The membrane may form upon the bulbar as well as the palpebral conjunctiva, is thick and coherent, and extends so deeply into the subconjunctival tissue that it is usually not possible to detach it. The discharge is at first thin, ichorous, and scanty, but at a later stage may become purulent. As in faucial diphtheria, necrotic changes not infrequently occur, and extensive sloughs, involving the subconjunctival, as well as the conjunctival tissue, result. This leads to the formation of scar tissue, the contraction of which may eventually produce incurvation of the lids with its attendant ill consequences.

In the *Treatment* of diphtheria of the conjunctiva, as in that of the faucial variety of the disease, injections of the diphtheria antitoxin should be resorted to as soon as possible after the diagnosis is established. The results of this plan of treatment have been most satisfactory, and, according to Jackson, "its importance overshadows that of all local remedies" ("Diseases of the Eye," p. 252). Quinine, iron, stimulants, and a nutritious diet are also indicated. The local treatment consists in the application of cold or heat (ice-cloths or warm fomentations), as may be more grateful to the patient, unless the cornea be involved, when the former is contraindicated; and for direct application to the conjunctival sac, in addition to atropine or holocaine, antiseptic, rather than caustic or astringent, remedies should be employed. Among these boric acid in saturated solution, and weak solutions of bichloride of mercury, of carbolic acid, and of permanganate of potassium (2 to 100) are the most useful. When the disease is confined to one eye, the same precautions should be taken to prevent inoculation of the other as in purulent conjunctivitis, and those in attendance should be warned of the need of caution lest they should infect their own ocular or faucial mucous membrane. During the declining stage of the disease, after the membrane has been thrown off, the inflammation not infrequently assumes a purulent type. When this occurs, protargol or nitrate of silver, in not too strong solution, may be employed with advantage.

Follicular Conjunctivitis.—The seat of this affection is chiefly in the palpebral conjunctiva. Its characteristic feature is the presence of enlarged follicles—hypertrophied lymphoid tissue—in the superior and inferior retrotarsal folds. In well-marked cases it bears a rather close resemblance to the follicular type of trachomatous conjunctivitis; but there are no so-called "granulations" (hypertrophied papillæ) present, and it does not lead to pannus or deformity of the lids. Nevertheless, it is an obstinate affection, and at times is but little influenced by treatment. It is an interesting fact that the negro race, which is almost immune to trachomatous conjunctivitis, is especially prone to this variety of conjunctival inflammation. It is probably of microbic origin, but this has not been proved. A collyrium of corrosive sublimate (from 1 to 12,000 to 1 to 8,000), dropped into the eyes three times a day, has seemed to accomplish more than any other remedy the writer has employed. Sulphate of zinc and boric acid, as recommended in catarrhal conjunctivitis, alum, and protargol are other remedies which may be found of use.

Trachomatous or Granular Conjunctivitis.—The distinctive characteristics of this form of conjunctivitis, which expends its force chiefly upon that portion of the conjunctiva which lines the lids and constitutes the retrotarsal folds, are its obstinacy, the marked structural changes which it causes in the subconjunctival tissue, as well as in the conjunctiva itself, and the secondary alterations, known as pannus, which it induces in the cornea.

Its pathology is as yet but imperfectly understood. Doubtless it is a contagious disease, the product of a specific micro-organism; but that the small diplococcus, described by Sattler, is the organism which produces it, is yet to be conclusively proven. It is usual to describe two varieties of the disease—a papillary and a follicular. In the former the distinctive feature is hypertrophy of the papillæ of the conjunctiva covering the tarsus; in the latter the presence in the retrotarsal folds of the so-called trachoma granules or follicles. Commonly the affection is of a mixed type, and both of these features are present. The trachoma follicles, which are made conspicuous by everting the lids and causing the retrotarsal folds to protrude, are translucent bodies, not unlike boiled sago grains or frog's spawn in appearance. Recent investigation seems to show that they are, in fact, hypertrophied lymphoid and connective-tissue cells enclosed in a fibrous envelope. The hypertrophy of the papillæ of the tarsal conjunctiva, which is observable chiefly upon the upper lid, and the development of the trachoma follicles are accompanied by pronounced hyperplasia of the submucous connective tissue; and ultimately there supervenes a stage of atrophy which involves all of these structures, and in the worst cases results in the condition known as xerophthalmia, in which the conjunctiva—itself so atrophied that the retrotarsal folds are obliterated, and free movement of the lids and ball curtailed—loses the character of a mucous membrane, and becomes dry and cuticular, and entropion develops in consequence of incurvation of the tarsal cartilage from contraction of the plastic material previously thrown out in the subconjunctival tissues. As Nettleship has pointed out, the palpebral conjunctiva does not undergo ulceration, and, therefore, the trachomatous condition which it assumes is not due to true "granulations," but to the hypertrophy of its papillæ. The secondary changes which occur in the cornea are chiefly, if not entirely, due to the mechanical violence to which it is subjected through constant friction with the roughened inner surface of the lids. The first evidence of corneal implication is a slight roughening of the external epithelial layer. Eventually the cornea becomes more or less opaque; numerous blood-vessels develop upon it; its surface becomes uneven; and sluggish ulcers occasionally make their appearance—these changes being more marked upon the upper half of the cornea, because here the lid friction is greatest.

Although one of the most intractable diseases of the eye with which we have to deal, and in its ultimate consequences as disastrous to sight as any, granular conjunctivitis does not, like purulent conjunctivitis, threaten the eye with immediate destruction. The inflammation does not approach in intensity that which characterizes the latter disease; nevertheless, during the acute stage which supervenes upon inoculation (for, without doubt, the malady always originates in this way) there are frequently considerable swelling of the lids, marked conjunctival injection, and pronounced photophobia, lachrymation, and blepharospasm. The discharge, which is not abundant, is usually mucoid or muco-purulent in character. With the subsidence of these more acute symptoms, the chronic stage of the disease begins, and this, if left to itself, may last for a lifetime, rendering the individual's whole existence miserable, and reducing him to a state of helplessness and dependence.

The *Treatment* of granular conjunctivitis does not usually yield very satisfactory results, and even in the most favorable cases must be long-continued to be effectual. Relapses frequently occur, and even when a complete recovery seems to have been secured, it is wise to give a guarded prognosis as to the future. In dealing with this loathsome malady, prophylactic measures are of the first importance. In this country, at least, as the writer has had occasion to remark before, the disease seems to to be kept alive in institutions, such as orphan asylums and houses of refuge, in which the young are crowded together. Indeed, in the writer's experience, it is an extremely rare occurrence to meet with a case, originating in this country, which cannot be traced, either directly or indirectly, to some such source. If the evil were systematically and energetically attacked in these its strongholds, its complete eradication, it would seem, ought to be only a question of time. Unfortunately, however, it occasionally happens, through the criminal carelessness of those who have the management of these institutions, that the disease is allowed to spread from inmate to inmate, being transmitted usually by means of towels which those with diseased and those with healthy eyes are permitted to use in common. To prevent the possibility of contagion in such institutions, all those with affected eyes should be placed in dormitories apart from the other inmates, and, as far as possible, should be kept entirely away from them. An intermediate class should also be established, in which the doubtful cases (for, as has been stated, the recognition of the different varieties of conjunctivitis is not always an easy matter) should be quarantined.

To combat the disease when it has become established, local remedies are chiefly to be relied upon, although tonics should, of course, be administered when the state of the system seems to call for them. Nitrate of silver, sulphate of copper, alum, tannin, boric acid, yellow oxide of mercury, atropine for the relief of marked ciliary irritation, and infusion of jequirity bean, are the remedies which were formerly chiefly relied upon. More recently the mechanical treatment of trachoma, especially the expression of the trachoma follicles by the roller forceps, has been very generally adopted and has been found to be of undoubted value. Protargol also doubtless has a useful field in this affection, as well as in purulent conjunctivitis.

When, during the early stage of the attack, there is pronounced irritation of the ciliary nerves, manifested by pain, photophobia, and lachrymation, atropine (1 to 100) should be applied to the eyes three or four times a day, and astringents should be used with caution, a collyrium of alum (4–1 to 100) and boric acid (2–4 to 100), to be dropped into the eyes three times a day, being perhaps the safest to begin with. Protargol (10–20 to 100) may also be used with good effect, even in this stage of the attack, being applied two or three times a day if well borne. When the ciliary irritation has somewhat abated, a daily application of a solution of nitrate of silver (2–4 to 100) should be made with a brush, or a wooden toothpick armed with absorbent cotton, to the inner surface of the everted lids, the excess of silver being neutralized by chloride of sodium if the application causes much discomfort. The anæsthetic action of cocaine may be employed to lessen the pain which the nitrate of silver produces. If the photophobia increases under this treatment, the silver solution should be applied less frequently, or, instead, the everted lids may be touched once in twenty-four or forty-eight hours with a smooth crystal of sulphate of copper. In the mean time the patient should continue to apply, three times a day, the alum and boric-acid solution, or, if this does not seem to be doing good, a weak solution ($\frac{1}{8}$–$\frac{1}{2}$ to 100) of nitrate of silver, or of alum ($\frac{1}{2}$–1 to 100) and sulphate of zinc ($\frac{1}{8}$–$\frac{1}{2}$ to 100). As a substitute for the silver and copper, when these are not well borne, Dr. Noyes recommends a 2–6 to 100 solution of tannin in glycerin.

When the disease has assumed a chronic character, the crystal of copper, and the solutions of protargol (20–40 to 100), of nitrate of silver, and of tannin are still among the most valuable remedies. The "lapis divinus" (sulphate of copper, alum, and nitrate of potash, each 1 part) is also a favorite remedy, and a simple crystal of alum, which may be applied to the palpebral conjunctiva three or four times a day, is another which the writer has sometimes found extremely useful. Again, there are cases which are benefited by the daily application of yellow oxide of mercury ointment (hydrarg. ox. flav., 1 part; vaselin., 30–60 parts), combined with the instillation of atropine. Corrosive sublimate, in strong solution ($\frac{1}{2}$ to 100), to be applied to the everted lids as the silver solutions are applied, is one of the more recently suggested remedies, which has hardly justified the claims made in its behalf.

The indication for the employment of the roller forceps is the presence of the trachoma follicles, the squeezing out or expression of these follicles being the end in view. The eye being under the influence of cocaine and the lids everted, the forceps are made to grasp the everted cartilage, and the follicles are expressed by traction combined with not too firm compression of the blades.

Although in a few instances disastrous consequences have followed the employment of jequirity in the treatment of "granular lids" (cases having been reported in which destruction of the cornea occurred as a result of its use), it has, on the other hand, so often proved of the greatest value, in the very cases, too, in which all other remedies had failed, that the writer feels it still deserves to be looked upon as one of the valuable remedies in the treatment of the later stages of trachoma. Its therapeutical action is dependent upon the acute inflammation which it excites in the conjunctiva and cornea, and which supplants, so to speak, the chronic trachomatous inflammation. A similar effect was formerly sought to be obtained by the more dangerous procedure of inoculating the eye with pus from a case of ophthalmia neonatorum. Its use should be restricted to cases of chronic trachoma in which the cornea is more or less opaque and vascular.

Experience has shown that there is an astonishing difference in the susceptibility of individuals to the action of jequirity, a single application of a 2 or 3 to 100 infusion causing in some persons a higher grade of conjunctival inflammation than a dozen applications of a 5 to 100 infusion in others. For this reason it is wise in all cases to exercise caution in beginning the use of this potent remedy.

A 2 to 100 infusion suffices in most cases to excite the requisite degree of inflammation. A stronger infusion, therefore, need not be employed (and certainly should not be at the commencement of the treatment), unless an insusceptibility to its action is manifested, when it may be necessary to use a 5 to 100, or even a 10 to 100 infusion. After the first application, which should be made with a mop to the everted lids, an interval of at least twenty-four hours should elapse before the treatment is repeated, in order that we may carefully observe the effect produced. Occasionally it will happen, in those peculiarly susceptible to the action of the jequirity, that this first application will suffice to excite the requisite degree of inflammation. More frequently the treatment must be repeated once in twenty-four hours, for three or four days, to attain this end, and not rarely several applications a day, for as long a period, may be required. The inflammation which ensues, as has been mentioned, is of a "croupous" or "membranous" character, and the degree which it is desirable to produce is attended by decided œdema of the lids, considerable increase in the previously existing cloudiness and vascularity of the cornea, and the formation of a "croupous" membrane upon the palpebral conjunctiva. Pain in the eyes and headache are generally present, and not infrequently there is considerable fever, with rest so broken that a liberal use of anodynes is called for. After the jequirity applications are discontinued, the induced ophthalmia usually subsides rapidly, and, unless complications have occurred (such as ulceration of the cornea), no further treatment is demanded. With the subsidence of the inflammation the corneal opacity begins to diminish, and the trachomatous condition of the lids to disappear, and in favorable cases the improvement in vision which results is most gratifying.

In consequence of the croupous character of the induced conjunctivitis, cicatrices are not infrequently left in the palpebral conjunctiva; but the writer is not aware that any case has been reported in which they were of such a nature as to give rise to inconvenience.

Relapses occasionally occur after the jequirity treatment, as they do after every other plan which has been proposed for the cure of this proverbially obstinate affection, and even temporary improvement is not attained in every case. When benefit results, but only to a moderate degree, a reproduction of the jequirity ophthalmia may be indicated, and under such circumstances it will generally be found more difficult to establish it, because of an acquired tolerance to the irritant action of the bean.

It has been suggested that the property of exciting a peculiar type of conjunctivitis possessed by the jequirity is dependent upon a specific bacillus which develops in the infusion, but there appears to be no substantial basis for such a belief. It has seemed to the writer that in preparing the infusion uniformity of strength is more

certainly secured by allowing the maceration to continue for twenty-four hours. To preserve the infusion from putrefactive changes, which soon take place, especially in warm weather, boric acid (2 to 100) should be added. By this means the infusion may be kept unchanged for weeks. The beans should be hulled, and then finely ground or crushed. Cold water should be used in making the infusion, and a single filtration through absorbent cotton is better than a slower and more perfect filtering through paper.

Vernal Conjunctivitis or Spring Catarrh.—This is a very obstinate form of conjunctival inflammation which is chiefly met with in children; it usually attacks both eyes, and is probably mildly contagious. It derives its name from the fact that the affection remains comparatively dormant during the winter and becomes more active and troublesome with the oncoming of warm weather. Though it is probably dependent upon a specific germ, the efforts to discover it have been fruitless.

Two distinct types of the disease are met with. In one, the bulbar conjunctiva is the seat of the characteristic changes; in the other, they occur in the conjunctiva of the tarsus. Well-marked examples of the two types are rarely met with in the same individual; at least, this has been the experience of the writer. In the bulbar variety one finds a slightly elevated, nodular, gelatinous growth, of yellowish-brown color, upon the conjunctiva close to the limbus corneæ. In some instances it exhibits a tendency to encircle the cornea as a rather narrow band; in others it tends to spread upon the conjunctiva, especially in the direction of the inner and outer canthi, and to a less extent upon the cornea. In rare cases the whole cornea is overrun by the growth. The nodular masses, which are stable and show no disposition to ulcerate, are composed of connective tissue and greatly thickened epithelium, the latter showing a tendency to extend into the underlying tissue in the form of solid epithelial plugs (Fuchs).

In the palpebral variety the papillæ of the tarsal conjunctiva, and to a less extent those of the retrotarsal folds, undergo a peculiar hypertrophy, and at the same time become flattened (probably from the pressure to which they are constantly subjected), so that the inner surface of the lid presents a strikingly tessellated appearance. The papillæ are as firm almost as cartilage, and their edges, which overhang in mushroom-like fashion, can be slightly elevated. According to Fuchs, they are composed of a sort of areolar connective tissue, with connective-tissue cells which have undergone a peculiar hyaline degeneration, and are covered by thickened epithelium, which latter gives to the conjunctival surface of the lid the bluish-white, skimmed-milk appearance that is a feature of the disease. These characteristic changes are limited to the upper lids.

The most prominent symptom of vernal catarrh is intense itching. Pain is not complained of, but rather a sensation as though dust or sand were in the eyes. The discharge is slight. In some instances the disease lasts for many years; it is never of brief duration. Not infrequently several cases are met with in different members of the same family. The writer has encountered marked examples of the palpebral variety in a father and son, and also in sisters who were twins. *Treatment* is not of much avail. A collyrium of sulphate of zinc and boric acid, as suggested in catarrhal conjunctivitis, or of bichloride of mercury (1 to 8,000), yellow oxide of mercury ointment, combined in some instances with instillation of atropine, dilute acetic acid (1 part of the dilute acid to 250 of water) as recommended by Van Millingen, and the use of the roller forceps, are some of the remedies which the writer has employed from time to time with a measure of success. The internal administration of iodide of iron he has thought a useful supplement to the local treatment. An ointment of salicylic acid and lanolin (or, still better, vaseline) 2–15 to 100, as recommended by Randolph, is another remedy which at times seems to be serviceable. It should be rubbed into the conjunctiva daily, cocaine having previously been instilled.

Phlyctenular or Scrofulous Conjunctivitis.—The essential feature of this form of conjunctivitis, which is also known as conjunctivitis lymphatica and as eczema conjunctivæ, is its dependence upon a constitutional cause. The exact nature of this dependence has not been very clearly set forth. In decidedly strumous subjects the resisting power of the tissues is so poor, the cellular instability so marked, that the most trivial irritation, acting locally, may set up a conjunctivitis, as it may excite an inflammation of other mucous membranes, or of the skin or lymphatic glands. Very often, however, phlyctenular conjunctivitis occurs in subjects who cannot properly be considered as scrofulous. This happens especially in young children; and here we frequently find associated with the ocular disease eczematous inflammation of the auricle, of the upper lip, of the tissues about the roots of the finger nails, and not uncommonly suppurative inflammation of the middle ear. A furred tongue, "feverish" breath, loss of appetite, and constipation of the bowels, are the other usual accompaniments of this condition. That in this latter class of cases we have a condition of the nature of septicæmia, the writer has for some time thought probable, and that the infection of the system occurs from the alimentary canal as the result of improper feeding and its consequences, seems equally probable. This view is supported not only by the clinical features of these cases, which are exactly such as we might expect would result from the presence in the blood of a relatively benign septic organism, but also by the nature of the treatment which proves most effective. For not only are the salts of mercury the most valuable of local applications, but of all remedial measures none produces so prompt and decided a change for the better as the administration of a generous, old-fashioned, calomel purge, which rids the alimentary canal not only of much fæcal matter, but also, probably, of myriads of bacteria and their poisonous products.

In the typical form of phlyctenular conjunctivitis the conjunctival injection is not uniform, but is confined to the neighborhood of the phlyctenulæ—yellowish-red elevations varying in size from that of a mustard seed to a split pea and composed chiefly of lymphoid cells,—which make their appearance upon the ocular conjunctiva, and are quickly converted into superficial ulcers through loss of their epithelial covering. In many cases, however, the conjunctival injection is diffuse, and the phlyctenulæ are absent or not distinguishable, so that the eye presents almost precisely the same appearance as in catarrhal conjunctivitis, with which this variety of strumous ophthalmia is very apt to be confounded, if only the condition of the conjunctiva be relied upon as a diagnostic guide. In genuine catarrhal conjunctivitis, however, both eyes are almost invariably affected, and there are no evidences of constitutional derangement; whereas, in the catarrhal type of strumous conjunctivitis, it frequently happens that only one eye is affected, or that the disease makes its appearance in one eye some days before it develops in the other, while it is seldom the case that there are not present other evidences of the constitutional disorder upon which the ocular inflammation depends. In the latter affection, too, blepharitis is often present, and there are usually more decided evidences of ciliary irritation, manifested by pronounced photophobia, blepharospasm, and lachrymation, while the discharge, which is mucoid in character, is considerably less in amount. As the treatment which is called for in catarrhal conjunctivitis (the use of astringent collyria) is almost sure to do harm in strumous ophthalmia, it is of the first importance that these two conditions should be distinguished one from the other. When there is uncertainty upon this point, it is wise to treat the case as one of strumous character. In children particularly this rule should be followed, as they are especially subject to phlyctenular conjunctivitis, and with them the doubtful cases are almost sure to be of this nature. The staphylococcus aureus and staphylococcus albus are often found in the conjunctival sac

in strumous ophthalmia, but a differential diagnosis could scarcely be based upon the presence or absence of these organisms.

In phlyctenular conjunctivitis the cornea is very frequently involved in the inflammatory process. In fact, in scrofulous inflammation of the eyes the rule is that both the cornea and the conjunctiva are affected. When this is the case, the photophobia, lachrymation, etc., are usually more severe than when the inflammation is confined to the conjunctiva. Extensive ulceration of the cornea sometimes occurs, but very rarely, except in consequence of neglect or injudicious treatment. The use of astringents (nitrate of silver, sulphate of zinc, sulphate of copper, etc.) always aggravates the inflammation of the cornea, and usually leads to the development of phlyctenulæ upon it, when previously they may have been confined to the conjunctiva. All of the varieties of scrofulous ophthalmia occur much more frequently in children than in adults; indeed, adults very rarely suffer with the disease unless they have had similar attacks in childhood, which have permanently damaged their corneæ, and so rendered their eyes susceptible to recurrent attacks of inflammation.

The *Treatment* of strumous conjunctivitis is very simple, and the results obtained are almost invariably extremely satisfactory, and yet this affection is often improperly treated. In the average medical mind there seems to be an indissoluble connection between the idea of a conjunctival inflammation and that of an astringent collyrium. Given the former, the mind turns intuitively to the latter as the one only therapeutic resource. No exception is made in favor of the variety of conjunctivitis under consideration, and, as may be supposed from what has been said, the consequences of this singular disposition, always unfortunate, are sometimes most disastrous. As has already been pointed out, whenever there is even a doubt as to the strumous character of a conjunctival inflammation the use of astringents should be scrupulously avoided; for not only are the photophobia, blepharospasm, and lachrymation aggravated thereby, but the danger of serious corneal complications is greatly increased.

The treatment which rarely fails to ameliorate the symptoms almost immediately, and, when supplemented by proper attention to the constitutional disorder upon which the local disease depends, in the large majority of cases effects a prompt cure, is the application to the eye three times a day of a solution of sulphate of atropine, and once a day of an ointment of yellow oxide of mercury and vaseline. It is better that the atropine should be dissolved in distilled water, and the strength of the solution should vary from ½ to 100 to 1 to 100 (gr. i.–iv. to ʒ i.) according to the severity of the symptoms and the obstinacy of the attack, the weaker solution being effective in most cases. The proper strength for the ointment is 2 to 100 (hydrarg. ox. flav., gr. i.; vaselini, ʒ i.). For the effectual application of the atropine solution an "eye dropper" is indispensable, and even with its aid, owing to the spasm of the lids, this is not always easy of accomplishment. The patient should be placed in a recumbent posture, and, if a child, will probably require to be held firmly while the application is being made. The ointment (which should be gotten well into the conjunctival sac) may be conveniently applied on the end of a flat toothpick, or, if the treatment is to be carried out by unskilful hands, more safely by means of a camel's-hair brush. It should be inserted between the upper or lower lid and the eyeball. An ointment of this strength, if properly prepared, does not irritate the eye in the least degree. Some care, however, is necessary in its preparation, for if it be mixed in a mortar or upon a tile which has the slightest trace of iodine, iodide of potassium, or iodoform about it, the oxide of mercury is soon changed to a green iodide, which few eyes can tolerate. For the same reason it frequently happens that the ointment is not well borne when iodide of potassium is being given internally. The ordinary doses of iodide of iron are not apt to give rise to the same inconvenience. Calomel dusted into the eye once a day acts in a similar manner to the yellow oxide ointment, and many use it in preference. In the catarrhal type of strumous conjunctivitis, a 2 to 100 solution of boric acid dropped into the eye three times a day sometimes acts extremely well, and in such cases it is convenient to add the boric acid to the atropine solution. An ointment of yellow oxide of mercury and vaseline cerate, 4 to 100 (gr. ij. to ʒ i.), should be applied to the lids at bedtime, when blepharitis is present.

As for constitutional treatment, which is, of course, of the first importance, when there is a well-marked strumous diathesis, the iodide of iron and cod-liver oil with hypophosphites are especially useful. In the writer's experience, however, the phosphates of iron, quinine, and strychnine (given in the form of a syrup or an elixir) is the remedy which accomplishes the greatest good, more especially in the less distinctly strumous cases previously spoken of as so common among young children. In this form of the disease the writer has also found the preparations of "beef, wine, and iron" very useful, also the "elixir of gentian and tincture of chloride of iron," both of which have the advantage of being palatable, a matter of importance when children are concerned. As a rule, however, and especially in acute cases, and when the ocular inflammation is accompanied by other evidences of constitutional derangement, such as nasal catarrh, otorrhœa, eczema of the face, scalp, auricles, etc., a purgative dose of calomel and rhubarb, or of calomel, rhubarb, and scammony, repeated once or twice at intervals of two or three days if necessary, should precede the exhibition of other constitutional remedies, and not infrequently it will happen that when this has had its effect the case will be so far on the road to recovery that the tonics, which are to follow, will have but little left to do.

The exanthematous fevers are frequently accompanied, or followed, by inflammation of the conjunctiva, and writers commonly make of these cases a distinct variety of conjunctivitis, which they denominate "exanthematous." There seems to be no good reason for doing so, however, as they differ in no essential respect from the systemic conjunctivitis we have just considered, and, like it, present at times a distinctly phlyctenular character, with marked tendency to corneal implication, and at other times a catarrhal type. The treatment, too, which they require is exactly the same.

Pinguecula.—An elevation, yellowish in color, and varying in size and shape, situated upon the conjunctiva in the interpalpebral space, usually upon the nasal, and less frequently upon the temporal, margin of the cornea, was given the name *pinguecula* (from *pinguis*, fat), because it was formerly supposed to be due to the deposition of fat in the conjunctiva. It is seldom met with in young persons, and is oftenest observed in individuals who have passed middle life. The fact that it occurs upon the most exposed portion of the bulbar conjunctiva seems to indicate that it is, in some measure at least, due to the irritation caused by wind, dust, etc. According to Fuchs, it is a thickening of the conjunctiva, chiefly dependent upon an increase in the number and size of its elastic fibres, and its yellow color is caused, not by the deposition of fat, but by the presence of numerous concretions of a yellowish colloid substance. On account of its unsightliness its removal is sometimes called for, and in other cases, when it is especially prominent, it may cause annoyance and should be gotten rid of. It may be excised with sharp scissors, care being taken to sacrifice as little as possible of the surrounding conjunctiva. The edges of the wound, after being undermined, should be brought together by one or two fine silk sutures.

Pterygium (πτερυξ, a wing).—A circumscribed hypertrophy of the conjunctiva and subconjunctival tissue, triangular in shape, more or less vascular, and exhibiting a tendency to encroach upon the cornea. The apex of the growth is always turned toward the centre of the cornea, the base toward the equator of the eye. Its usual location is to the nasal side of the cornea, over the region of attachment of the tendon of the rectus internus; exceptionally it occurs to the outer side of the cornea,