℥ij.	
	Pulv. talc,	℥ij.	M.

Even without the poullice, this is a valuable dusting powder.

*Iodide of Starch Poullice.* Mix two ounces of starch with six ounces of boiling water, which forms a jelly; add to it, before it cools, half an ounce of liquor iodi. Spread the poullice on lint and apply cold.

*Alum Poullice.* Composed of the whites of two eggs and 60 grs. of alum. Its action is astringent.

*Chlorinated Soda Poullice.*

37. R.	Liquoris sodæ chlorinatæ,	℥ij.	
	Lini,	℥iv.	
	Aquæ,	℥viii.	M.

Used as an antiseptic.

*Hemlock Poullice.* The following is the formula of the British Pharmacopœia:

38. R.	Conii foliæ,	℥j.	
	Lini,	℥ij.	
	Aquæ bullientis,	℥x.	M.

Used as a sedative and anodyne.

*Mustard Poullice.* (Sinapism.) The following is the formula of the British Pharmacopœia:

39. R.	Mustard,	℥ā	
	Linseed meal,	℥ijss.	
	Water,	℥x.	M.

Used as a rubefacient and stimulant.

#### VENESESECTION.

The following practical directions are very concisely given by Dr. DRUITT, of London:

*Manner of Bleeding.* General bleeding should be executed in such a way as to cause slight faintness as quickly as possible. For this purpose the blood should be drawn, as rapidly as possible, from a large orifice; and above all, the patient should sit or stand upright. For if the blood is drawn slowly, so that the vessels have time to adapt themselves to their diminished contents, or if the patient is lying down, so as to admit the flow of blood to the brain, the bleeding may be continued almost to death without the occurrence of faintness.

*Quantity to be Taken.* As a general rule, the blood should be permitted to flow till paleness of the lips, lividity about the eyes, sighing, nausea, fluttering pulse and relief of the pain, indicate the approach of faintness; but full faintness should always be avoided.

*The class of Patients* whom it is allowable to bleed, as a general rule, are the robust, with red lips, firm muscles, rustic open-air occupations, firm pulse and rigid fibre. Pregnant women usually bear bleeding well. If the lips and conjunctiva are pale, showing deficiency of blood; if the patient is bulky, soft, flabby; if there is any weakness or degeneration of the heart; or if there is any continuous disease of assimilation—scrofula, Bright's disease, or the like—bleeding can scarcely be thought of.

*The class of Inflammations* in which bleeding is permissible are those of sthenic inflammation of vital organs, especially the chest. It is not allowable, as a rule, in the *asthenic class* of maladies, nor in erysipelatous diseases; nor in the case of injuries requiring great constitutional efforts for their reparation, as compound fractures; nor if the disease be advanced towards suppuration or gangrene; and very seldom indeed in the case of a zymotic disease, or inflammation having a natural tendency to recover, or traumatic inflammation of parts not essential to life.

#### THE DIET IN INFLAMMATION.

There is still some difference of opinion in respect to the proper diet in inflammation. The view entitled to the greatest weight on this subject is expressed in the treatises on Surgery of Dr. D. HAYES AGNEW and of Dr.

JOHN ASHHURST, JR., both published at the close of 1878. Dr. ASHHURST believes that from the outset the patient should take light and easily-assimilable food in small quantities and at frequent intervals. He prefers *milk* in teacupful doses every few hours; and later, beef essence and strong broths. Weakness of the pulse, and especially delirium, is an indication for *alcohol*, whisky or brandy,  $\bar{z}$  iv-vj, or wine  $\text{O ss}$ , in the twenty-four hours. Dr. AGNEW is a more rigid dietician. He strongly condemns "the modern plan of stuffing patients from the very inception of the disease." He considers that cold water, barley water, or water diluted with milk, supplies all that is needful at first. When the febrile disturbance subsides, then beef tea, animal broths, milk, eggs, &c., may be given.

## II. ANÆSTHETICS

GENERAL ANÆSTHETICS.—*Alcohol—Bonwill's Method—Carbon Tetrachloride—Chloral—Chloroform—Ether—Ethidene Dichloride—Ethyllic Bromide—Methylene Bichloride—Nitrous Oxide—Anæsthetic Combinations.*

LOCAL ANÆSTHETICS.—*Alcohol—Carbolic Acid—Carbon Bisulphide—Carbonic Acid Gas—Chloral Hydrate—Ether—The Esmarch Bandage—Ice—Iodoform—Menthol—Morphia—Potassium Bromide—Rhigolene—Saponin—Anæsthesia of the Larynx.*

### GENERAL ANÆSTHETICS.

#### ALCOHOL.

The vapor of heated alcohol was used to induce anæsthesia in surgical operations before the discovery of ether or chloroform. The insensibility of the drunkard also suggested its internal use for the same purpose.

Of recent years it has been extensively employed by Prof. JOHN LYNK, M. D., of Cincinnati. He depends upon it almost entirely in his surgical operations, believing that it leaves the functions, especially those of the heart, in a more normal condition than chloroform. He advises the patient to drink freely of whisky, in the case of a robust male to the amount of about a pint. Very little chloroform is then needed, or, in minor operations, none at all. (*Cincinnati Lancet and Observer*, May, 1876.)

Although it is probable that this method will not receive the general sanction of surgeons, the value of a small amount of alcohol taken shortly before the inhalation of chloroform or ether cannot be denied, and should generally be remembered and acted on.

#### BONWILL'S METHOD.

This method is named after its discoverer, W. G. A. BONWILL, D. D. S., of Philadelphia. The anæsthesia is produced by rapid breathing of ordinary atmospheric air.