either amounting to actual fits, or only to an aura
epileptica.

The following are two of some instances which I
have seen of epilepsy of the retina.

Case xi. Stephen P., aged 22, had had two years
before I saw him an attack of epilepsy, of which (he
said) the effects lasted for three days. On recover-
ing, he found the left eye closed (ptosis), and he
could not open it for seven days. From that time,
he had no further fits. He did not remember
his sight failing him for any time, or immediately
before the fit. What he now complained to me of
was, that about once a week or fortnight he would
lose his sight for a time, but that he recovered it
again. I found that he was amblyopic with the left eye,
and appeared to be slightly myopic with both. With
the ophthalmoscope, I detected neither a hyperme-
tropic nor a myopic refraction of the eye; the optic
disks were reddish, their contours rather ill-defined;
the vessels were rather small; there was an appear-
ce of tension in the internal tissues.

Case xii. A man, aged 21, a year ago, whilst at
work, found a “mist” come over his eyes sufficiently
dense to obscure objects around him. He has ever since
been subject to these attacks every four or five weeks.
They last for from five minutes to half an hour at a
time; the average being a quarter of an hour. During
an attack, he can see his way about, and even read with
difficulty. He has never had any fits, but occa-
sionally feels giddy. After one of his attacks, he feels
sickish and has a headache.

I am quite aware how imperfect is the above
sketch that I have ventured to offer on those obscure
functional impairments of the retina. It is necessarily
so, from the comparatively slight amount of atten-
tion that has been directed to them. I would be
imperfect, as it is, I trust, however, that it may prove suffi-
ciently suggestive to induce others to follow up what
I cannot help considering as a most interesting and
important study, not only for the ophthalmologist,
but for all who are interested in the investigation of
disease generally.

Carcinoma of the Stomach.

By John Richard Wardell, M.D., M.R.C.P., Phy-
sician to the Tunbridge Wells Infirmary.

[Concluded from page 629.]

To attempt to assign any real or regular cause of
cancer, would be at the best but a vain endeavour;
and all that we can assert, in the present state of our
knowledge, are mere hypotheses and vague surmises,
which are either not borne out, or are absolutely re
defuted, by the facts which accumulated cases present.
We know, however, that some occult cause, whatever
it may be, effects a very potent change in the fluids
that it institutes some morbid condition of the blood
capable of favouring the genesis of those flagrant
cell-growths known as malignant. We see this con-
dition in persons whose bodily conformation and ex-
ternal appearances are most opposite; sometimes in
the ruddy and muscular, as well as in the pale and
attenuated. The belief of many that it is an hered-
itary disease is a creed which has long been enter-
tained, and one that is becoming still more preva-
ient; for certain it is that, in many instances, other
members of a family are, upon inquiry, found to
have died of the same disease. Nor is the acknow-
ledgment of its transmission by inheritance at all
inconsistent with what we know of the vital prop-
ties of the organism. Absolute cancerous material
cannot be transmitted with the germ; but some
hidden, inscrutable impress is transmissible, which
impress at a remote period favours the development
of that product; and we must confess that it cannot
be entirely divested of any material relations. We
know that other diseases, as tuberculosis, gout, in-
sanity, are hereditary; and there is no reason why
the cancerous diathesis should not be transmitted in
like manner. That constitutional tendency is, how-
ever, very greatly promoted or retarded by the opera-
tions of external agencies; and there is no doubt that
a high state of civilisation conduces to its progress
and results. With the exception of the uterus, there is
no organ so prone to cancer as the stomach; nu-
merical data in our own and other countries having
abundantly attested this fact. Men are more de-
cidedly prone to it than women, probably on account
of their more intemperate habits, greater exposure
to vicissitudes of temperature, and greater mental
anxieties. Some few instances are given of its occur-
rence before the age of thirty. It is, however, very
seldom observed before the age of thirty-five; far
more frequently in those approximating fifty, and
in still more advanced life. It belongs to those hetero-
drastic changes which take place in the stomach, such
as, for example, the head of the pancreas, the liver, the spleen, the omentum or mesen-
tery, are affected. Some pathologists have affirmed
that it is the colloid variety which is most generally
found in the stomach. It would, I think, more corre-
cently express the fact, if we say that it is the scirrhus-
colloid which is most frequently met with in that
particular situation—the hard, fibred basic substance
upon which is superimposed the gelatiniform, locular
mass. Colloid may and does coexist with the villous,
encephaloid, and melanotic forms; but these com-
binations are not nearly so often observed. The car-
cinomatous matter is infiltrated into the areolar
system; because, in such a case, the interaction of a
resisting structure, it there finds less opposition to its
deposition. In the course of time, the muscular and
other tissues become encroached upon, and cancerous
cells are formed within the muscular filamentous
sheaths, the molecular constituents of the muscles
being absolutely displaced and occupied by the new
formation. One of the great characteristics of car-
cinoma is displacement and occupation. The pro-
duct which is substituted not only does not possess
the sequester eccentricities of the parts removed, but
it gravelly interferes with the functions of the organ
or organs which it has selected as its habitat. Again,
the vitiated secretions, which are poured out into a
hollow viscus, confer additional disorder. Carcinoma
of the stomach fully illustrates this evil. The large
jelly-like mass, by mixing its perverted exudations
with the gastric juice, so injuriously operates upon
the normal qualities of that fluid as to render it quite
unequal to the due performance of its office; hence
one cause of the sour ejections, the dyspepsia, the
hollow viscus, and a delirium. Carcinoma is great
diminution of flesh and strength, which an impaired
chyme must inevitably produce. The encephaloid
variety grows most rapidly; the scirrhus most slowly.
Scirrhous and colloid may exist in the stomach for
years before they destroy; the encephaloid will produce a fatal issue in the course of a few months. The one typifies the acute, the other the chronic form. The encephaloid and scirrhoum are considered to owe their existence to the contents of the loculi or alveoli, which are so characteristic of the colloid, are formed simply by irregular infiltration; they vary in size and configuration, according to the circumferential pressure, the amount of fibrous tissue, and their deep or superficial position. In the stomach, however, the colloid is more fusiform and less nodular than when deposited in glandular structures. Microscopic investigation has in latter years cleared up much that was previously obscure respecting the ultimate structure of cancer; and, by this acquired knowledge, diagnosis has been rendered much more certain than it was when mainly based upon clinical observation and empirical practice. Cancer-cells are regarded by Lebert as modified lymph-cells, often monstrously altered in size. Collis says they present more or less resemblance to typical forms; and in any specimens there will be much variation in the size and outline of individual cells. They are sometimes found by undissolved fragments of the original tumour. Lebert describes the colloid cells as being large, pale, oval, round, or tubular, lying in clusters. There are also small granular irregularly shaped corpuscles, which are regarded as cancer-cells hindercd in their development. The pyloric end of the stomach is most prone to carcinoma; most in frequency is the cardiac orifice; after that situation, the lesser curvature. The splenic end is least liable to the affection. It is a curious fact—nevertheless, one which is true—that the deposit is rarely or never seen to extend into the duodenum; and the only reason why this abrupt termination thus occurs appears to be, that the duodenum is far more constantly supplied with areolar tissue than the stomach. The mass may present much resemblance to cystic lymph; and it should not be forgotten that lymph will sometimes be deposited in the walls of the stomach, especially towards the pylorus, to considerable extent. But the malignant growth is much less uniform in its configuration; and there is not superficial softness in mere lymphatic deposit. When the disease pervades the cardiac orifice, the growth will extend into the esophagus, and cause organic stricture. When the liver becomes secondarily affected, the germs are transferred by the lymphatics to the hepatic orifice. In cases of especial cause, it should be remembered, the gastric veins run to the liver. The reason why the lungs are not implicated in carcinoma of the stomach, is supposed to be on account of the cancer-cells being too large to pass through the hepatic lobular plexus. When the liver has become carcinomatous, sometimes uneventness of eructation may be felt on its surface. I have known this in marked manner when there has been much emaciation. The stomach is often found agglutinated to the liver, and more especially when the disease is at the pylorus. When the growth at the pyloric orifice becomes considerable, the pylorus will be narrowed, simulating tumour or impaction at the ileocecal junction. I recently saw a case which I believe to be very illustrative of this fact. Rokitansky has known the pylorus to touch the symphysis pubis. We have seen in Case iv above recorded, that even when the mass hangs from the lesser curvature, the mass of the pylorus, which is a fact which, in a practical point of view, is of much importance. This falling down can, of course, only be when there is no attachment to neighbouring viscera. On reference to Case iv, it is stated that the patient was always in the least pain when in the erect position. The autopsy fully explained this peculiarity. The mass was pressed upon in the sitting or lying postures; but, on the resumption of the erect position, it would hang tolerably free in the general cavity.

The symptoms by which this formidable disease can be recognised are, in the earlier date of the affection, often obscure, and by no means easy of interpretation. When it has made progress, the diagnosis becomes comparatively easy. Sometimes it happens that the tumour is palpable by abdominal examination before it was even suspected. Again, it occasionally occurs, as Dr. Watson has remarked, without from first to last presenting any pathognomonic symptoms at all. It usually begins with dull, aching pain in the epigastrum, sour eructations, and an uneasy feeling of fulness and distention, which are at first merely attributed to indigestion; afterwards, there are loss of appetite, depression of spirits, and, curiously enough, an unwonted petulancy and irritability of temper. The tongue is comparatively clean; nor is there any symptomatic fever. Costiveness, alternating with occasional attacks of diarrhoea, supervenes, and with it there is sometimes present much sour fermentation which the unhealthy secretions from the cancerous surface are known to produce. No symptom, however, augurs greater import than the loss of flesh; and, if accompanied with the yellowish dusky cachexia, in addition to the more obvious and ordinary symptoms of a malignant affection, the issue is unfavourable. When the ordinary stomachic remedies fail, and the wasting goes on, there can be but little doubt of malignancy. As the complaint advances, vomiting generally comes on. In two of the foregoing cases, it came on immediately after eating. In both, the disease was at the cardiac end of the stomach. In Case ii, where there was partial stricture of the esophagus, the food was instantly rejected. In all the cases, the ejections were invariably sour. Sometimes there will be mixed with the glairy mucus of the coffee-grounds looking flakes, the results of hemorrhagic exudation, or the erosion of some of the smaller vessels; or there may be active hemorrhage. This symptom is in the latter stage. At the first, simple ulcer may be simulated; but, in simple ulcer, the pain is not so persistent, nor so sharp and lancinating; it occupies but a small area; and the rest of the mucous membrane is healthy, and there is little or no loss of blood. When the ulcer is not ulcereous, sickness is less urgent, and the patient lives longer. When the pylorus is the seat, a special train of phenomena supervene. This orifice becomes gradually narrower until positive occlusion well-nigh results; the imperfectly digested food can then but with great difficulty pass through the contracted portals; the stomach labours to overcome the obstruction; and the applied hand can feel a vermicular movement resulting from its efforts. By this excess of action, and the abnormal gases which are generated by perverted secretion, the organ becomes large, and percussion elicits pretumoral resonance. When there are no palpable impressions, the pylorus, the intestines are empty, and the belly is drawn in—a condition which is seen in some other forms of disease; for example, in typhus, when there is diminished chyle and great destruction of the tissues. When the cardiac orifice is the seat of the tumour, the swallowed morsel gives rise to pain immediately after it has been swallowed. Above, there is constriction; then there will be instant rejection, or (Case ii) the food will feel to stick as it were at the epigastrum; and the pain to which such obstruction gives rise is excessively severe. When the growth is in the lesser curvature, it very generally extends to one or both orifices. In Case iv, it did not do so. Sickness may
be a distressing symptom even when the inlet and outlet are free from disease. The mental faculties usually keep clear to the last. In all of the above examples, this was the case.

The diagnosis is more difficult at the first than afterwards. When the affection has progressed, palpation will assist the formation of an opinion very materially. Pressure gives pain at some circumscribed spot. This pain often radiates through into the back. Frequently, a large, irregular, hard substance can be felt in the right epigastric region between the transverse and the right ribs. The movement of this substance gives pain. When the cardium is the site of the growth, some thickening can be discerned (after emaciation has progressed) towards the splenic end of the organ. The patient's description of the pain should never be disregarded. Sharp, stabbing, hot, burning, were terms employed by the patient before the growth was noted. The branches of the par vagum enter the mass, there will be great suffering. If the tumour lie in front of the abdominal aorta, it will be lifted up by the pulsations, and simulate aneurism. Negative and stethoscopic facts will, however, guard us against such a mistake. In chronic or acute irritation of the gastric mucous membrane, the pain is diffuse, and referred to the entire epigastrum—not circumscribed as in malignant tumour. The ejected matters will assist in some measure in arriving at a correct diagnosis, not only as regards the true nature of the disease, but as to its particular position in the organ. Under the microscope, cells of a specific character can, on careful examination, be discovered mixed with the vomited fluids. If the growth be at the pylorus, the food will be partially digested; if at the cardium, it will generally be little altered. If there be much blood, we should suspect the encapsulated or melanotic variety. Notwithstanding all the foregoing rules for observation, necropsy will from time to time reveal conditions unsuspected, and disappoint us by not displaying those which we had anticipated.

Some time ago I was requested by Mr. Hutchinson of Lamberhurst to see with him a patient who had long been affected with persistent stomach-disease. There was no very decided cachectic expression; yet he got thinner, and his condition caused anxiety. The tongue was livid, flabby, smooth, csemagy; the appetite impaired; the epigastrum full and resonant. Pressure gave pain, which was not localised, but diffused over the whole region. There was pain after meals, but no vomiting. The urine was voided in normal quantity; specific gravity 1015; excess of triple phosphates. I gave it as my opinion, notwithstanding the loss of flesh and other doubtful symptoms, that his case was not a malignant. Arsenic, alums, bitter infusions, morphia at bedtime, and a regulated diet, were followed by gradual improvement; and for more than twelve months he has been quite well. An in-patient was admitted into the infirmary under my care several months ago, in the person of a tall, powerful woman, who had been seen suffering in a gentlemanly way in a small town. She had had epigastric pain, and more especially after eating. She looked sallow, anemic; and had become thinner. Her spirits were much depressed, and she believed she labourd under a fatal malady. A medical opinion had been given sus-