

maturity. Is the surgeon to operate upon an immature lens? or is he to hasten the maturity by some operation? The latter course Mr. Critchett believes to be full of danger; and, except in cases where the cortical layers of the lens are much involved, it is, he thinks, the duty of the surgeon and in the patient's interest to wait. In the case where one is cataractous and the other quite sound, Mr. Critchett thinks that in young subjects it is well to operate, but in elderly patients, while one eye retains its perfect power, the cataract in the other should not be interfered with.—*London Med. Record*, May 20, 1874, from *Annales d'Oculistique*, Sept. and Oct. 1873.

53. *Prolapse of the Vitreous Humour*.—Mr. PIERMÉ in a recent work gives the results of his studies relative to the anatomical changes which take place immediately after the loss of vitreous humour and on the question of its redevelopment, by the light of experiments on animals as well as from its clinical and surgical aspect, and his results are embodied in four chapters. The first chapter is devoted to the normal anatomy of the vitreous humour. The second gives an account of his experiments performed upon rabbits. The third is devoted to clinical observation; and, in the fourth, are summed up the conclusions derived from the preceding three.

The results of the experiments made upon the eyes of rabbits showed that, when a small quantity of the vitreous humour had been removed by means of a small syringe, the operation was a very simple one, and was attended by no evil consequences, no hemorrhage, nor any inflammation of the coats of the eye. Thirteen such experiments are recorded, and in all, the eye, which was soft and somewhat shrunken after the operation, in a few hours had regained its normal tension and appearance. The author asks whether, in these cases, the vitreous humour reproduced is identically the same, or, merely a new substance, more or less resembling that which had been lost; and he feels inclined to admit the reproduction of a veritable vitreous humour, and for the reason that the fluid removed from the vitreous chamber is the structureless and albuminous fluid which is again speedily reproduced from the surrounding bloodvessels. M. Pierné even admits a renewal to a certain amount of the nucleated cells described by Iwanoff. Surgical experience shows that a man may lose vitreous humour in consequence of a wound of the sclerotic, and in a short time the eye may regain its normal appearance and may retain its sight; and it has been the experience at some time or other of most surgeons, that on the day following a cataract operation, during which vitreous humour has been lost, the tension of the eye has been completely restored. It is, however, probable, that such eyes are never so sound or so well able to withstand disease, as those which have passed through the operation without accident. The case is far otherwise, however, when the loss of vitreous humour has been considerable; there is then the risk of choroidal or retinal hemorrhage with detachment of the retina perhaps, or, in the instance of a cataract extraction, the fragments of the cortical substance which are retained in the eye may become the exciting cause of proliferative changes, and take the shape of suppuration, or of membranous opacities which must prevent useful vision.

The conclusions arrived at by M. Pierné are as follows:—

1. The vitreous humour is reformed readily and speedily both in the eyes of man and of the lower animals.

2. Prolapse of the vitreous humour is of greater danger when the wound is large, and naturally the gravity of the accident is greater in proportion to the amount of the loss.

3. The vitreous humour may become the seat of an inflammation in consequence of a wound, and this inflammation may terminate by resolution, by suppuration, or may become chronic.

4. The immediate evil consequences of prolapse, generally have their origin in the choroid; and the ultimate result is atrophy of the eyeball.—*London Med. Record*, May 20, 1874.

54. *Foreign Bodies lodged within the Eye*.—Mr. C. S. JEAFFESON, Surgeon to the Eye Infirmary, Newcastle-on-Tyne, makes (*Med. Times and Gaz.*,

March 28, 1874) some judicious remarks on this class of accidents. "There is one rule in ophthalmic surgery," he says, "which will help us to deal with a large class of these cases, and it is this: *That an eye which has been damaged by accident or disease, and which is no longer useful for visual purposes, is a dangerous organ, and should be removed.* I do not wish to assert that this rule should always be rigidly carried out as regards eyes which have been destroyed by idiopathic disease, although I think, in these cases, a rigid conformity to it would rarely carry us astray. In traumatic cases I firmly believe that it can never safely be departed from, and should be carried out as soon as we have convinced ourselves that the visual power is gone, or will be so low as to be practically useless. Scarcely a day passes in my public and private practice without my seeing a case of sympathetic ophthalmia, which might have been averted had this rule been thoroughly understood by the bulk of practitioners; and every year a large number of persons are consigned to a life of darkness and misery from a want of appreciation of the importance of it. Patients have a great horror of enucleation, and require usually a great deal of pressing to submit to it; and for this reason the surgeon must be firm and unflinching, and must indicate the necessity for action in the most forcible language.

"Now, in by far the larger number of cases in which foreign bodies are lodged in the deeper parts of the eye, the visual power will have been destroyed immediately, or will certainly depart after a few days, and it will only be in exceptional cases that difficulty will arise in determining what should be done.

"Sometimes we may have an opportunity of extracting the foreign body, and there are some few cases on record where intruding substances have been extracted from the vitreous chamber, but it rarely happens that the combination of circumstances is sufficiently favourable to allow of this course being pursued. In my experience the vitreous becomes very quickly turbid after an injury, and the chance of extraction is slight, unless the patient is seen almost immediately after the accident, and when the position and relation of the foreign body can be unmistakably made out. Indiscriminate fishing for the intruding substance (a practice I have seen adopted more than once) is much to be deprecated, and can lead to no good results. Sometimes we may have strong reasons, from an examination of the track of the wound and other circumstances, for suspecting that the foreign body lies in a certain position, although we may not be able to see it. It is then justifiable to make a small incision in the sclerotic over the suspected spot; and cases are on record where this has been done with success. I need scarcely say these operations should never be undertaken by persons wholly unpractised in the delicate manipulations of ophthalmic practice. When patients are seen soon after an accident, it seldom happens that there can be much difficulty in deciding whether a foreign body is embedded in the vitreous or not, especially when it has passed through the cornea and iris, or lens, and there is little blood effused. It may be more difficult to diagnose between simple penetration and lodgment when the wound is made directly through the sclerotic, as we naturally miss the visible evidence of wounded intraocular structures.

"What should, then, guide our treatment in doubtful cases? In my opinion the following circumstances:—

"1. If there are the slightest signs of sympathetic ophthalmia in its fellow, the injured eye should be immediately excised.

"2. If vision is absolutely lost beyond hope of recovery, the eye should be sacrificed.

"3. If the wound is in the ciliary region, and there is no prospect of really useful vision, the eye should be excised.

"4. If the wound is not in a dangerous region, and the impaired vision seems to be in a great measure due to effused blood, I should not advise immediate operative interference.

"When once we have made up our minds that enucleation is necessary, is it advisable to wait till acute inflammatory symptoms have in a measure subsided? For my own part I think not. I have frequently performed enucleation during the most acute inflammatory stages, and I never have seen any bad

results follow. I believe by following this rule we may frequently curtail a great deal of pain and anxiety which would have been incurred by waiting.

"When foreign bodies are lodged in the anterior chamber, lens, or iris, they are generally clearly visible, and may usually be removed without much difficulty whilst the structures are still transparent. When they are lodged in the lens, no time should be lost, for sometimes it happens that a body which remained *in situ* whilst the lens was firm, disappears behind the iris when the lenticular matter becomes diffident, and, if extraction be attempted at this period, special care must be employed, as the lenticular matter not unfrequently flows out, leaving the foreign body hidden by, or entangled in, the folds of the iris.

"Occasionally a foreign body which has been lodged in the eye will escape spontaneously."

55. *Tubercular Ulceration of the Conjunctiva*.—Dr. H. SATTLER, Assistant at Prof. Arlt's Ophthalmic Clinique, reports the following case of this hitherto unobserved disease:—

The subject of it was a tall, spare, pale man, who, according to his own account, had until lately been perfectly healthy. When I first saw him he was under treatment at Prof. Schrötter's Laryngoscopic Clinique, for a hoarseness of which he had been complaining for the last six months. In the course of the previous two years he had often had a cough. He had now been complaining frequently, for some months, of a burning sensation in the left eye. Upon examination I found the lids of this eye somewhat red and swollen, with numbers of dilated veins visible through the integument. The semilunar fold of the conjunctiva was very swollen and red, and the bulbar conjunctiva slightly injected, while the cornea and the deeper parts of the eye were perfectly normal.

The conjunctiva of the under lid was uniformly red and velvety. Scattered over it were several small ulcers, the largest being oval in shape, and measuring two lines in its long and one line in its short diameter. These ulcers had sharply cut margins, and their floors were covered with a grayish exudation. There was little or no inflammatory reaction in the conjunctiva surrounding the ulcers.

The upper lid was enlarged in every dimension, and flaccid. The entire retro-tarsal fold, as well as the conjunctiva covering the upper portion of the lid, was occupied by one extensive ulcer, the floor of which was hidden by a yellow, creamy exudation, its margin being jagged and sinuous. That part of the conjunctiva which the ulcer had not attacked was greatly injected, and the papillary bodies swollen. Towards the inner angle, the ulceration extended slightly on to the bulbar conjunctiva, as well as to the semilunar fold. Its boundary in this direction was not well defined, and here, too, the conjunctiva seemed swollen from infiltration.

Owing to the extreme rarity of tubercular ulcers of the conjunctiva, suspicion was directed to syphilis as the fundamental disease; and, in fact, the ulcers were at first regarded as being of secondary syphilitic nature. At the same time it was not possible to obtain any certain sign of previous syphilis either from the unimnesia, or from objective appearances on the body of the patient. The ulceration in the larynx was at once recognized as tuberculous by Prof. Schrötter, and the further progress of the case, too, spoke decidedly against syphilis. The ulcers of the conjunctiva were painted with a solution of corrosive sublimate, and touched with solid nitrate of silver at intervals of three or four days, while, a little later on, some mercurial inunctions were administered. The patient, however, became more debilitated. A healthy condition of the surface of the ulcers could not be attained; on the contrary, they extended more to the bulbar conjunctiva, and fresh ulcers formed upon the under lid. The way in which these formed was characteristic. At first a pale grayish and slightly prominent point appeared in the conjunctiva; gradually this became more of a yellowish shade, and then became abraded on the surface, producing an ulcer about the size of a pin's head, which slowly increased in size, and became confluent with others in the neighborhood.

The patient's death took place about six weeks after he came under observation, and the autopsy removed all doubt as to the true nature of the affection.