nection which exists between the tibia and astragalus. The broken portion of the fibula remained, on the other hand, attached to the external lateral ligament connected with the os calcis. The astragalus was tilted up at its fore part, so that the head of this bone projected above the other bones of the tarsus; but at its posterior part it was pushed down, and the surface which was in contact with the os calcis corresponded now to the posterior articulating surface of the navicular bone.

The second case was that of a man who, whilst suffering from delirium tremens, threw himself from the window of the second floor. When he was admitted, there was found to be a peculiar prominence on the outer side of the dorsum of the foot, plainly indicating the nature of the injury. Mr. Pollock, under whose care the patient was, failing to reduce the dislocation, divided the tendo Achillis, when the bones were reduced with ease. The man, however, died some days after, from the effects of the delirium tremens, the foot remaining in a most satisfactory state. The following is a description of the parts. The ankle-joint was not injured, though the two anterior fasciculi of the external lateral ligament were torn through. A small fragment of the astragalus was broken off at the posterior, internal, and inferior ankle of the bone, and the process of the os calcis (sustentaculum tali), with which that part of the astragalus articulates was also broken through. The interosseous ligament, between the astragalus and os calcis, was stretched, but not ruptured.

In the case at present in the hospital, there may be said to have been a double dislocation; a dislocation of the upper third backwards and inwards from the ankle-joint, and a dislocation of the head downwards from the scaphoid; so that there was, in fact, a complete dislocation of the astragalus from all its corresponding articular surface and attachments; and this form is stated to be the most rare of all dislocations implicating this bone.

Original Communications.

DIAGNOSIS OF CATARACT: EXTENT TO WHICH THE APPLICATION OF THE OPHTHALMOSCOPE ILLLUSTRATES THE SUBJECT.

BEING REMARKS IN THE COURSE OF CLINICAL INSTRUCTION AT THE CENTRAL LONDON OPHTHALMIC HOSPITAL.

By HAYNES WALTON, Esq., Surgeon to the Hospital, and to St. Mary's.

THIS matter is among those in ophthalmology that have received assistance from modern science, and therefore is well fitted for practical discussion. When cataract is fully formed in an eye otherwise healthy, there is no difficulty whatever in appreciating the fact. It is the most readily detected of all affections of the eyeball. There is the opaque body, which cannot be mistaken for any other morbid condition. No special knowledge is needed for the diagnosis, as this physical change is palpable, and cannot be confounded with anything else; and this is the case whether the crystalline lens alone, or the capsule of the lens as well, be spoiled. The larger the area of the pupil, the more apparent will be the cataract; therefore, if the pupil be unnaturally small, artificial dilatation of it will clear up any doubt.

Central circular opacity of the cornea, with shaded edges, of the size of the pupil, may just possibly deceive the very inexperienced, but it can never mislead one who possesses the desired anatomical knowledge, and will take ordinary pains to examine the eye. No more, therefore, need be said of it. I shall take no further notice of capsular opacity, because it likewise under any degree or extent cannot be mistaken; and it is the anterior part of the capsule, that in front of the lens, which becomes opaque; the posterior rarely, if ever, so suffers.

When the crystalline lens is nearly opaque, there being yet some clear portions, or when this body is generally invaded by opacity of subordinate density (which is equivalent to saying, when there is half-formed cataract), the detection of the change is sure by any one accustomed to eye-diseases. But in proportion to the incipiency of these changes, is there less ease in discrimination, and more scope for quickness of perception and tact, which are supplied in proportion to experience and study in such cases. I will merely add that the scrutiny is best made with a well-dilated pupil, under light condensed by a magnifying glass.

It is, therefore, only in the early periods of cataract that there is really any uncertainty; and that this is not merely imaginary is sufficiently shown by the fact that our most skilful surgeons of modern times, who justly deserved the reputation and the practice they acquired, were frequently blundering, and did not scruple freely to express their inability to discover an unerring test. The difficulty exists under two different states. In the one, the cataract is present, but cannot be recognised, the pupil appearing to be too clear to account for the slight defect in sight; in the other, there is really no cataract, the haziness or greyness in the pupil being due to the amber change in the lens, the coloration of age, and the declining sight to disease in some posterior part of the eye.

The ophthalmoscope has come to our great assistance; and it is for me to say what has been gained by it, and how, with this addition, the matter now stands.

The crystalline lens loses its transparency generally in a partial manner; that is, bundles or sets of lens-fibres become opaque, while the rest as yet are healthy; and it is for the most part at the circumference of this body that the change is accomplished. Very often the opaque spots are arranged in radii. It is, then, under such a condition that the ophthalmoscope is serviceable; for the striæ may be so small, or so deeply situated or arranged, as to elude detection by any other means. My practice therefore now is, when I suspect the presence of cataract, and cannot at once discover it, immediately to use the ophthalmoscope, previously artificially dilating the pupil, or not, according to the natural size of this aperture.

It would be a waste of time to speak about the forms which the opacities may assume, or to describe minutely the positions that they may occupy. It is enough to say about the latter that, when quite posterior, they seem to be deeper than they really are, and even look as if behind the lens. I have been able several times to pronounce the presence of cataract, while so incipient that the individual has been unaware of it. This has occurred while examining an eye supposed to be sound in persons who had the other far advanced in the affection. I can give no stronger evidence of the accuracy of this method of exploring the eye.

In using the ophthalmoscope for the purpose, high illumination must be avoided—a modified light only is admissible; for strong glare would make slight opacities almost transparent, or rather, render them invisible. In making the examination, too, the patient should turn his eye in different directions from side to side, etc.; because, by an oblique investigation, a more careful search can be made. It is better also in the first instance to make the inspection with the reflector alone, without the lens. For more and fuller details, I must refer to the chapter on the ophthalmoscope in my work on the *Surgical Diseases of the Eye;* and I will add only one remark, to the effect that dots of pigment, which are so often seen on the capsule of the lens, as the result of inflammatory attacks, by which the iris and the capsule have

been brought into apposition; as also cicatrices, or spots on the cornea, must not be mistaken for cataract opacities. It is enough to direct attention to this point to prevent a mistake.

When, however, on the other hand, the transparency of the lens is affected by general invasion of opacity, the ophthalmoscope is not so available. I am speaking of the very commencement of the affection, when as yet the eye begins to fail a little, especially in viewing distant objects; for somewhat later there are almost always distinct, although irregular markings of more opaque parts, but then the cataract must be so far advanced as to be readily visible; the degree of light then which is necessary to illuminate the eye that the interior may be seen, may render the slight haze in the lens imperceptible. I have proved this over and over. Of course, the presence of cataract in any degree must intercept light; but as the power of individual eyes to receive illumination varies, it is hardly possible to tell whether the greater or lesser degree of this is due to the one or the other cause. At first, I thought that so long as the fundus of the eye was visible, and the optic disc could be seen well defined, the lens could not be cataractous; now I know the fallacy of such a test, and am well aware that, with the lamp-flame sufficiently intense, it would require cataract far beyond the stage of incipiency to shut out the light.

Should the one eye only be concerned, the difficulty may often be overcome by a comparative examination of the other. Where both are involved there must often be doubt, which increases with the age of the patient, because the blackness of the pupil decreases after adolescence, and rapidly after manhood.

I pass now to that part of the subject in which the loss of blackness of the pupil in elderly persons, consequent on the amber change in the lens, is sometimes supposed to be cataract. This was a source of frequent mistakes up to a few years ago; very often there was no means of avoiding it. Here the negative evidence afforded by the ophthalmoscope in the absence of striæ, or opaque spots, leaves nothing to be desired in the very large majority of cases. Of course, there apply here the same remarks just made about the difficulty of detecting incipient uniform opacity of the lens, with the addition of somewhat greater force, since the eye of a young person is more easily illuminated than that of an old one.

I may say, however, that when proper care and attention are bestowed, it can be but seldom that errors will be made, except both eyes are cataractous. But a wrong diagnosis is just possible. It has occurred to me lately to know that several London surgeons, all in extensive ophthalmic practice, and any one of whom would be considered authority in such a matter by the profession, have been divided, in a particular case, as to the existence or non-existence of cataract in both eyes, after a most painstaking examination of an elderly lady.

I have yet to speak of one important pathological change in the eye, which concerns us much in the diagnosis of cataract—I mean haziness, or opacity of the vitreous humour. I suspect it must seem as though I have ignored the subjective symptoms of cataract, of which so much has been written in former years, as well as the careful distinctions made between them and amaurosis and glaucoma. The fact is, that they are worth nothing; so little indeed, as to be in themselves useless in a diagnostic point of view, and this chiefly because they are closely imitated by disease of another part of the eye, the vitreous humour, of which till now we were wholly ignorant. No one ever wrote or taught anything about haziness or mistiness of the vitreous humour, because no such state was known to exist. To the presence of such an abnormal condition must be referred many blunders and supposed anomalous states, and, I may add, many errors as to the suspected presence of cataract. Only a fortnight ago I was consulted by a nobleman holding a conspicuous place in the political world, who thought that he had cataract, having been told by a London surgeon that he was so afflicted. The answers to my questions were just what I should expect from an intelligent patient who had a lens slightly opaque. I thought there was cataract, although I could not at a glance perceive any indication of it in the pupil; but as a matter of caution I reserved my opinion till I examined the eye with the ophthalmoscope, when I satisfied myself that the lens was clear, but the vitreous humour was diseased.

But a hazy vitreous humour interferes with an ophthalmoscopic examination for cataract. I am not able to say what are the distinctive marks or signs between slight general haze of the lens and that of the humour; and this is no more than we should suspect, when we call to mind that the two bodies are in actual contact, differ little in density, and that the one is placed immediately behind the other. I have more than once thought that I had succeeded in discovering a means of distinction, but more experience disappointed my expectations. In any instance, therefore, when the presence of a diseased vitreous humour is suspected, the pupil should be examined under concentrated light, obliquely and directly, and if opacity be not detected in the lens—which most assuredly it will be, if this part be so changed as to produce any decided loss of sight, or any ophthalmoscopic effect—to alteration in the vitreous humour must the morbid change be attributed.

CASE OF BRONZED SKIN SUCCESSFULLY TREATED.

By Thomas Taylor, Esq., Cricklade.

On the 27th of June, 1861, I was called upon to visit Isaac Matthews, a carpenter by trade, stoutly made, of sanguine temperament, and about 36 years of age. I found he had been unwell for some time, and had been obliged to leave his work the last fortnight, simply from weakness. He was unable to walk across the room without assistance; he was in no pain, but felt an uneasiness about the loins; his appetite was not good; the bowels were regular, and the secretions from the bowels and kidneys healthy. The skin of the face and hands was highly bronzed, and had become so about the time he left his work: he said his friends had remarked of what a curious colour he was. He was advised to keep perfectly quiet, and do nothing whatever to produce fatigue, by attempting to walk or otherwise; to take sugar in large quantities with everything he drank; and to take five grains of iodide of potassium three times a day, in water.

July 1st. He was much the same. He did not find the medicine to disagree in any way, and was ordered to continue the same.

July 5th. He felt better before he was up this morning, and thought he should be able to walk; but on getting up felt as weak as ever. He was ordered to continue the iodide of potassium three times a day in four ounces of compound decoction of sarsaparilla.

July 12th. He was rather stronger, and walked rather better: the complexion was rather improved. He continued to mend under this treatment until the 22nd, when he had a severe rigor, which returned the next and following day, succeeded by fever, which reduced his strength.

On the 24th he had five grains of disulphate of quina twice a day, with croton oil liniment to the loins.

On the 7th of August his febrile state had left him, but was succeeded by a bronchial cough which was relieved in a few days; so that on the 9th he began taking the syrup of iodide of iron in half-drachm doses