years old. The angle of the lid, just where the punctum is situated, was closely adherent to the eyeball by a very red and thick band. Nearly the upper half of the cornea was covered by a membrane resembling an ordinary pterygium, but rather redder. As with pterygia in general, it was continuous with, and seemed to grow from, the ocular conjunctiva. The pupil was partly covered by it. The history was different from that of the other case, there having been none of the injuries from which symblepharon usually springs. A purulent ophthalmia, contracted several months past, would seem to have been the exciting cause. But it is not unreasonable to infer that the treatment might have, from its severity, contributed to the effect, when we learn that solid nitrate of silver and other escharotics had been applied to the conjunctiva several times a week for months—a practice unfortunately common, and which Mr. Walton strives hard to diminish, as he never loses an opportunity of pointing out the impropriety of such measures. Whether, therefore, the adhesion had been from the cicatrix consequent on the destruction of conjunctiva, or whether from the inoculation of granulating surfaces, cannot positively be determined. It was resolved to attempt to check the growth on the cornea (for a slight extension of it would render the eye useless) by cutting off the vascular supply, as in the operation for pterygium; namely, dissecting away a strip from the sclerotic, and, for the present at least, not attending to the symblepharon. The upper eyelid was therefore raised to the extent that its adhesion would admit, and the operation commenced. Not till then was it discovered that the body was a soft and pulpy mass, through which the forceps readily tore: it was separated from the sclerotic with the handle of the scalpel, and trimmed off with a pair of scissors. The portion attached to the cornea was not readily raised, and Mr. Walton determined not to interfere with it, but to watch the result. This new material resembled soft, flabby, and unhealthy granulations. This false membrane, if we may so call it, was continuous with the outer edge of the band that connected the lid and the eyeball, and from which it was readily torn.

We saw the patient a week after he had been submitted to treatment. The beneficial effect was marked. The texture of the cornea was visible, red vessels having taken the place of the pulpy mass. The reason why dissection was continued to this part is because opacity of the cornea is almost sure to follow; whereas, if left to itself, the process of absorption gives a better result. The man was advised to go home to the country, and return in a month.

Original Communications.

CONTRIBUTIONS TO THE PATHOLOGY OF INTRATHORACIC CANCER.

By JOHN COCKLE, M.D., Physician to the City Dispensary and to the Margaret Street Dispensary for Consumption, etc.

[Continued from page 232.]

IN some preceding papers I attempted to point out the occasional difficulty, in cases of intrathoracic cancer, of arriving at a satisfactory diagnosis either from the subjective phenomena, or from the application of those physical methods of exploration so valuable in most intrathoracic maladies. It is therefore, clinically, of the greatest importance to avail ourselves of any additional sign which may throw light upon affections so avowedly obscure and defiant of our usual resources. Upon reference to the last paper published in this JOURNAL, March 21, 1857, it will be seen that the appearance of external tumour most materially contributed to a successful diagnosis—a diagnosis amply justified by the autopsy. I have now to detail another case in which such tumour at once enabled the diagnosis to be formed; the phenomena observed prior to its advent having been ill-defined in the highest degree.

The case was watched almost throughout by Dr. Elliotson, who has kindly placed the following history, with the preparation, at my disposal. For the description of the latter, and the general remarks, I must be considered responsible.

"In the middle of January last, a medical friend of mine took into his service, as butler, a young man three and twenty

years of age, who represented himself as a few years older, was pale, but active, and made no complaint. In the beginning of February, my friend observed him to pant without exertion, to grow paler, and to have a little œdema of the eyelids. In the middle of February, the young man complained, and his pulse was found to be 90; in a week it rose to 100; and it never became slower than this. At the end of the month, it was 120, and he had grown weaker, thinner, and paler, and become deaf. He was sent to me on the 4th of March. In addition to the other symptoms, he complained of pain in the loins, so great as to prevent sleep; and sometimes of pain at the occiput, and between the scapulae, and sometimes in front, and sometimes at the side on which he happened to be lying: he had also vertigo. The ganglia under the jaw on each side were swollen, painful, and tender. His pulse was 115; the urine not deficient, 1020 specific gravity, and without albumen or other morbid contents. Percussion and auscultation were healthy. He coughed, and expectorated a very little frothy mucus, which was sometimes reddish. The tongue was rather white; he was very thirsty; and the tonsils were swollen and ulcerated. His respiration was 20; his pulse 112. Two ounces of blood were taken from the arm, but it was neither cupped nor bled; he was purged with jalap and bitartrate of potass; and dry cupped on the loins. His pain in this part was entirely removed, so that he slept well. The pain between the shoulders continued, and did not yield to dry cupping. He now took preparations of iron in very minute doses, and continued them, but without any abatement of a single symptom. At first it appeared a case of acute inflammatory anasarca; but I soon saw there was some organic disease, though I could not fix upon its seat or nature. Tubercles began to appear on each side of his abdomen, on his thighs and arms, and ultimately in the orbits. His voice cracked. Percussion was dull at the highest part of the chest in front, and at length all over the right half of the chest; and respiration became inaudible to the same extent; and ægophony was heard to a very limited extent behind, at the highest central portion of the thoracic region. His ankles became œdematous. I expressed my opinion that the disease was malignant, and seated at the highest part of the chest, where an encephaloid mass would be found. He lay in bed for the most part, and always on the right side. He died on the 1st of May."

Autopsy. Upon opening the body, a considerable tumour presented itself in the anterior mediastinum, fusing into the walls of the anterior portion of the pericardium corresponding to the auricles, great vessels, and base of the right ventricle. The tumour was of irregular form, between three and four inches in diameter, occupying the whole of the mediastinum from the anterior to the posterior side of the chest, and extending along the roots of the lung on either side. It was of yellowish hue and firm consistence, and was composed in part of rounded and oval masses, some of which, towards the exterior, were isolated. These portions varied in size from a pea to that of a hen's egg. The largest of them, of botryoidal surface, lay in the triangular space, between the right and left bronchus and upper surface of the left auricle; other portions insinuating themselves between the lobes of the lungs. The central portions of the tumour and that involving the pericardium in front, were of a more homogeneous character, not being separable into masses. The tumour moulded itself around the great vessels; the arch of the aorta, which was not apparently compressed by it, reappeared from the midst of the tumour about the end of the transverse portion. Both venæ innominatæ and cavæ were involved in the tumour, but nowhere obliterated. The venæ innominatæ, however, were lessened in calibre, and evidently compressed. The mass also embraced the anterior portion of the trachea; and the left primary bronchus, in a part of its course, was completely imbedded therein. The second and third ramifications of both bronchi, and the corresponding pulmonary arteries and veins, were, more or less, imbedded in that portion of the tumour which extended to the roots of the lungs in the form of lobulated masses of various size. The trachea and bronchi were nowhere appreciably lessened in size by pressure of the tumour, even when the bronchi were surrounded by it. The same remark appeared to apply to the pulmonary vessels, which were readily injected. The portion of the tumour which involved the pericardium thinned downwards from the great vessels, where it was more than an inch in thickness, to the apex of the heart, where it had almost disappeared. This portion of the tumour presented in the least degree the lobulated structure before described. That portion of the pericardium covering the left auricle and ventricle behind was free from disease. The right

and left phrenic nerves were traced lying upon and at one part just imbedded in the tumour. The left vagus was traced backwards towards the left bronchus, imbedded, to a considerable extent, in the tumour; the nerve appeared healthy, though stretched, and doubtless somewhat compressed by the tumour. The right pleural sac was filled with transparent lemon-coloured serum. The lung tissue proper, liver, and spleen, were healthy. A very small cancerous tumour occupied the right kidney; the other was apparently healthy. There was no opportunity of examining the head. Microscopic examination revealed the elements characterising malignant growth.

REMARKS. Upon analysing this most instructive case, we are led to the consideration of the several pathologic conditions with which it might, *in transitu*, have been confounded. The initial phenomena were, apparently, those which indicated simple change of the normal constitution of the blood,—pallor, breathlessness upon exertion, puffiness beneath the eyelids, vertigo, quickened pulse, debility. These symptoms were gradually followed by considerable œdema of the face; increasing pallor; constant and severe lumbar pain preventing sleep; headache; deafness; pain in the chest, interscapular region, etc.; tender submaxillary glands,—symptoms which, in their aggregate, naturally suggested that the kidney might be the seat of some degenerative process. Careful examination of the urine, however, lent no confirmation to this view, inasmuch as the quantity of urine passed was normal, as also its specific gravity; it was, besides, free from albumen or other visible abnormal element; the lumbar pain, also, soon ceased, suddenly and permanently. Coincident with, or immediately successive to the symptoms already recorded, there supervened cough, attended with scanty expectoration of frothy, and occasionally of muco-sanguineous sputa; thirst; white tongue; swollen and ulcerated tonsils; increasing speed of pulse; peculiar cracked voice. In addition to the great œdema of the face, the ankles became slightly œdematous. Physical examination, which at first yielded no results, now revealed marked dulness of the superior sternal region, which gradually extended over the entire right half of the chest; cessation of the respiratory murmur; agophony. In this phase of the case what did such physical signs import? Aneurism of the thoracic aorta, with secondary pleuritic effusion? The marked œdema of the face and, in a less degree, of the ankles, the cracked voice, early situation of percussion dulness, character of the cough and sputa, certainly favoured, to some extent, the idea of possible aneurismal pressure upon the bronchial tubes and large venous trunks, the latter result inducing the cerebral phenomena alluded to. Still, the early history of the case, the age of the patient, the association and succession of the symptoms, together with the absence of tumour, abnormal impulse or murmur, were scarcely reconcilable with the hypothesis of aneurism.

Could the occurrence of tubercular deposit better explain the observed phenomena? The premonitory symptoms were not dissimilar to those of tubercular dyscrasia; and even at a later phase, some of the signs, and some of the symptoms especially, were not opposed to such disease,—the pleuritic effusion being the possible result of tubercular irritation; still, as on the hypothesis of aneurism, there were residual phenomena which were excluded from, and others wanting which should have been included in, the definition of tuberculous disease. Such were the doubts involved in the very nature of the case, so that a satisfactory diagnosis seemed scarcely possible until the appearance of the external tumours; then the suspicion of malignant disease was at once originated,—such disease affording a sufficient explanation of the hitherto anomalous symptoms.

From this, and many other cases recorded by different observers, the great semiotical value of external tumour occurring in the course of obscure thoracic disease, is strikingly exemplified. Indeed, so great is the value of the sign, that, in the cases named, such tumours should be carefully searched for, and if discovered and determined to be of recent origin, it would probably justify the observer in at once including the case in the category of malignant disease. The widely spread pain, as also the inutility of treatment, are additional points of value in the diagnosis of this class of diseases.

With regard to the lumbar pain, it is worthy of note, that this symptom was apparently limited to the period of actual renal deposit, and definitely ceased with the completion of the process and its extension to, and increase in, more remote organs.

CASES OF DEATH WITH AIR IN THE VEINS.

By GEORGE MAY, JUN., Esq., Reading.

CASE I. On December 15th, 1855, I assisted Mr. Walford at the *post mortem* examination of Mrs. H., aged 50, who had died the day previous. She had long been ailing, having complained chiefly of spasms in the bowels, especially on the right side; and for a fortnight before her death, she suffered from pain in the throat. She was rather hoarse; but there was no tenderness on pressure. Her abdomen was large, and the veins were distinct; the liver was much enlarged; and the urine was of low specific gravity and albuminous. Although a grave opinion was entertained of her case, neither a speedy nor abrupt termination was expected. She was seen by Mr. Walford at 1 p.m. on the day of her death, and found to be sinking. Her abdomen was tense, and extremely sensitive to pressure; respiration was thoracic; the pulse was feeble and running. She died in the evening.

The next afternoon the body was examined. There was much thickening of the colon, with ulceration of the cæcum and ileo-cæcal valve. There was air in the adjacent subperitoneal tissue, which we traced upwards to the diaphragm and downwards for some distance; it also extended between the muscles of the parietes. There was frothy blood in the heart and in the portal and pulmonary veins. Air-bubbles were also seen in the submucous cellular tissue of the intestine, near the ulcer. The kidneys were very large.

It was not known that there had been any hæmorrhage from the bowel, and no open vessel could be discovered on inspection of the intestine. The uterus was much enlarged, and contained a fibrous tumour.

REMARKS. What was the cause of death? The symptoms were those of perforation; and it is well known that emphysema may follow wounds of the intestine; but the ulcer opened into the mesocæcum, and we could not detect any escape of the contents of the bowel into the abdomen. Would subperitoneal emphysema cause thoracic respiration?

Air was traced from the ulcer through the liver to the heart. How did it enter the veins? There had not been any hæmorrhage, and no open vessel could be detected. Was the air produced by the ulceration? We shall see in a subsequent case that air may be locally generated. Small quantities of air may enter the circulation, without producing much effect, especially if it enters slowly.

CASE II. Miss H., aged 42, but looking much older, and being of a very spare habit of body, had usually enjoyed good health, with the exception of occasional attacks of bilious vomiting. She had been suffering from one of her usual ailments for three or four days before her death; but, although I was in attendance at the house, she did not think it necessary to obtain my advice.

On the morning of March 9th, 1857, after violent vomiting, she became suddenly faint. On my arrival, I found her covered with a cold perspiration; her face was pale and anxious; the lips and hands being livid. The respiration was very short and hurried; the pulse frequent, small, and very feeble; the heart was acting tumultuously, but I could not hear any churning sound, nor could I distinguish the ordinary valvular sounds.

After taking some brandy and water, she expressed her ability to sit up in bed; and I found that air entered all parts of both lungs.

I told her friends that she was suffering from imperfect action of the heart, and must be considered in great danger; but I could not satisfy myself as to the cause of such a sudden attack. She was extremely anxious and unwilling that I should leave her; but I went to procure some stimulants, and she died before my return, having survived the commencement of the attack for three hours. She died quietly, and without convulsions.

A *post mortem* examination was made twenty hours after death, the body not being quite cold. On opening the thorax, the heart appeared enlarged, this being caused by the distension of the right auricle with frothy blood. The right ventricle contained a small fibrous clot. The other cavities of the heart were empty. The heart itself was healthy; and there was no fluid in the pericardium. The lungs were healthy; but on pressure frothy blood freely issued from the cut surfaces. The stomach and kidneys were healthy; the liver was enlarged, and contained blood mixed with air-bubbles. The uterus was three and a half inches in length, and much congested. The catamenia had appeared the previous day. The left ovary con-