places which are proved "foci of infection" to be thoroughly purified at once.

House to house visitation, by sanitary inspectors to abate nuisances, small and great, and by medical men to treat premonitory symptoms, might also have great preventive value. The establishment of cholera hospitals may be made necessary when the number of cases is great, especially as the greatest proportion always happens among the poor, who are ill provided for attendance at their homes.

DIATHESES.

RHEUMATISM.

Several affections are, in popular language (partly sanctioned by medical usage), included under this term. 1. *Acute articular rheumatism*, or *rheumatic fever*. 2. "Chronic rheumatism," affecting the joints and sheaths of the muscles. 3. Syphilitic rheumatism, of the long and flat bones. 4. "Rheumatoid arthritis." 5. Myalgia. 6. "Gonorrhœal rheumatism."

Acute Rheumatism.—Only certain persons and families are liable to this affection upon any exposure. It is characterized by high fever with severe inflammation of several of the larger and smaller joints; which mostly, one after another, become swollen, red, hot, tender, and painful. The shoulders, wrists, knees, and ankles are most frequently so affected. Although with a full and rapid pulse, the skin, after the first week or so of the disorder, is often bathed in perspiration. The duration of an attack under various modes of treatment has averaged nearly three weeks. Sometimes it extends over months; and the *sequelæ*, or resulting *crippling* of the articulations, may remain for a lifetime.

The *danger* in rheumatic fever consists in the liability to endocarditis and pericarditis. A singular *complication* of it,[1] occasionally met with at a late stage, is *chorea*. Rheumatism may undergo *metastasis* from the joints to the bronchial tubes (rheumatic bronchitis), or, much more rarely, to the membranes of the brain. In feeble persons, the bowels or the womb may occasionally be involved.

The *blood* in acute rheumatism is found to contain an excess of fibrin. *Lactic acid* has, upon some basis of observation and experiment (Richardson), been asserted to be in excess in the blood as the characteristic pathological element in rheumatism.

Apart from the cardiac affections possible in its course, rheumatic fever is not often dangerous to life; but it is very painful and debilitating.

Treatment.—Many methods have been and still are in use. *Calomel and opium; opium* (Corrigan) alone, or with ipecac, as in Dover's powder; *lemon-juice; quinine; colchicum;* and *alkalies;* these are the most important. My conclusion upon the subject is, that the *alkaline* treatment is the best by far. Recoveries under it have, in my own practice as well as elsewhere, taken place several times *within a week*, where the symptoms indicated a probably long attack. Of 417 cases, Dr. Fuller reports, under alkaline treatment, none fatal, and only nine suffering with cardiac complications. Dr. Dickinson,[1] in St. George's Hospital, in a considerable number of cases, found the proportion of those in which the heart was involved, under non-alkaline treatment, more than one in four; under alkalies, one in forty-eight. Carbonate or bicarbonate of potassium, with the Rochelle salt or nitrate of potassium (in scruple doses of the carbonate, or half drachm of the bicarbonate, with about the same of either of the other salts), thrice daily, will answer [F. 37, 45, 46]. Opiates, especially Dover's powder, at night, may do great good. Local application of *laudanum* (detained by oiled silk) to the painful joints, gives great relief.

Lemon-juice (O. Rees) has seemed to me a useful adjuvant (tablespoonful doses every three hours) in cardiac inflammations of rheumatic origin.

Quinine is sometimes very beneficial in enfeebled cases, with *free perspiration*. 10 or 15 grains may be given in a day. Briquet and others in Paris have given 60 grains in a day.

Colchicum is of decided service in the presence of the gouty diathesis; sometimes useful at the beginning of other cases.

Dr. Da Costa[2] reports favorable results, especially in the apparent prevention of cardiac affections, with *bromide of ammonium*, in fifteen or twenty grain doses.

Veratrum viride has been especially praised for its action, in small or moderate doses, in acute rheumatism, by Henser, in Germany.

Remarkable success has been reported in the treatment of rheumatism by "flying blister;" *i. e.*, the successive application, to different affected parts, of small blisters; allowed to produce moderate vesication only. Drs. Davies, Peacock, and other British physicians laud this practice.

Propylamin I have tried without success. Gaston, Besnier, and Dujardin-Beaumetz report very favorably of it.[3] Dr. J. Russell Reynolds[4] asserts good results in six out of eight cases treated with *tincture of chloride of iron*.

Dr. Anstie[5] remarks upon the value of the chloride of iron as a *prophylactic* in incipient rheumatism. Dr. R. F. Dyer, of Ottawa, Illinois (*Amer. Journal of Med. Sciences*, July, 1874, p. 285), reports very good results as following the use of *podophyllin*, in doses which purge somewhat actively.

Chronic Rheumatism.—Any one may have this affection, which is, however, most common in those advancing in age. It is a sort of slow inflammation of the fibrous tissues investing the joints and muscles, following exposure to cold and wet. The aching pains are apt to be worst at night.

Cold may produce pain, without any inflammation. Five min-

[1] First remarked by Sée of Paris, and Senhouse in England.

[1] Lancet, Jan. and Feb. 1869. Drs. Gull and Sutton (Lancet, Jan. 16 and 30, 1869) insist that cases treated merely by rest in bed do as well without any medicine as with it. As above shown, I am not ready to accept this as proven.
[2] Pennsylvania Hospital Reports, 1869.
[3] London Med. Record, Jan. 29, 1873.
[4] Brit. Med. Journal, Aug. 28, 1869.
[5] The Practitioner, Sept. 1871.

utes' exposure to a draught of damp air will often so affect different parts of the body; relief being at once obtained on the application of warmth. This fact, of *cold directly producing pain*, especially in the muscles, ought not to be overlooked. It supports Inman's and Radcliffe's idea, that pain is always a sign of the local diminution of vitality.

The **Treatment** of chronic rheumatism has been largely experimental. The medicines most given are iodide of potassium, guaiacum [F. 167], oil of turpentine, and cod-liver oil. Alkalies and colchicum do not signally affect it. *Oil of cajuput* is sometimes very serviceable. Opium is seldom required unless locally. Local treatment generally does more for it than medicine. For this, various liniments are useful. I have found none better than one containing oil of turpentine, oil of sassafras, ammonia, and laudanum, diluted with soap liniment; or, where pain is considerable, chloroform or aconite liniment. Blisters may be applied in bad cases. Guarana (Rawson) internally, has lately been advised.

Dry cupping to the back, leaving a number of cups on for twenty or thirty minutes at a time, makes a more pervading favorable impression, sometimes, than might have been expected. For rigidity of the joints, and even for pain in them or in the muscles, *pouring hot water* continuously over the parts does great service. The *hot bath*, or *vapor bath*, or, as some prefer, the hot dry *air* bath (130° to 200°) will be powerful for relief in many cases. Galvanism also will aid in hastening the restoration of use to the stiffened parts. Wrapping rheumatic joints in *cotton* is often very serviceable. Those subject to rheumatism should wear flannel through the whole year.

Syphilitic Rheumatism.—As stated already, this affects the long and flat bones chiefly, and mostly *between* the joints, not at them. Generally there is *nodosity* upon the bones affected, or some degree of periosteal inflammation, at least.

The remedy for syphilitic rheumatism[1] is iodide of potassium. I have never known it to fail to relieve the pains in a very few days. They may return in the course of months or weeks, when the same treatment should be renewed. (Ten to twenty grains of the iodide, thrice daily, will suffice.) [F. 168.]

Rheumatoid Arthritis.—This designation is applied by authors to a form of subacute or chronic inflammation of one or more large joints, of greater severity than ordinary chronic rheumatism. Effusion into the joint, with deformity and permanent, or at least long-continued, lameness, may occur. I doubt the influence of the gouty diathesis in this affection; while constitutional debility no doubt often promotes it.

Can rheumatism and gout ever actually be combined in the same patient, in a hybrid attack? I am sure that they can, at least, be so far blended together, that inflammatory rheumatism, in a patient of gouty constitution, is more affected by the state of the digestive organs, and is more beneficially acted upon by colchicum, than in others. I will consider the diagnostic comparison between rheumatism and gout hereafter.

[1] First thus used by Dr. R. Williams, of St. Thomas's Hospital, London.

Myalgia.—Dr. Inman, of Liverpool, first gave this name to *muscular pain* without inflammation or other defined disease. It is more often met with in the *back* and *chest* than eleswhere. Debility and fatigue are its principal causes; although, as I have said, muscular pain may follow from the direct impression of cold.

Rest, *warmth*, and tonics meet the general indications for the treatment of myalgia. Anodyne applications, as aconite liniment or tincture, or veratria ointment, will be required only in a few cases. The hot bath or douche will often give relief.

Gonorrhœal Rheumatism. — After Swediaur (1781) and Sir Astley Cooper, several English and French writers have described a peculiar inflammation of one or more joints, mostly of one only, occasionally commencing in the course of gonorrhœa, or even of urethral inflammation from forced catheterism. Follet asserts that it occurs in 1 in 35 cases of gonorrhœa in men; much less often in women. Gonorrhœal *sciatica* is described by Fournier.[1] The local affection may be severe, with suppuration in a few cases, and anchylosis of the joint in many. It appears to be an *ichorhœmic* affection; *i. e.*, the result of absorption into the blood of morbid matter effused into or formed upon the membrane of the urethra.

Treatment.—Chambers and Brodhurst, on the ground of experience, recommend *active* treatment for this affection; by moderate bleeding, general in the robust, and local in others; followed by blisters, the hot air bath, chloride of ammonium, and opiates at night.

GOUT.

Synonyms.—*Podagra; Arthritis.*

Gout is a *diathesis*, or constitutional disorder, more or less persistent, with local affections, mostly inflammatory, occurring in paroxysmal attacks.

Symptoms.—Premonition of a gouty spell is often witnessed for some days, with symptoms of indigestion; flatulence, acidity, constipation, palpitation of the heart. Then (or without such warning) a joint becomes very painful, swollen, red, and tender. In a majority of cases the *great toe* is affected. Other toes, the fingers, ankle, wrist, or knee, may be attacked; the large joints least often. Towards the end of the spell, *tophaceous* or chalk-like deposits (chiefly of urate of sodium and calcium, altering with time in part to carbonates) are thrown out about the joint, in some but not in all cases.

The suffering with the gouty inflammation is often very intense; but its duration is not commonly more than a few days at a time. Aptness to return, at intervals shortening with each attack, is an unpleasant feature. When the period of release is so short as to be almost absent, it is called *chronic* gout.

Retrocedent or **Misplaced** gout is that in which, instead of the small joints, some internal organ is affected, as the stomach or

[1] Gazette Hebdomadaire, No. 48, 1868.

heart. Such attacks are violent and threatening to life; but generally brief. Exposing an inflamed gouty foot to cold may thus "drive in" the disease, or produce a metastasis.

If the *stomach* be so involved, nausea, vomiting, and spasm or cramp of the stomach are experienced, which, unless relieved in a short time, prostrate the patient very much. When the *heart* is the organ seized, its action is interfered with so as to cause distress in breathing, pallor, faintness, and debility.

The *urine*, during the attack of gout, is scanty, with its usual amount of urea, but a deficiency of uric acid, until near the close of the spell, when the latter is increased. The *perspiration* not unfrequently contains an excess of uric acid and the urates, particularly urate of sodium.

Hereditary gout is sometimes genuine *podagra*, or foot-gout, but more often is of the *wandering* kind. Neuralgia, indigestion, palpitation, and urticaria or eczema upon the skin, are its most common manifestations. In such a system rheumatism and other affections are to a considerable degree modified by "the gouty tendency." I believe this tendency to be often too much overlooked in practice.

Morbid Anatomy.—Except the deposits of urates about the joints, and the proved excess of uric acid in the blood, the only peculiar alteration belonging to the anatomy of gout is the shrinking and granular degeneration (with some deposit of urate of sodium) of the kidney; the "gouty, contracted kidney" of Todd. The deposit is pathognomonic of gout.

Pathology.—Garrod has established the doctrine[1] of the characteristic of gout being *excess of uric acid in the blood.* The *origin* of this excess is still doubtful. The view of Mialhe is plausible, that, urea being more highly oxidized than uric acid, deficiency of oxygenation of the blood may increase the amount of uric acid in it, unchanged.[2] Also, imperfect action of the kidneys may, by their not depurating the blood fully, induce the same accumulation.

Causation.—High living, with indolent habits, generates gout. Even excess of animal food, with scanty exercise, I have known to produce it. But strong wines and malt liquors much increase the tendency. Weak wines do not seem to have the same effect. In the Rhine region gout is rare. Nor do spirits produce it readily; their effects, when abused, are different, though worse in the end. Hereditary transmission of the gouty constitution is very common.

Diagnosis.—Between gout and rheumatism there is great resemblance; and, as I have observed, they may be blended together. When clearly exemplified, the following differences exist:—

In gout the small joints are chiefly affected; in rheumatism the larger joints. Repetition of attacks is much more frequent in gout; their duration is greater in rheumatism. In gout the heart is seldom attacked, and *spasmodically;* in rheumatism the heart is often subject to *inflammation*. In gout the stomach is sometimes

[1] Suggested by Murray Forbes, and afterwards by Prout.
[2] Headland and others advocate a quite different view.

spasmodically affected with violent symptoms; in rheumatism almost never, although the bowels may be. In gout, and not in rheumatism, uric acid (or urate of sodium) is in excess in the blood. In pure gout colchicum generally does good; in pure rheumatism hardly ever.

Treatment.—During the attack colchicum and the alkalies are the remedies. Wine of the root (some prefer that of the seeds) of colchicum may be given in ten to twenty drop doses several times daily. The stomach and bowels are sometimes irritated by large doses; but for a few days most patients will bear fifteen drops thrice daily. It should be stopped when relief has been obtained. Carbonate of potassium, ten to thirty grains at once, with half-drachm doses of Rochelle salt, will be important in addition [F. 37, 45, 46]. Garrod and Petit speak highly of the anti-arthritic powers of lithia; experiments with the carbonate having shown in it some capacity to dissolve gouty deposits. The urate of lithium is the most soluble of the salts of uric acid. Spectroscopic examination shows that a minute amount of lithia exists ordinarily in human blood. The *citrate* of lithium is preferred by some practitioners.[1] Opiates or other anodynes may be craved by the patient during the extremity of his pain.

Shall any local application be made? Not cold to reduce the inflammation. More than one death has occurred from this, by repulsion of the disorder to the heart, stomach, or brain. Laudanum may, I believe, be safely applied to the part, as in rheumatism, by wetting a piece of linen or muslin with it, laying it on the painful joint, and covering it with oiled silk. Alkaline washes (not too cold) are sometimes used. *Oil of horse-chestnut* is recommended by some.

Gouty attacks affecting the stomach or heart spasmodically are usually sudden, violent, and prostrating; requiring prompt stimulation, as by brandy, laudanum, Hoffmann's anodyne, chloroform, or Warner's cordial (tinct. rhei et sennæ). Small or moderate doses of one or another of these should be given at *short intervals.* Mustard plasters to the epigastrium, or chest, and back, will be important; and the feet may be placed in hot mustard water for revulsion.

Breathing oxygen has been lately proposed as a remedy for the gouty state of the blood. Its utility has not yet been decided upon by sufficient trial.

The *prevention* of attacks, by the removal of the diathesis and predisposition, is often very difficult, even in the absence of hereditary taint. Regulation of the diet is of primary importance. But it should not be too low, especially when the patient's habits have been those of a free liver. Nourishment must be full, while the digestive power is economized, and positive stimulation avoided. Exercise, in proportion to strength, should be recommended. In some weak or old cases tonics may be called for; vegetable bitters particularly. The state of the *skin*, as well as of the *bowels*, is important.

Change of air, travelling, and mineral waters are generally use-

[1] Of the effervescing citrate of lithium, the dose is from three to five grains.

ful during the intervals between the paroxysms. Alkaline springs and baths (such as those of Vichy in France, Ems in Germany, or Gettysburg in Pennsylvania) have an especial reputation as prophylactic against gout.

SCURVY.

Synonym.—*Scorbutus.* This affection was once very destructive to voyagers at sea, and explorers of barren regions, as well as, sometimes, to large armies. Captain Cook has the credit of proving the preventive value of vegetable food. Dr. Lind, his contemporary, published a work on scurvy in 1757, advocating the antiscorbutic use of oranges and lemons. Still, in their Arctic expeditions, Drs. Kane and Hayes were much incommoded by this disease. In the Crimean war, and during the late rebellion in this country, although uncomplicated scurvy was not very frequent, the *scorbutic diathesis* modified other diseases, and increased mortality to a serious extent.

Symptoms.—Languor, debility, and lowness of spirits first occur. Then swelling, sponginess, and bleeding of the gums are observed; the teeth loosen, and the breath is offensive. Palpitation of the heart and dyspnœa may be present. An eruption resembling acne, and afterwards petechial spots (from subcutaneous extravasation of blood), appear on the limbs; sometimes the legs swell from fibrinous deposits, especially at the ham. Diarrhœa and dysentery often come on. Death may take place by gradual exhaustion, or by sudden syncope.

Diagnosis.—*Purpura hemorrhagica* is undoubtedly not identical with scurvy, although "purpuric" extravasations are common to both. Purpura does not depend, as scurvy does chiefly, upon a fault of diet; nor are the gums affected in purpura.

Causation and Pathology.—That the essential cause (*sine quâ non*) of scurvy is deprivation of fresh food, and, in almost all cases, of fresh *vegetable* food, is proved. Fresh meat will retard it, in the absence of of vegetables; but neither this nor oranges and lemons will altogether prevent it, through long periods. Additional *promotive* causes are severe cold, fatigue and exposure, and mental anxiety or home-sickness.

Further than this, the pathology of scurvy has not been determined. The hypothesis that it depends upon *deficient alkalinity* of the blood is disproved by the failure, in many hands, of potassa and its compounds to hasten the cure, or insure prevention.

Treatment.—Medicine here is almost valueless. Fresh vegetables alone will restore what is wanting, though chemistry has not detected the nature of the need. Potatoes, tomatoes, oranges, and lemonade are the most generally available articles. If any medicine be useful as an adjuvant, it is the tincture of the chloride of iron, in moderate doses. Sometimes citric acid does good.

For the gums, a wash of solution of tannic acid or tincture of myrrh in diluted glycerin will be useful; or alum, brandy, and water. Salt and whisky rubbing to the skin will aid in dissipating the petechiæ.

Prophylaxis.—Medical men in charge of expeditions to a distance from ordinary supplies, should always insist on measures being taken to furnish enough fresh vegetables, or, next best, *desiccated* potatoes. After the latter, onions, tomatoes, turnips, salad, etc., and oranges and lemons rank. *Wine* is also decidedly though not infallibly *antiscorbutic*. The leaves of the pokeberry plant (*phytolacca*) and of the *cactus opuntia*, are so. Raw meat is better, in the Arctic regions, for the same end, than that which is cooked. The experience of the Army of the Potomac during the late war, in the McClellan campaign, shows that neglect of the means of preventing this disease will sometimes cost far more than those means themselves, whatever difficulties they may seem to present.

SCORBUTIC DYSENTERY.

This term appears prominently in the sanitary and medical reports of the armies in the Crimea. In the Peninsular Campaign in our late war (just alluded to above), the Chickahominy region was the seat of a great amount of disease, partly febrile (typho-malarial fever) and partly scorbutic. While on duty in the summer of 1862 in two U. S. General Hospitals in this city, I met with many such cases. A record was kept of thirteen deaths in the Fourth Street Hospital, from what I then designated as "scorbutic marasmus."

These men were brought from the Chickahominy very much emaciated, pale, feeble, without appetite, almost without power of digestion, and with moderate diarrhœa. Vomiting occurred in some. Blue or nearly black purpuric or petechial blotches appeared on their arms and legs; in the *fatal* cases, over the breast and abdomen also. But one of our men recovered in whom the extravasations occurred on the breast; a considerable number in whom only the limbs were so affected.

The diarrhœa was in none of them so great as of itself to threaten life. Several improved under treatment for a while, and then relapsed into a condition not unlike in aspect to the collapse of cholera; in which they died. Two, after seemingly great improvement for a week or more, died *suddenly*. It seemed that, in them, the blood or blood-making power was hopelessly ruined.

Autopsy, in several of these, and in some patients in another ward of the same hospital, under the care of Prof. S. D. Gross, exhibited coincident lesions not often described together. These were, extensive follicular colitis, and double pneumonia. The latter invariably affected the posterior portions, only, of the lungs. Suppuration had occurred in the lungs in two of our cases; hepatization in three or four more.

The condition of the bowels in those instances was thus recorded in my notes:—

The large intestine, especially the rectum, was extensively inflamed; with large, rugose tumefaction, the ridges covered thickly by an ash-colored granular and diphtheritic deposit; the whole surface reddened underneath this, and the bloodvessels generally enlarged. No pus was found; and only slight, rare, and superficial spots of ulceration. The ileum also was affected

with marked hyperæmia and swelling of the mucous membrane without ulceration.

I give these facts and appearances as matters of medical and pathological history. The occasion of their occurrence, we may well trust, will never exist again in this country.

SYPHILIS.

Few old subjects have been so completely reopened lately as that of syphilis. Twenty years ago, not many denied the unity of the syphilitic poison (distinct from that of gonorrhœa), while all admitted the multiplicity of its manifestations. Soft chancre, indurated chancre, and phagedænic chancre were all recognized, as well as the specific bubo, and secondary and tertiary syphilis. But now, prominent authorities (*dualists*) urge that at least two poisons exist, productive of venereal diseases, not mutually inoculable or convertible. This I am not satisfied to pronounce proven. The topic is altogether rather surgical than medical; but as the physician must often deal with it, I propose to state (perhaps, for brevity's sake, dogmatically) what I conceive to be the most important practical points.

The "Hunterian" chancre is a sore on the male or female genitals, slightly cup-shaped, upon an indurated base. From ten days to a month or more may elapse usually after infection before the chancre is perceived. Then it begins as a red pimple, often unnoticed until it ulcerates. Its discharge is moderate in amount, and scarcely purulent except under irritation from without.

This is said not to be "auto-inoculable," *i. e.*, matter from it will not, if introduced anywhere on the patient's own body, produce a like sore. The lymphatic glands may become affected, with enlargement and hardening, not suppurating unless disturbed and inflamed. The constitutional disease, called in its manifestations secondary and tertiary syphilis, results from infection by this sort of chancre.

The "simple, soft" chancre or *chancroid* is described as having no period of incubation, and not commencing as a pimple or tubercle, but as an abrasion, which discharges pus. If a bubo follow it, it is of the suppurating kind. The system is said, by recent authorities, not to be involved by this.

Phagedænic chancre is characterized by unhealthy purulent discharge and a destructive tendency to erosion. Ulceration of the groin may follow its buboes. *Sloughing* chancre may be regarded as the extremest degree of this, observed under conditions of depressed vitality.

Now in the above discrimination between "infecting" and "non-infecting" chancre, the former being considered to be only that with indurated base and non-suppurating buboes, I follow late authors,[1] not my own observation. A not inconsiderable experience in the treatment of syphilis, in hospital and private practice, impresses me with a different opinion; viz., that either the hard-based or the simple soft chancre may have a suppurating

[1] Bassereau, Ricord, Fournier, Geigel, etc., advocate the dualist view. Hebra is a *unitist*.

bubo and a decided constitutional affection. I must assert that I have *seen* those results, repeatedly, follow *both*. Bradley's[1] experiments upon monkeys and other animals confirm this statement. Many confirmed "dualists" admit that it is sometimes impossible to distinguish the infecting from the non-infecting sore. Some (as Neumann, of Vienna) are "unitist" in theory, but admit the importance of the diverse manifestations of the disease. Bumstead (the highest American authority) supposes it possible that "chancroid" may be a derivative of chancre.[2] Bryant[3] uses the following language: "Unfortunately, in a clinical point of view, this great distinction between the two forms of chancre is not always to be made out; and consequently an intermediate class of cases has to be recognized, approaching in its clinical features more the soft sore, which is capable of giving syphilis."

Treatment.—Without claiming opportunity to have put fully to the test all the different ideas, my conviction remains strong, that for all forms of primary syphilis, except the sloughing or the extremely phagedænic variety, mercury is the specific antidote. I have not seen reason to believe in the efficacy, in primary syphilis, of any other medicine, internally administered.

Blue mass, calomel, iodide of mercury, etc., all have the effect. Enough must be given to produce the impression of mercury upon the system; but decided salivation is not necessary. I never positively salivated more than two men; one who had a bad chancre under a *phimosis*, and another peculiarly susceptible to ordinary doses. A grain of blue pill thrice daily, or half a grain of calomel as often, or from half to a grain of iodide of mercury [F. 169] twice a day will do. The *earlier* it is begun with, the better; at least in indurated chancre. Many recent authorities urge that it is not indicated in the absence of induration. I would give it in any case of doubt.

Local treatment is also important. The caustic use of nitrate of silver (some prefer the stronger *potassa* caustic), used early, may *kill* the specific disease at the spot. To do so, it must burn out the whole substance of the chancre. After such application, astringent lotions, as lime-water, solution of sulphate of copper (gr. ½ to gr. j in ʒj), etc., may be applied, washing the part gently twice a day with castile soap and water. Many cases thus treated early, will get well without taking any mercury. In obstinate venereal sores, however, sprinkling the part with powder of calomel is one of the most effectual remedies. The calomel air or vapor *bath* has lately been recommended; as well as inunction with the mercurial ointment. Lewin and Bricheteau use *hypodermic injections* of solution of corrosive sublimate. *Iodoform* (Izard, Damon, Petiteau, and Courteau), has come into use latterly, especially as a local application to venereal sores. It may be employed in powder, ointment, or alcoholic solution with glycerin.

Buboes, if they *inflame*, may be leeched, and refrigerated with

[1] Brit. Med. Journal, Aug. 26, 1871.
[2] Pathology and Treatment of Venereal Diseases. Third edition, 1870.
[3] Surgery, p. 627. Philadelphia edition.

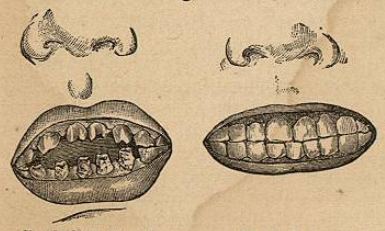
lead-water or soothed with poultices. When they suppurate, let them be freely opened with a bistoury. When, afterwards, they refuse to heal, the surgical treatment proper for indolent ulcers will be suitable for them; besides the local use of powder of calomel.

CONSTITUTIONAL SYPHILIS.

Weeks or months after the primary disease, *secondary* syphilis may show itself. Once produced, although sometimes readily curable, it often impairs the constitution for life, and transmits the taint to offspring.

The affections belonging to secondary syphilis are—peculiar copper-colored eruptions, rupia especially; warts about the genitals; ulcers of the throat; iritis; loss of hair (alopecia); affections of the testicle or uterus. These last, as well as *periostitis* and osseous tumors or *nodes*, cutaneous tubercles, gummata (soft, elastic tumors, found on the skin and the bones, and occasionally in the viscera), and chronic degenerative inflammations of the brain, spinal marrow, liver, spleen, lungs, etc., are often called *tertiary* syphilis. Jonathan Hutchinson regards the *secondary* maladies as due to blood-changes; the *tertiary*, to alterations of tissues. Although long ago suspected, Dr. T. Reade, of Belfast, first proved (1847) the syphilitic origin, in some instances, of certain nervous affections; epilepsy, mania, hemiplegia, amaurosis, loss of memory, cranial neuralgia, paralysis of sphincters; all resulting from syphilitic disease affecting the nerve-centres.[1]

Fig. 87.



Syphilitic teeth. Healthy teeth.

General experience and opinion have asserted that constitutional syphilis is not transmissible by inoculation. Some recent experiments (Lee, Walker, Pelizarri) have placed this question again "sub judice." The following statements (Bryant) are now generally accepted:—

"A healthy woman marrying a man who has had syphilis, but who has lost all symptoms of it, may acquire syphilis through a blighted ovum, or a series more or less prolonged of stillborn children, the placental circulation between the fœtal and maternal blood being the infecting medium.

"A healthy woman giving suck to a child the subject of hereditary syphilis may acquire the disease through some fissure of the nipple, the disease locally and constitutionally manifesting its presence with all the intensity of a primary inoculation.

"Again, the secretion of any true syphilitic sore, chancre, mucous tubercle, whether of the mouth, nose, anus, vulva, or penis, is capable of transferring the disease; and the syphilitic poison may probably be simply absorbed by the vessels of a part—*physiological absorption*—without giving rise to any local affection. Hunter believed this, and Lane, Marston, and Lee have published observations that tend to support the theory."

[1] See a paper by Dr. E. L. Keyes, N. Y. Med. Journal, Nov. 1870.

In 1872, at Vienna, Dr. A. Lostorfer asserted his discovery of certain small shining bodies in the blood of syphilitic patients (after it had been kept several days) which are not present in the blood of other persons. These "syphilitic corpuscles," so called, were, however, afterwards found by Stricker and others in patients suffering with various cachectic affections.

Treatment.—Mercury is available in the treatment of secondary as well as of primary syphilis; but its power over it is less absolute. After moderate trial of its impression (especially of the iodide of mercury), iodide of potassium may be given; from ten to thirty grains thrice daily. It is an almost certain cure (I have never known it to fail) for syphilitic "*rheumatism*" or bone pains with or without nodes. Over ulcers of the throat, also, it has great power; as well as over purely syphilitic affections of the nervous system. Such things, however, often do not *stay* cured; they break out again, as may also the cutaneous eruptions; requiring the same treatment over and over. In some anæmic cases *iodide of iron* will do great good.

Donovan's solution,[1] internally, and mercurial ointment locally, are the only additional remedies among many proposed and often used, that I think it worth while to name in our brief consideration of this subject. Dr. F. Bumstead thinks very highly of mercurial inunction, along with the internal use of iodide of potassium. The *oleate* of mercury (Marshall) has been a favorite with some practitioners for external use. Of course, enfeeblement of the constitution of the patient may require the employment of generous diet, salt bathing, change of air, iron, quinine, or cod-liver oil.

SYPHILIZATION.

Among the most remarkable curiosities of medical history is the attempt lately made to prevent, and even to cure, syphilis by inoculation with the syphilitic virus. Auzias Turenne, Sperino of Turin, Broeck of Christiania, and J. Z. Hall of St. Louis, Mo., have especially urged their assertions of success with this process. The immunity is said, like that of vaccination, to last for life. Out of place as it would be to discuss it here, it must be said only that, after reading a good many pages of the evidence, pro and con, I do not find that, as yet, positive proof enough has been afforded to overcome the strong *a priori* improbability of its availability.

It has been fairly tried by eminent authorities, such as Hebra, of Vienna,[2] and abandoned. Also those who advocate it admit that it is a slow method of cure, as well as far from agreeable; and

[1] Liquor Hydrargyri et Arsenici Iodidi. *Dose*, 3 to 5 drops.
[2] See Phila. Med. Times, Oct. 1870, p. 11.

as to its *prophylactic* use, few physicians, at all events in this country, are likely to recommend it to their patients instead of avoidance of the cause of contamination. Jonathan Hutchinson, Rodet, Hardie, and others have recorded instances of the recurrence of syphilis by a second inoculation in the same person. Kœbner, of Berlin, reports forty-five cases of this; thirty-seven witnessed by others, and eight occurring under his own knowledge.

GONORRHŒA.

Very few words must suffice us upon this topic. Gonorrhœa is a *specific urethritis;* in the female, also, vaginitis; produced by impure sexual congress. Its symptoms are, pain and soreness, redness and swelling of the penis, with early and continued suppurative discharge. Burning pain on passing water, and *chordee*, or painful rigidity of erection, are the principal causes of suffering, while the patient is at rest. Walking about aggravates very much the soreness and pain.

Urethritis, or balanitis (inflammation of the glans penis), may occasionally be brought on by contact with the matter of leucorrhœa or the menstrual discharge. No perceptible difference exists in the symptoms in this case, from gonorrhœa; but the latter is more obstinate, and is itself directly contagious. Such non-specific urethritis is, moreover, a very rare disorder.

The period of *incubation* of gonorrhœa is sometimes but a day; seldom many days. Its duration is generally from ten days to three weeks. But a *gleet*, or chronic discharge, more or less mucopurulent, without active inflammation, may be left behind, of indefinite continuance.

Sympathetic non-suppurating *bubo* may attend gonorrhœa; so may also *orchitis*, or inflammation of the testicle. *Gonorrhœal rheumatism* is sometimes met with, ascribed to a metastasis of the local affection to some of the joints. *Pyœmia* sometimes (P. Hewett) follows gonorrhœa, though very rarely.

Treatment.—At first, during the height of the inflammation, rest in bed, low diet, Epsom salts, and free draughts of flaxseed tea, comprise the best treatment. It is true there is a period at the end of incubation, when the symptoms are just *commencing*, when *abortive* treatment may be practised; as by a strong injection of nitrate of silver (gr. vj to gr. x in f℥j) into the urethra. This is a *bold* and rather uncertain measure, however.

Bathing the penis frequently in warm water is very soothing to the pain and soreness. *Chordee* may be treated by that means, and by suppositories of opium and cocoa butter. A pill of camphor and belladonna (camphor five grains, ext. belladonnæ half a grain) at bedtime will be useful in preventing chordee.

As soon as the activity of the urethritis has subsided, injections may be used; of nitrate of silver (gr. j to gr. iv in f℥j), acetate or subacetate of lead (subacetate, gr. xv in f℥j), sulphate of copper (gr. j in f℥j), sulphate of zinc (gr. ij in f℥j), or chloride of zinc (gr. j in f℥j). Glycerin may be added to the water for either of these solutions with advantage. Glycerole of tannin [F. 205] is also a useful preparation.

Copaiba and cubebs are, time out of mind, medicines for gonorrhœa. Without any *specific* antidotal properties, they come in well, one after the other; first the copaiba, and then the cubebs (in half fluidrachm doses of the former, in mucilage, and ten to twenty grain doses of the latter), when the inflammation is subsiding [F. 174, 175].

For *gleet*, which is often very annoying, local treatment, with regulation of the diet (avoiding stimulants and condiments), must be depended on. Injections, of the same character as those above alluded to, may be repeated. Should they fail, a bougie, smeared with an astringent ointment, should be introduced every day or two, and left in the urethra for ten or twenty minutes. Ointment of nitrate of mercury, of carbonate of lead, spermaceti ointment, and ointment of nitrate of silver, are all recommended. A *flexible* bougie, of cacao (cocoa) butter will irritate the least. Very obstinate cases have sometimes been cured by the introduction of solid nitrate of silver by the *porte-caustique*.

Examination with the *endoscope* (recently introduced for specular examination of the urethra) may detect the exact spot which is the seat of the irritation and discharge. Blistering the perineum is practised by some for gleet. Constitutional treatment by tonics may be called for when general relaxation maintains the complaint.

SCROFULA.

Prof. Aitken[1] defines (scrofulosis or) tuberculosis as follows: "A particular morbid condition of the system, attended [generally] by a persistent increase of temperature, followed by a continuous wasting of the body and the growth of a substance in various tissues and organs, especially the lungs, to which the name of tubercle or tuberculous matter has been applied. These phenomena are associated with peculiarities of outward appearance during life, and liability to certain diseases termed scrofulous, such as swellings of lymphatic glands and of joints, carious ulcerations of bones, frequent and chronic ulcerations of the cornea, ophthalmia, abscesses and cutaneous pustular eruptions, persistent swelling and catarrh of the mucous membrane of the nose, and characteristic thickening and swelling of the upper lip—lesions which, while they are distinguished by mildness of symptoms, are peculiarly persistent, and follow the application of exciting causes which would have no effect on a healthy person."

Scrofula is the term applied commonly to those of the above-named local affections involving (most frequently in rather early life) the glands, bones, nose, ears, and eyes. The tubercular diathesis has been already sufficiently considered for our purpose and space. (See *General Pathology.*) A very few words of a practical bearing must be added.[2]

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[1] Science and Practice of Medicine, vol. ii. p. 188. As remarked already under *General Pathology*, this identification of tuberculosis with scrofulosis is not assented to by all pathologists. I believe, however, that it is essentially correct.

[2] *Lymphadenoma*, the *adénie* of Trousseau, or "Hodgkin's disease" of the glands (*Medico-Chirurg. Transactions*, vol. xvii.) appears not to be indentical with