deviations, nor is the labour rendered tedious in consequence of their existence.

ART. IV.—*On the Means of distinguishing real from apparent Enlargement of the Eyeball, in Cases of Hydrophthalmia and Exophthalmia.* By JAMES O'BEIRNE, M. D., Surgeon Extraordinary to the Queen, one of the Surgeons of the Richmond Surgical Hospital, Dublin, &c.

AMONGST the observations appended to the case of General Hydrophthalmia, published in the Number of this Journal for May last, it was my intention to have inserted some on the subject of this communication. I was particularly anxious to do so, in consequence of one of my colleagues in the Richmond Hospital having expressed an opinion, that the case in question was one of protrusion, not enlargement, of the eyeball—an opinion which I combated at the moment; and, subsequently, in my clinical lecture on the case; by pointing out certain diagnostic marks, which, I am strongly disposed to believe, have been overlooked by all writers on diseases of the eye. Yet, strange to say, it will be found, on referring to my published observations, that I have altogether omitted to touch on the subject which I was so anxious to treat. How such an omission occurred, I am now quite unable to say. Be that as it may, shortly after the publication of the case, I received a letter from my friend Mr. Guthrie of London, expressing doubts of its nature; and some weeks afterwards, another from Mr. Middlemore, of Birmingham, requesting to be informed whether I could have mistaken protrusion for enlargement of the eyeball. These communications, of course, instantly reminded me of my omission, and its consequences; but I cannot regret an oversight which has, at once, procured for me the opinions of such distinguished men, and afforded me an opportunity of treating an interesting point of practice at more length, and in a distinct article. Suffice it then to say, that my reply to

Mr. Middlemore's query may be collected from the following exposition of the point in question.

In the natural state, by far the greatest portion of the globe of the eye lies imbedded in the orbit, and hidden behind the folds of the conjunctiva. We cannot, therefore, see the whole diameter or size, or more than a small segment, of this globe. Accordingly, when one eye is protruded by any newly formed solid or fluid body or bodies, situated in the back part of the orbit, it *appears* considerably larger than the other, although both are really of the same size. Such being the state of the facts, how are we to distinguish between cases of hydrophthalmia and others of exophthalmia, in both of which there is protrusion, and either real or apparent enlargement of the eyeball?

In order to try this question fairly, let us consider, first, protrusion as a circumstance common to both cases. In hydrophthalmia, the eyeball is protruded by its own enlargement, and fills the orbit so as to render it impossible to ascertain by the touch whether the latter is occupied, or not, by any unusual solid or fluid body. In exophthalmia, the touch, the state and appearance of the parts, and the history of the case, may often enable us to detect an enlarged lachrymal gland, an abscess, fatty tumours, serous cysts, exostoses, and sanguineous or serous effusions, when situated immediately behind the conjunctiva; but none of these means will enable us to ascertain the presence of these or other morbid degenerations more deeply seated in the orbit. Again, with respect to the next feature common to both diseases, the *appearance* comes so exceedingly near to the *reality* of enlargement of the eyeball, as to make the distinction between them one of too great nicety to be decided by the eye of even the most acute and clear-sighted observer; and hence arises the frequent diversity of opinions on the point. Neither can measurement by callipers give any idea whatever of the relative size of the affected and the unaffected eye; for, although we may thus measure the former, we cannot measure the latter, in consequence of its greatest diameter being situated so deeply, and covered by the folds of the conjunctiva.

Such are our present means of distinguishing *real* from *apparent* enlargement of the eyeball; and it must be confessed, that they are very imperfect and inadequate for the purpose. But I shall now direct attention to means which will enable us to determine the point, at a mere glance, and with great certainty. Before I do so, however, I cannot avoid expressing my surprize, that it should be left to me to point out such obvious, simple, and strongly diagnostic marks.

I have seen a great number of cases of exophthalmia, and, in all of them, without distinction of causes, the upper eyelid covered the eye, and hung down lower than usual, was more or less paralytic and puffed, and its surface was generally of a dusky red colour, and traversed by several enlarged veins. Such was the state of this appendage in the case of exophthalmia from an enlarged and scirrhus lachrymal gland extirpated by Mr. Travers, who gives a coloured engraving which accurately expresses the state which I describe.* Such also was the state of the upper eyelid in two subsequent cases of a similar kind in which the lachrymal gland was extirpated, one by the late Professor Todd, and the other by myself;† and the same may be said of two cases admitted within the last three months into the Richmond Hospital, under the care of my friend Mr. Adams; one of which was an instance of exophthalmia caused by an enlarged lachrymal gland, and the other an example of fungoid disease of the brain extending into the orbit and protruding the eye. I should state, however, that, after very considerable research on the subject, every author whose works I have examined, with the exception of Mr. Travers, has neglected to notice this state of the upper eyelid: yet this circumstance does not in the least weaken my confidence in the correctness of my observation. But I must now turn to the state of the same appendage in cases of real enlargement of the eyeball. I have seen some cases of

* A Synopsis of Diseases of the Eye, p. 233—Plate 2, fig. 6.

† Dublin Hospital Reports, vol. iii. Mine is the second instance on record of the performance of this operation, and the only one in which vision was restored.

hydrophthalmia, but a much greater number of large spherical staphyloma; and have invariably observed, first, that the eye was remarkably uncovered, and presented a staring appearance; secondly, that the upper eyelid was merely pushed upwards, and retained in that position, but unchanged in all other respects. That such was the state of these parts, in my recently published case of General Hydrophthalmia, will be shown by the following passage in the account of it, viz. "The eyelids are neither œdematous nor inflamed, [I ought to have added, nor paralytic,] and leave the eye perfectly uncovered."

Having now before us a full view, first, of the imperfections of all our present means of diagnosis in such cases; secondly, of the striking contrast which some of the symptoms and physical signs of the two diseases present, it is obvious that the following are the only certain means of distinguishing real from apparent enlargement of the eyeball, viz.—

In hydrophthalmia, the eye is completely uncovered; in exophthalmia it is more covered than usual.

In the former, the upper eyelid is pushed upwards, but unchanged in all other respects; in the latter, it hangs lower than usual, is more or less paralytic and puffed, and its surface is of a dusky red colour, and traversed by several enlarged veins.

ART. V.—*Statement of the Medical Effects of the Liquor Hydriodatis Arsenici et Hydrargyri.* By M. DONOVAN, ESQ.

Some months since, I inserted in this Journal a communication relative to the nature and composition of a new chemical compound, consisting of iodine, arsenic, and mercury; and I offered some suggestions on the diseases in the cure of which it might be found useful. These were psoriasis, lepra, and lupus.

Abundant trials, made by some of the most eminent members of the medical and surgical professions in this country, have proved, that these anticipations were not unfounded. The prac-