wards the left side, and steadily increased until the time I saw her.

She had then the appearance of a woman in the sixth month of pregnancy, with a rounded, firm, elastic, but indistinctly fluctuating tumour, occupying the hypogastric region, and extending as high as the umbilicus. The cervix and os uteri were normal; the uterine cavity measured three inches. The uterus was somewhat fixed, especially on the right side, where there was a greater sense of resistance than on the left, but no decided tumour could be made out. The flanks were clear on percussion. There was an entire absence of any sympathetic signs of pregnancy. It appeared to me that we had to deal with an extra-uterine pregnancy almost certainly; but the question then arose: What else was there? What had caused the recent increase in size? The possibility of normal pregnancy at first caused me to hesitate about passing a sound, and this was done only because it was essential to confirm the diagnosis. At the worst, only a miscarriage would occur. Then an adherent ovarian tumour seemed probable, or a fibro-cystic enlargement of the uterus, or perhaps suppuration occurring in a mass of pelvic cellulitis, or in the interior of the sac of an extra-uterine foetus. It was clearly one of those cases in which an abdominal section was the proper course. This was done on May 14th, 1883, under ether.

An incision, about four inches in length, into the peritoneal cavity, exposed what seemed to be a universally adherent omentum, covering a large tumour occupying the uterine region. The adhesion to the abdominal wall on the whole of the right side was so intimate, that the hand could not be passed at all in that direction. The slightest attempt to do so caused free bleeding. On the left side a dark, purplish, smooth portion of tumour could be seen and felt, firm, tense, and apparently semi-solid, and continuous with the uterus. On handling this carefully I felt some crepitus, which decided its character. The cyst was opened, and found to contain a large quantity of foetid, dark, purulent fluid, and a macerated foetus. The bones show that it was almost, if not quite, mature. The contents were carefully removed, care being taken to prevent any escape into the peritoneal cavity, and the edges of the cyst were secured to the centre of the abdominal wound by silk sutures. The cyst-wall was thick, and muscular; it was firmly adherent over the whole of the right side and posteriorly for some inches to the colon, at which point it had thinned, and was very soft and friable. An India-rubber drainage-tube was left in the cavity, and a glass one in the pelvis, through the lower portion of the wound. Gauze dressings were used. Slight sickness followed the operation, and the next day she appeared little the worse for it. Temperature 100.4° Fahr.

Progress continued satisfactory up to May 24th (ten days after the operation). The abdominal drainage-tube was removed on the fourth day, and the wound was closed. The cyst drainage-tube was exchanged for a smaller one, as the cyst appeared to be contracting rapidly, and the discharge was diminishing, and, instead of a dirty-brown colour, was assuming the character of healthy pus. It was syringed out daily with sanitas fluid. The sutures had all been removed.

On the 24th, the temperature rose to 103°. There was a free mucous discharge from the bowel, and floating in it numerous flakes similar to the fluid in the cyst. A careful examination of the wound showed that the cyst had greatly contracted, and a probe would pass only a short distance. Discharge was very slight. Two days afterwards, the temperature fell to 99°, and a purulent discharge took place from the lower wound, which had reopened. A drainage-tube was reinserted, but it did not seem to communicate with the cyst.

From this time, she continued to improve again, having considerable pain, however, at times, relieved by full doses of opium. The discharge continued free for some time from the cyst and the wound.

On June 10th, she was allowed to sit up, but at night the temperature rose to 102°, and remained high (101° to 104°) until the 17th, when it again subsided.

On July 1st, a small bone came away, and as the temperature kept fluctuating, and the discharge continued, I had ether administered, and explored the wound thoroughly with the finger. The cyst had contracted into a sort of hour-glass shape, from the lower portion of which I removed three or four fragments of bone, which were almost embedded in the cyst-wall. I was unable to feel the cyst, with my fingers in it, through the vagina with the other hand, but it appeared to be near the fundus of the uterus, pressure within it depressing the uterus, and *vice versa*. From this time, the patient steadily improved. The wound has closed, and she is now well.

REMARKS.—The primary difficulty in this, as in all such cases, lay in the diagnosis. There was, it is true, an obscure history of extra-uterine pregnancy to begin with; but the rapid subsidence of the original enlargement, and the subsequent steady increase eighteen months afterwards, tended to complicate it and render it more difficult. It certainly looked like normal pregnancy following an extra-uterine one; but the absence of most of the usual signs of pregnancy precluded this conclusion. The passage of a sound decided it. The probability then was that it was an ovarian cyst, adherent to the uterus, with or without abnormal pregnancy, perhaps suppurating, or a fibro-cystic tumour of the uterus, a supposition which the increased length of the uterine cavity appeared to favour. The tumour, whatever its nature, was clearly connected with the upper part of the uterus, and moved, as far as its attachment would permit, with it. It was probably, therefore, of the interstitial form, if extra-uterine pregnancy were present. This view would accord with the supposition that the gush of fluid said to have taken place when labour was expected, may have been amniotic; and this may also explain how putrefaction may have been initiated; although it is possible this might have occurred through a minute perforation in the adherent colon, too small to be detected in the operation. The central position of the tumour, the inability to feel it with any distinctness on either side of the uterus *per vaginam*, and its firm elastic feel on palpation, pointed further in the direction of this view. There is nothing easier, as Dr. Thomas points out, than to describe these varieties of conditions in the lecture-room—especially after the event—but few things more difficult than to decide upon them at the bedside of the patient. This was clearly one of those cases in which an exploratory incision was urgently demanded, as the only means of determining the precise nature of the case on the one hand, and the first step necessary for its cure under any circumstances. The wisdom of this course was justified by the result; and I feel convinced that, if this foetid putrid mass had not been removed, it would, ere long, have burst into the peritoneum, and have inevitably caused the death of the patient. If the sac and its contents had remained in the shrunk condition which was observed about three months after delivery was expected to have taken place, possibly no harm would have ever resulted. But this instance shows very plainly, I think, the danger incurred by assuming that such a mass will remain in a quiet state, and will not do as this one did—begin to suppurate rapidly, bringing the patient slowly but surely into a condition of the gravest danger.

NOTE ON A HITHERTO UNDESCRIBED APPEARANCE OF THE RETINA, OR "SHOT-SILK" RETINA.

Read in the Section of Ophthalmology.

By W. SPENCER WATSON, F.R.C.S.

OUR mental conception of the living and healthy retina is derived from the absence of any visual perception of its essential elements. We can, it is true, see its larger vessels, and can even trace the position of the fovea centralis, but, for the rest, the less we see of the retina, when examining the fundus oculi by means of the ophthalmoscope, the more satisfied we feel that it is sound. This is, of course, equally true of all the transparent tissues within the eye, but I think it right, at the outset of my remarks, to insist on the almost perfect transparency of the retina, (1) because it is apt to be overlooked, and (2) because, as seen by the anatomist, the retina is not transparent.

Considering that the ophthalmoscope has only been in general use about twenty, or perhaps twenty-five, years, it is only to be expected that appearances, difficult to interpret, should now and then present themselves. That this is so, the following anecdote may serve as an illustration. A country practitioner, affected with serious impairment of vision, consulted a well known London oculist. He was naturally anxious to obtain from the latter some definite opinion as to the cause of his malady. The oculist, however, observed something hitherto undescribed, and found it convenient to shelter himself under negative statements. "It was not a cataract." "It was not glaucoma." "It was not intraocular hæmorrhage." "It was not this, nor that, nor the other." At last, our country friend's patience becoming exhausted, he bluntly exclaimed—"Is it a tenpenny nail?" "No," replied the oculist gravely; "it is not a tenpenny nail." With this oracular statement the sufferer had to be content.

I can quite sympathise with the oculist in this case. There is often much difficulty in naming intra-ocular appearances if pre-

viously undescribed. We can then only describe them in negative terms to those who expect definite and technical descriptions, but who may be perhaps but scantily informed as to the normal appearances. In these notes I shall endeavour to give a definiteness to a vague and (as I believe) hitherto undescribed appearance. For convenience, I shall call it "shot-silk" retina.

I have noticed this in a number of instances (about a dozen). It has occurred chiefly in the eyes of children affected with strabismus, and is associated with more or less hebetudo visus and defective refraction. It is not associated with any acute mischief, and is quite distinct from the cloudy swelling of inflammation. The appearance in question takes the form of a whitish flickering line, or lines, of light along the course of the vessels for the most part, but sometimes moving across the direction of the vessels, and assuming various forms and shapes when the eye is moved, or the observer views the fundus under a different angle. "Shot-silk" retina must not be confounded with the congenital opaque white prominences seen in certain eyes. These permanent radiating patches, extending from the margin of the optic disc into the surrounding retina,¹ have none of the flickering mobile character of the appearances in "shot-silk" retina.

I regard the "shot-silk" retina as due to a slight opalescence of the retinal elements analogous to that of the lens, and perhaps also of the vitreous body in advanced chronic eyeball-tension—to the condition of the dioptric media, which has given rise to the term "glaucoma." Most of us have noticed the lens in advanced chronic glaucoma apparently opaque when viewed by reflected light, but perfectly transparent when examined ophthalmoscopically, *i.e.*, by transmitted light.

It is, I think, possible that some similar change in the retina is the cause of the "shot-silk" appearance. Whether this is a degenerative change, or (as I am at present more inclined to think) a persistent foetal condition, I would not venture, at present, to give an opinion. Any reflected light sent to the observer's eye from the retinal elements must be the result of opacity or opalescence of those elements. The latter seems to me to be the condition present in the "shot-silk" retina; its change of position with the varying movements of the eye being analogous to that observed in some kinds of opalescent glass.

Data are wanting to enable us to decide as to the exact pathological significance of this opalescence of the retina (if such it be), but from its frequency in young children, in whom it is associated with strabismus and hebetudo visus, I am inclined to regard it as a congenital defect. I have seen it, however, in one case without any great amount of defective vision. The refraction in all the cases I have seen is hypermetropic.

As an alternative explanation, it is possible that the opalescence has its seat in the hyaloid membrane, and there is certainly one point in favour of this supposition. The persistent hyaline canal (a very rare condition) has a somewhat similar opalescent look; but, in this case, I think that the flickering and changing aspect of the opacity is due rather to its being viewed successively at different depths in the vitreous chamber—a condition which would not obtain in regard to the "shot-silk" flickering lines on the retinal surface.

It is possible, as a third alternative explanation, that similar appearances might result from the suspension in the vitreous of delicate filaments or membranes, more or less parallel with the plane of the retina, and reflecting the light variously, as the angle, under which the fundus was viewed, varied.

Of these three explanations, I prefer the one first stated—*viz.*, that the retina is opalescent, and that this is a persistent foetal condition.

I do not remember to have seen appearances similar to those described in adults; but this may be due to the fact that I have more frequently examined children ophthalmoscopically, when testing them previously to operating for strabismus. I suspect, however, that had I more frequently examined adults, affected with high degrees of hypermetropia, similar appearances would have presented themselves.

The following are some of the cases in which I have noted "shot-silk" retina.

CASE I.—Dora —, aged 11, of stunted growth, had occasional divergent strabismus and a want of symmetry in the orbits and eyes, the right eyeball being smaller than the left, and the right palpebral aperture being also the smaller of the two. The squint was so slight that I declined to operate. The sight was fairly good in both eyes;

and, though there was slight hypermetropia, the child saw and read easily without glasses. The "shot-silk" appearance was more striking in the left than in the right (or dwarfed) eye. The "flickering" light passed sometimes across the line of the blood-vessels.

I note in this case a congenital asymmetry, but little or no defect in the acuity of vision.

CASE II.—A. C., aged 12, had a convergent squint of $3\frac{1}{2}''$, and hypermetropia. In the left eye, which was the one habitually inverted, I found streaks of white light along the lines of the vessels, which streaks disappeared when seen at certain angles, and reappeared when viewed at a different angle. The squint was operated on successfully. After the operation the same "glimmer" of the retina was observed, and it was also noticed that the light sometimes seemed to pass across the line of the vessels.

A sister of this boy had also convergent squint. In this case, therefore, I note the "shot-silk" retina associated with a congenital ocular defect.

CASE III.—A. S., aged 7, had convergent squint of $3''$, and H = $\frac{1}{2}$. The squint was operated on successfully, and spectacles worn with much benefit. The same appearances were noted in both retinæ as in the two preceding cases. Here also congenital defects (*viz.*, a high degree of hypermetropia and squint) were associated with "shot-silk" retina.

CASE IV.—L. A., aged 11, had convergent squint of $1\frac{1}{2}''$ and a high degree of hypermetropia (H = $\frac{1}{2}$) and astigmatism, with probably some amount of hebetudo visus. The same "shot-silk" lines were noted as in the previous cases. Here also we have congenital defects associated with the retinal appearances.

CASE V.—S. H., aged 12, had slight convergent squint, with hypermetropia. Pearly white wavy lines ran parallel to the retinal vessels, and disappeared when the eye moved, or, if not disappearing, altered their position relative to the course of the vessels. "Shot-silk" wavy lines formed a shifting boundary to the yellow spot, which was very large and distinct in this case.

The above five cases are those noted since January 1881. I believe I have seen altogether about a dozen of a similar kind. I believe that, before a perfectly satisfactory theory can be formed, we want more detailed observations, and the concurrent testimony of a number of independent observers.

SURGICAL MEMORANDA.

COMPOUND FRACTURE OF THE SKULL.

THE following account of a case of compound fracture of the skull may perhaps be of interest as an example of the value of the antiseptic method of treatment in such cases. A boy, aged 9, received one evening a kick from a horse, which inflicted a contused lacerated wound on his right temple, extending from an inch above the middle of the upper margin of the orbit, outwards for an inch and a half. When seen an hour after the accident he was gradually regaining consciousness, a piece of the outer table of the skull, about the size of a sixpenny-piece, was lying loose in the wound, and also about a cubic centimetre of brain-substance. The boy had also lost a considerable quantity of blood, including some from the nose. The pupils were equal, and responded to light, though not readily; the pulse was irregular and intermittent, and was beating about 88 per minute. The wound was dressed antiseptically, any further interference being postponed till daylight. During the night he vomited twice, and had some slight twitching of the limbs. In the morning he was quite conscious, and his pulse was firmer and no longer intermittent, and, chloroform having been administered, the wound was enlarged, and a partly detached splinter of the inner table of the skull, an inch long and a quarter of an inch broad, was removed. It was found that the blow had made an opening in the skull an inch and a half long, and three quarters of an inch broad, depressing fragments of the skull to a third of an inch below the level of the surrounding bone, and tearing the dura mater away from the bone for some little distance round the opening. These fragments were still attached to the dura mater, and could not be moved without trephining, so they were left *in situ*, and a piece of drainage-tube having been inserted in the wound, it was closed, strict antiseptic precautions having been observed throughout. In the evening the boy's pulse was 96 and his temperature 99.4° , but the following morning both pulse and temperature were normal, there had been no more twitching or vomiting, and he had slept well; the discharge from the wound had come through the dressings, which were accordingly changed. When dressed again, four days afterwards, the wound had

¹ I allude to an appearance which Virchow showed to depend on the optic nerve-fibres retaining their neurilemma for a short distance beyond the optic nerve-margin, and into the surrounding retina.