On the Operation of Largely Puncturing the Capsule of the Crystalline Humour, in order to promote the Absorption of the Cataract; and on the Gutta Serena accompanied with Pain and Inflammation; from the Third Edition of Observations on the Cataract and Gutta Serena. By James Ware, Surgeon, F. R. S. Lond. 1812. 8vo. pp. 26.

In the former editions of Mr Ware's Works, several cases were inserted of persons having recovered their sight by the opaque crystalline lens being absorbed without the necessity of performing any operation. These papers are omitted in the third edition, and the observations now before us are introduced to point out a method by which the absorption may be promoted, not only in cases of cataract subsequent to an external injury, but also in those cataracts which come on in infancy, and in congenital cataract. This method consists of an operation, which has, of late years, been strongly recommended in all cases, the puncturing the capsule of the lens with a needle, and instead of depressing the cataract, the endeavouring to break it down, and leave the fragments to be absorbed in the aqueous humour. This mode was first recommended by Mr Pott, in cases of soft or fluid cataracts, where they cannot be depressed, and has of late years been strongly recommended in all cases by Professor Scarpa and Mr Hey of Leeds. It gives us much pleasure to find that the author, though he recommends this mode in the cases of cataract in early life, still gives a decided preference to the operation of extraction, which we have repeatedly pointed out to our readers as unquestionably the best mode of removing the disease in the adult. Mr Ware, speaking on this subject, remarks:

"To this indiscriminate preference, however, I cannot accede; being fully persuaded, that, though in the cases of young persons, and particularly of infants, the operation of largely puncturing the capsule, and breaking down the substance of the opaque crystalline, possesses considerable merit, yet when the cataract attacks adult and aged persons, the operation of extraction, if well performed, has greatly the advantage over it."—p. 5. And again, p. 9. "The experience of more than thirty years authorises me to entertain a much higher opinion of the operation of extraction, and to express a decided preference of it, when the disorder attacks adult persons and those who are aged."

In performing the operation of puncturing the capsule of the crystalline humour, great benefit is derived from the artificial
ficial dilatation of the pupil by means of the extract of belladonna. Though the singular property possessed by this, as well as by other narcotics, was first pointed out in London by the late Mr Sanders, it has been long known on the Continent, and we recollect having seen an operation for cataract performed a dozen of years ago, where the belladonna had been previously applied. Of late years it has been more particularly noticed by Professor Himly of Jena*, and the late Professor Schmidt of Vienna, who gave a preference to the hyoscyamus extract, as being less stimulant when applied to the eye itself, and as its effects are confined to the iris, whereas those of the belladonna sometimes extend to the retina. The dilatation of the pupil by means of the belladonna, may be caused by its internal use, but it is produced with more certainty by rubbing a little of the extract on the eye-brows, or applying it to the eye diluted with water, by means of a hair-pencil.

The instruments used in this operation are Pellier’s elevator for the upper eye-lid, which is always necessary in the case of infants, though, when the patients are beyond that age, the author observes, it may sometimes be dispensed with, and the eye fixed by the fingers above; a needle resembling that of Mr Hey, except that its extremity is pointed, and it cuts on one side for the space of about the eighth of an inch; the other side is blunt; it is about an inch long, and should form a complete wedge through its whole length. The pupil having been previously dilated by the application of the belladonna, half an hour before, Mr Ware thus describes the steps of the operation:

“*The patient being either seated on a chair of a suitable height, or placed on a table with the head properly raised on a pillow, the bent end of the speculum should be introduced under the upper eye-lid, and the instrument committed to the care of an assistant. The eye being thus fixed, the point of the narrow bladed knife above mentioned should be pierced through the sclerotics, on the side next the temple, about the eighth of an inch from its union to the cornea, with its blunt edge upwards; and it should be pushed forwards in the same direction until so much of its blade has entered the eye, that its point has nearly reached the crystalline. Its point should then be brought forwards, until it has passed through the opaque crystalline and its capsule, and is plainly visible in the anterior chamber of the aqueous humour. The future proceedings must be governed by what now occurs. If the cataract be fluid, and the anterior chamber become immediately filled with the opaque matter, it appears to me advisable to withdraw the instrument, and defer further measures until the matter be absorbed, which absorption usually takes place in the course of a few days, and sometimes of a few hours. If no visible change be produced

* Ophthalmologische Beobachtungen.
produced in the pupil, the point and cutting edge of the instrument should be applied in different directions, so as to divide both the opaque crystalline and its capsule into small portions, and, if possible, to bring them forwards into the anterior chamber. This may require the instrument to be kept in the eye for a minute or two; but, if the operator preserve his steadiness, he may continue it there a much longer time without doing the least injury to the iris or any other part. If the cataract be found of a firm consistence, (though this rarely happens in young persons,) it may be advisable to depress it below the pupil; and in such a case particular care should be taken to perforate largely the posterior part of the capsule, and to withdraw the instrument immediately after the cataract has been depressed, in order to hinder it from rising again. If the opacity be in the capsule, the instrument will not act so easily upon it as it does on the opaque crystalline; but, notwithstanding this, the capsule, as well as the crystalline, may be divided by it into larger or smaller portions, which portions, when thus divided, will be softened by the action of the aqueous humour; and though, in the first operation on such a case, it may not be possible to remove the opacity, yet, on the second or third attempt, the divided portions may be brought forwards into the anterior chamber of the aqueous humour, in which place they will then be gradually absorbed and will soon disappear.” p. 11-14.

In performing this operation, Mr Ware is farther of opinion, that the surgeon will operate with more composure if the patient is laid on a table, than if he be placed in the erect posture on a chair, and this will be found particularly proper where the patient is an infant, and his steadiness cannot be depended on; and, of course, if the right eye is the subject of operation, and the surgeon operate with his right hand, he must sit behind the patient, and, in that case, will manage the speculum with his left hand, while an assistant depresses the under eye-lid. If symptoms of inflammation come on after the operation, or the patient suffer much pain during its performance, the antiphlogistic regimen should be rigidly observed, for we have found, in all operations for cataract, that the success is more frequently prevented by inflammation than any other occurrence, though the author remarks, that he has never once had occasion to take blood from infants, and very rarely in persons under twenty years of age. The patient should be kept in a dark room, and the eye guarded against a strong light by a compress of linen dipped in a weak saturnine lotion, for a few days after the operation. At the end of ten days the inflammation is generally gone, and if the opaque matter be observed still to obscure the pupil, it is recommended to repeat the operation in the same way, endeavouring to bring the opaque portion into the anterior chamber. Mr Ware observes, that in the greater number of cases that have come under his care, the operation has been repeated
peated twice; in a few the cure has been completed the first time; and in only three out of the last twenty has it been requisite to repeat the operation a fourth time. Instead of these frequent repetitions of the operation, we are of opinion that it would be much better to follow the mode recommended by the late Mr Gibson of Manchester,—after the first operation with the needle, to make a small incision in the transparent cornea, and to extract the opaque portions through it; as in that way their removal may be in general effected at once, and because it is attended with less danger and irritation to the eye, and occasions less pain to the patient.

Mr Ware concludes the account of this operation by remarking, in a note, that he had been informed that the late Mr Saunders punctured the cornea instead of passing the needle through the sclerotica. This operation was proposed in the year 1797, by the late Dr Conradi, and repeatedly practised by Dr Beer, and other oculists, with various success; but, in cases of adults, cannot be brought into comparison with the operation of extraction, and on that account is now generally laid aside, though it might be of great benefit when the crystalline is decidedly fluid, being attended with much less pain than the usual mode of performing depression.

On the Gutta Serena accompanied with Pain and Inflammation.

It not unfrequently happens that patients labouring under amaurosis, or insensibility of the retina, are subject to attacks of inflammation of the eye, which the author considers to be of a peculiar kind, and not removable by the ordinary means. From having observed an effusion of lymph between the choroid coat and retina, in cases of gutta serena, after death, Mr Ware was led to try the effect of puncturing the ball of the eye through the sclerotica, with a grooved needle, and in many cases it has been attended with beneficial effects. As these cases are not of frequent occurrence, we shall select one of Mr Ware's, as the best description of his method of treatment:

"Mr G. of Chippenham, applied to me, in the latter part of November 1810, on account of an inflammation of the left eye, which had been accompanied, upwards of three weeks, with a most violent pain both in the head and eye; the sight having been previously lost by a complete gutta serena. A great variety of evacuant and anodyne remedies had been employed, both externally and internally, by his medical adviser in the country, without affording lasting relief. In this instance, suspecting a fluid to be effused between the choroid coat and retina, I immediately made a puncture through the sclerotica with the grooved needle above mentioned; carrying the point of the instrument about three-eighths of an inch into the ball of the eye, a little further back than the part which is usually punctured in the operation of couching. A considerable quantity of a
watery fluid, evidently different from the vitreous humour, issued immediately through the groove of the instrument. The operation gave considerable pain, and it did not wholly cease for two hours; but afterwards the patient fell into a sound sleep, and awoke much refreshed, and quite easy.” p. 18–20.

Mr Ware also mentions two cases of recent blindness, attended by a dilated pupil, without any pain or inflammation, where the patients recovered their sight by means of puncturing the eye-ball, and he remarks, that the fluid discharged appeared to be merely the vitreous humour, scarcely in a diseased state. Particular care should be taken to direct the point of the instrument so as not to wound the capsule of the crystalline, which accident might occasion an opacity of that humour.

Mr Ware concludes these observations by stating, that, in cases of closure of the pupil after an unsuccessful operation of extracting the cataract, he has repeatedly succeeded in making a new pupil according to Cheselden's mode, the fibres of the iris retracting after they were divided, and leaving an opening very nearly of the natural size of the pupil.

IV.

Bionomia. Opinions concerning Life and Health, introductory to a Course of Lectures on the Physiology of Sentient Beings. By A. P. Buchan, M. D. of the Royal College of Physicians, London. Small 8vo. pp. 119. London 1811.

We have been amused by the perusal of this little well-written volume, which exhibits a neat sketch of the general facts connected with the existence of animal life. But we doubt, whether it be calculated to accomplish one of the purposes which the author appears to have in view, to wit, that of seducing the unprofessional inquirer into the path of physiological science, and of teaching him, physically as well as morally, to know himself. For, independently of the difficulty of conveying information to minds that have “not been, in some measure, already awakened to analogous trains of thought,” which the author has acknowledged in his preface, the brief and aphoristic style, and the abstract form, in which he has chosen to inculcate his opinions, appear to be ill adapted to interest the novice, or to facilitate his comprehension of the arrangement and connection of the facts,