From Eczema. 1. The history of the case is a means of diagnosis. 2. In porrigo the scab is a psydracium; but in eczema the scab resembles that of chronic psoriasis. 3.*In porrigo we have a pustular, in eczema we have a serous scab. 4. In eczema we have great heat of parts, and small superficial ulcerations, more or less constant oozing of a serous discharge, which we have not in porrigo; but in both we have glandular enlargement. 5. Eczema is non-contagious, whilst porrigo is contagious. 6. Eczema affects all ages, and the eruption is chiefly general, extending over large surfaces; whilst in porrigo it affects children and is more local.

CAUSE. The disease arises from direct infection, by using combs, brushes, caps, towels, etc. It often occurs in children during the period of dentition, and most frequently during the damp season of the year, and in sudden changes of the atmosphere. It most commonly attacks children between the ages of 3 months and 12 years. Improper feeding and bad ventilation produce it; and it is sometimes (though rarely) caused by vaccination. The general health is as usual, except in severe cases.

What is the cause of the infection? In my mind, this depends upon a vegetable parasite, which, I believe, has not hitherto been described by any author. I have examined fifty or sixty cases carefully, with only a vague result; for in some I have found the same parasite, and in others I have quite failed to discover it. The parasite which I have found is a cryptogam, and is very similar to that found in sycosis, but differing in size. It consists of a stem with branches and spores; about the hair itself I have failed to discover any disease. I am of opinion that this disease is very similar to sycosis; both being dependent upon the same parasite.

I tried the following experiment three years ago.

J. B., a warder at Cold Bath Fields, came under my care for sycosis menti, which had resisted treatment. He allowed me to inoculate his arm from his chin. In seven days, there was a distinct porriginous scab; viz., a psydracium surrounded by no inflammatory base. The same parasite was found in it as in the chin; and the disease yielded to the same treatment, except that the arm got well first.

TREATMENT. This is very simple and effective. I generally treat all the cases coming under my care as Mr. Startin does at the Skin Hospital; viz., by the internal administration of iodide of potassium, and the application of compound sulphur ointment of the Skin Hospital *Pharmacopœia.*+ But any other antiparasitic treatment would do; and, in a large number of cases, no medicine is at all necessary. I have very often used, with a good effect, alkalies; viz., magnesia, sesquicarbonate of soda combined with a little colchicum, and an ointment composed of three grains of nitric oxide of mercury and half an ounce of lard, with three drops of creasote.

But the most important point is to *remove the scab.* The head must be kept clean by washing it with the yolk of an egg and warm water, the use of soap being avoided. In some extreme cases, bread and water poultices over the scab are of great service. A regulated diet is important; it should not be overstimulating, and the meals should be taken at regular hours. Sweets of every kind, pastry, salted food, are not to be taken. Beer, wine, and spirits should be strictly prohibited. I now cite the following cases, in proof of the correctness of my diagnosis, and the treatment consequent thereon.

CASE I. J. S., aged 4 months, applied at the Farringdon Dispensary, March 1860. About a week previously, the mother observed that the child had a sore head. She found a scab upon her breast, and a whitlow on her finger; and, upon inquiry, discovered that the girl who had tended the child during her absence from home was suffering from the same disease. Upon examination, I found that the child had porrigo contagiosa. The scalp alone was affected. The glands in the neck were very much enlarged. The mother had a true porriginous scab upon the breast. This was the first instance in which I found the parasite. In all three patients I found it. They were put under treatment, and soon got quite well. The whitlow on the mother's finger I opened; it discharged a thin watery pus.

CASE II. J. B., aged 2 years, came to the Dispensary in 1860. He had always had good health. The disease first showed itself four weeks before. He had been under treatment, but had derived no benefit. The whole of the scalp was more or less affected with the disease; also the nose and back. Another child, who slept in the same bed, was likewise affected. The glands in the neck were very much enlarged, and one had suppurated. There was no distinct cause, except that the child went to an infant school, where many of the children had eruptions; and the same parasite was found as in the former. The other child came to the Dispensary the following week. The legs, back, and head were affected. The same parasite was found. In both, the disease yielded rapidly to treatment.

CASE III. A. B., sister to the above, came to the Dispensary this year. The child was quite free from any disease till vaccinated. The mother stated that the child from whom her baby was vaccinated had an eruption on its face. On both arms, where the child had been vaccinated, were distinct porriginous crusts; and the child had porrigo on other parts of the body. Two more children in the same family caught the disease; and the mother had whitlows and porriginous scabs upon her chest. I found the parasite in *two* of these cases. They all soon got well under treatment.

* Dr. Gull.

+ *Compound sulphur ointment.*—R. Sulphuris sublimati ʒss; hydrarg. ammonio-chlorid. ℈ss; hydrargyri sulphureti cum sulphure ℈ss; conterendo misceantur; et adde olei olivæ ʒii; adipis recentis ʒvi; creasoti gttas iv.

SOME ACCOUNT OF THE OPERATIONS PRACTISED IN THE NINETEENTH CENTURY FOR THE RELIEF OF TENSION OF THE EYEBALL, GLAUCOMA, ETC.

By JAMES VOSE SOLOMON, F.R.C.S., Surgeon to the Birmingham and Midland Eye Hospital.

[*Read before the Midland Medical Society, February 3rd*, 1863.]

[*Continued from page 509 of last volume.*]

Division of the Ciliary Muscle. [It was shown in the first part of this article, that Mr. Hancock's theory of acute glaucoma being dependent upon an arthritic condition of the blood, and spasm or constriction of the ciliary muscle as evinced by a conical state of the cornea, were unsupported by the cases which he had appended as illustrative of his views. I now proceed to offer some other objections to his opinions, which, in part, arise out of a consideration of the physiological anatomy of the choroid and ciliary muscle.]

In the first of a series of articles on "Incision of the Ciliary Muscle," published in the *Medical Times and Gazette* (Jan. 19, 1861, p. 56), I remark: "The existence of ganglion-cells in the choroid (Müller and Schweiger), and the arrangement of its vessels (and nerves) indicate the importance of it in the nutrition of the eye. Is it probable that with such nervous and vascular endowments, the function (circulation?) of the choroid is made subservient to the greater or less tension of a muscle, which, among civilised nations, almost equals in activity that of the eyelid; which, in many occupations—watchmakers, engravers, etc.—is maintained for eight or ten hours of the day in constant contraction, without ren-

dering such employments specially liable to glaucoma or choroiditis? Is it credible that this little delicate muscle, which is only one-eighth of an inch broad, and which is arched to the curve of the case of the eye, and so rich in nerves as to have been mistaken by the older anatomists for a ganglion, possesses such power as to be able to invert by spasm or constriction of its fibres, the arch of the tough fibrous sclerotica, at a point corresponding to its position, and to cone the cornea? According to my observations, before the arch of the sclerotica will suffer inversion or flattening, so as to form a kind of neck to the cornea, its structure must be weakened, either by inflammation of the choroid when it becomes thin, or by a fracture from a blow—as, for example, where the lens has been subconjunctivally dislocated, in which case the cornea has a tendency to become conical. If it be replied that it is the circular, and not the radial fibres, which are in a spasmodic or constricted state, then we should expect the patient would obtain more distinct vision from concave glasses; whereas, in glaucoma, we find he corrects the presbyopia which precedes the impaired vision by wearing convex glasses. Moreover, it has never been explained (by Mr. Hancock) how an incision in the direction of the radial fibres relieves the assumed spasm or constriction of the muscle in question. Assuredly, if an organ like the thoracic diaphragm were in a state of spasm (and its division had been decided upon as practicable and proper), the surgeon would not incise it in the direction of its fibres, but contrariwise. Nor can I admit what is observed in spasm of the sphincter ani, and the relief of it by myotomy, bears any sort of analogy, as stated by Mr. Hancock, to the treatment of glaucoma by cutting asunder the ciliary muscular circle. Before such illustration can be considered of argumentative value, it must be shown that the relation of the vessels to the direction of the fibres in the two muscles is the same. Mr. Hancock is too good an anatomist to be unaware that the hæmorrhoidal vessels which suffer compression and congestion in spasm of the sphincter ani run longitudinally in the gut, and at right angles with the muscular fibres; whereas, the radial fibres of the ciliary muscle and their vessels run parallel,* or nearly so, and, consequently, the latter are not constricted by the former."

To these arguments, Mr. Hancock has never attempted the slightest answer.

But it may be suggested, if there is not spasm, may there not be such constriction of the ciliary region that the eye will expand rather in its antero-posterior axis than laterally, and thereby a conical cornea and a groove over the ciliary muscle be produced?

Modern clinical observations conducted by Von Gräfe, Bowman, and Donders, are entirely opposed to such a view. These authorities agree that, in consequence of the intra-ocular pressure, the cornea, in glaucoma, has a tendency to become flat.† Indeed, it is obvious, on mechanical principles, that the arch of the cornea cannot be lessened without a proportionate expansion of the sclerotic ring (ciliary region) with which its base is continuous. But, while insisting on this view, I by no means pretend that any form of eye is prophylactic of glaucoma; we know that conoidal and buphthalmic eyes sometimes become the seat of the glaucomatous process. Such occurrence, however, is accidental, and in no way in the relation of cause and effect.

One more observation, and I will dismiss the pathological views propounded by Mr. Hancock. If it be true that an arthritic condition of the blood-vessels and ciliary spasm be the main elements in the production of the glaucomatous state, then a resort to operative measures certainly cannot be needful. The patient will only require to be armed in one hand with a solution of atropine to relax his ciliary muscle, and in the other with a supply of antiarthritic medicine to depurate his blood of its *materies morbi*, and in due time he should be cured. Judged by his papers in the *Lancet*, Mr. Hancock has not yet essayed anything in a direction so consistent and logical with the principles for which he contends.

I witnessed for the first time the performance of division of the ciliary muscle on a casual visit to the Westminster Ophthalmic Hospital on Friday, June 1st, 1860, exactly a week after a notice of my treatment of near-sightedness by intraocular myotomy had appeared in the British Medical Journal, and on the same day that the London edition of the *Medical Times and Gazette* drew attention to the subject, and to certain particulars wherein intraocular myotomy differs from division of the ciliary structures, as practised by Mr. Hancock.* The procedure which I witnessed was as follows. The patient being seated in a chair, the eyelids were held widely apart by an assistant, who stood behind him. Mr. Hancock, having placed his left hand on the patient's face, plunged with his right a large sized Wenzel's cataract-knife into the eyeball near to the rim of the cornea, and cleft the ciliary structures by an incision which radiated from the cornea in the space between the external and inferior pectus muscles. This sudden stab, as a matter of course, excited spasm in the external muscles of the globe, and consequently an emission of the aqueous and vitreous humours. In the case of a much enlarged eye, the vitreous body was so exceedingly firm, that none escaped, although the opening was extended to nearly half an inch in length; the diameter of the globe being enlarged, and *the vitreous acting as a tent in the wound.*

It is remarkable that the advocates of the operation, having in view the reduction of ciliary spasm, do not avail themselves of the use of chloroform, and limit the operation to a slow, methodical division of the sclerotica and ciliary muscle, taking care to avoid disturbance of the vitreous humour.

Mr. Hulke, after having witnessed this proceeding, publicly expressed the opinion that it differed in no respect from paracentesis of the sclerotica, as practised by Desmarres and others, with a view to lessen the contents of the globe. In reply, Mr. Hancock vindicated his treatment of acute *glaucoma* by publishing a case of *recurrent iritis*, or irido-cyclitis, which he had benefited, although *no fluid* was noticed to follow the incision.

This attempt to prove the value of an operation in a certain and peculiar disease (glaucoma), by showing its utility in one of an entirely different nature, must be admitted to be more plausible than conclusive. The following summary of the case to which reference has been made (*Lancet*, 1860, Case 15) is here given, as it exhibits in a striking manner the sort of clinical reports upon which Mr. Hancock founds his practice and commends it to the judgment of the profession.

A lady, aged 26, was treated during three years by mercury, tonics, and an issue in the arm, for an iritis of the *left* eye, which, notwithstanding, terminated in "*a progressive opacity of the lens* and capsule, *a contracted and irregular pupil*," and the "*utter extinction of vision.*" Subsequently iritis attacked the *right* eye. It recovered, and remained well for two years, when it became the seat of asthenic irido-cyclitis (inflammation

* The vessels of the ciliary muscle resemble those of unstriped muscle in abundance and arrangement, and indicate in the most decided manner the backward direction of the fibres, from their origin at the junction of the cornea and sclerotica, towards the anterior region of the choroid. (Bowman's *Lectures*. London: 1849, page 53.)

† It has been experimentally shown that excessive tension of the eyeball lessens the curvature of the cornea.

* "In this operation, the incision does not radiate from the lens and ciliary attachment of the iris, as it does in Mr. Hancock's operation for acute glaucoma; hence the diameter of the globe behind the diaphragm (iris) is not increased." (*Medical Times and Gazette*, June 2nd, 1860, page 548.)

of the iris and ciliary body of the choroid). Mr. Hancock, on being consulted, divided the ciliary muscle. No fluid was discharged, and vision was restored.

In the *Lancet* for September 13th, 1862, p. 279, and under the heading of Case 22, some additional particulars of this lady's case are given, which deserve attention as bearing upon the credibility of the papers under review. "Soon after September 5th, 1860, the *left* eye became less satisfactory; the vision rapidly failed; the pupil became insensible to light, and occupied with fragments of pigment."

Inasmuch as the *same* organ had been already reported (*Lancet*, 1860, Case 15) as having been affected with "progressive opacity of the lens and its capsule" (capsulo-lenticular cataract), and "utter extinction of vision", the reader is puzzled to understand in what way it could possibly "become less satisfactory", unless from a general disorganisation of its tissues; and the process whereby "the utter extinction of vision" was converted into a "rapid failure of vision" is equally mysterious.

In October, iridectomy was proposed to the patient, and rejected by her. All medical treatment was now dispensed with; and, by Christmas, the eye in which there was cataract and "utter extinction of vision" had so far recovered itself that small print could be read with it! So brilliant and marvellous a result having been got without the aid of the doctors, we are startled on reading that medical advice was again sought, and a constricting band placed upon an hæmorrhoid which had bled much (indeed, apparently during the several years the eye was under treatment). Misfortune, however, still remorselessly pursued this unfortunate woman; for the cataractous eye, which read small print on Christmas Day, 1861, again failed. Division of the ciliary muscle was performed at the beginning of 1862. "Notwithstanding," says the report, "the attack was very obstinate; but she was ultimately restored to sight." The degree of impairment of vision is not stated.

It is upon such clinical evidence as the preceding that Mr. Hancock asks his brethren to adopt division of the ciliary muscle as a cure for acute glaucoma, in preference to iridectomy.

I have given the method a very extended trial in public and private practice, and I regret to say that it has uniformly disappointed me as a means of *permanent* relief in glaucoma. My experience fully corroborates that of Desmarres and Bader, that it is merely a palliative. In many cases it has not even this merit, but proves positively detrimental to the interests of the patient, by preventing the adoption of a really useful plan of treatment at the outset of the disease.

The accidents which I have witnessed to follow its employment are ophthalmitis and atrophy of the globe. The latter event occurred to a patient who, from being blind, was enabled to count fingers immediately after the turbid humours were discharged from the eye.*

If a close investigation be made of Mr. Hancock's method, the claims he has made to originality must be seen to have been anticipated by other ophthalmic surgeons.

He cuts the ciliary muscle; so did Whyte and Desmarres.

His incision is made in the space between the inferior and external rectus muscles; so was that of Desmarres.

He plunges with force a large lance-shaped knife into the globe, and extracts vitreous: Desmarres did like wise, and published his results years before Mr. Hancock discovered (?) "division of the ciliary muscle".

He repeats the paracentesis on the same eye for the same disease; so did Desmarres, and moreover publicly avowed the necessity of the practice, which his imitator has not done.

Mr. Hancock asserts that the operation *cures* glaucoma. Desmarres candidly admits it produces no more than beneficial arrest in the disorder ("detente salutaire").*

Desmarres sometimes pierced the sclerotica behind the insertion of the ciliary muscle, without apparently obtaining any appreciable difference in his results. Whyte, as has been already remarked, always cut the muscle for the relief of tension.

These facts having been laid before the Society, its members will find no difficulty in deciding whether Mr. Hancock is in a position to claim originality for the slight modification, if any, which he has made in the mode of performing sclerotic paracentesis in cases of acute glaucoma—a measure of relief which was first suggested by Mackenzie, extensively practised by Desmarres, and which, in the hands of every surgeon who has given it an extended trial, has failed to cure idiopathic glaucoma.

* As a remedy for myopia, it is deceptive and dangerous. In the course of a few months, the patient finds his myopia to have returned, his adjustment destroyed, and that spectacles are no longer of any service to him.

Progress of Medical Science.

CAUSES OF DEATH AFTER OPERATIONS FOR HERNIA. Dr. Rupprecht of Munich, in a paper on the favourable and unfavourable results of hernia operations, describes recovery as taking place in the following ways. 1. Perfect recovery: *a.* the external wound being healed by the first intention; *b.* the wound being healed by suppuration and granulation, often with simultaneous radical cure of the hernia by adhesive inflammation; *c.* recovery preceded by peritonitis, which may or may not leave strong adhesions. 2. Imperfect recovery; *a.* with stricture of the intestine, as the result of gangrene; *b.* with formation of an artificial anus, also produced by gangrene.

He then speaks of the causes of death after the operation, arranging them under the heads of peritonitis, morbid changes in the intestine, shock, internal hæmorrhage, and pyæmia.

1. Peritonitis may set in very rapidly after the operation. It most frequently occurs when a large quantity of intestine has been protruded, and has been exposed for some time to the air during its replacement. It is also very liable to occur, when there has been very tight constriction and consequent considerable hyperæmia of the intestine; and especially when the operation has been preceded by repeated and rough attempts to reduce the hernia by the taxis. Very frequently, also, peritonitis occurs when a portion of the hernial sac has been cut away, or even when the omentum, after a portion has been removed, has been tied and reduced, as the ligatures not unfrequently exert no small amount of irritation on the peritoneal surface. The peritonitis sets in with rigors and nausea, soon followed by vomiting, generally of a green colour; the abdomen is somewhat distended, very tender on pressure; exceptions being afforded in the cases of those who have taken large doses of opium, or who are still under the prolonged influence of chloroform, and in whom therefore there is less tenderness. Even though all appears to be going on well after an operation for hernia, the surgeon must not lose sight of the possibility of the occurrence of peritonitis. It often happen that, when the intestine has been reduced and all obstruction has been removed, no evacua-

* "On pourra faire tomber la douleur et desparaître l'accès, par des ponctions pratiquées de temps en temps au travers de la sclérotique; il en résultera de cette façon une detente salataire." (*Traité des Maladies des Yeux*, p. 767. Paris: 1817.)