presses on the whole of the thoracic parietes equally, and drives in the most yielding; in other words, the bony ribs, raised against it by the respiratory muscles, are able to resist it, but the soft cartilaginous portions are not. It must be remembered, too, that the diaphragm is attached along the margins of all the

Fig. 2.
Pigeon-chest in Asthma dating from infancy.

ribs below the fifth; its strong contractions during the asthmatic paroxysms would tend therefore to draw them in, and being less opposed by their yielding cartilaginous portions, would concur in the production of this change of shape. This condition would, of course, at first only last as long as the paroxysm; but if the attacks were frequent and severe at a time when the cartilaginous portion of the ribs was considerable and the figure forming, one can easily understand how the deformity would become permanent, and how asthma would in this way produce such a change in the form of the chest as I have been describing. Still more easily could we explain its production by asthma, if we suppose asthma capable of giving rise to pulmonary collapse, in the way I have suggested.

But the actual event to which I think this form of chest directly points—the particular morbid change that it immediately implies—is pulmonary collapse. One cannot but be struck, on looking at such chests, with their exact resemblance (except in the absence of what one may call the diaphragmatic stricture—the drawing in of the attachment of the diaphragm at each inspiration, as if a ligature were put round the body) to the shape of the chest in the inspiration of infants suffering from bronchial plugging, or its established result, atelectasis, or croup, or laryngitis, or any affection that, preventing the ingress of air and the expansion of the lung, refuses to allow the parietes to follow the movements of the inspiratory muscles.* Pulmonary collapse would certainly be a more potent cause of this deformity than unaided asthma, because it is a more permanent condition and involves a more complete inexpandibility of lung, and therefore would more effectually resist the inspiration-movement of the softer parts of the parietes.

In as far, then, as this heteromorphism points to atelectasis, its occurrence in cases of asthma tends to confirm what I have already said of the tendency and sufficiency of that disease to produce this condition of lung. But remembering that it is

only in cases that have become asthmatic young that this state of chest is well marked, and remembering how commonly asthma dates in the young from catarrhal bronchitis, from the bronchitis of measles, or from what has been called “whooping cough with bronchitis”, which is nothing more than whooping cough in which the bronchitic portion of the malady has extended far and severely into the bronchial tree—remembering this, I say, one cannot but see it possible that, at least in many cases, the pulmonary collapse may have been produced in the ordinary way, by mucous plugging of the bronchial tubes from the primary bronchitis, and not from the consequential asthma, in the way I have suggested. I have seen this deformity strongly marked in cases where ordinary bronchitis had never occurred, and where the patient was entirely free from bronchitic complication or tendency; but then the asthma dated from whooping cough in infancy—and, in my opinion, no form of bronchitis has so great tendency to generate collapse as that of whooping cough.

Dr. Gairdner, of Edinburgh, in his excellent papers on the “Pathological Anatomy of Bronchitis”, alludes to this deformity of chest as an occasional permanent result of pulmonary collapse. “In rickety individuals,” he says, “it is not only more marked, but apt to become permanent, especially when such subjects are affected with any considerable or persistent bronchitic affection. In such cases, the reversed movement of the ribs is stereotyped, as it were, in the form of chest, called *pigeon-chest*, in which the sternum is protruded, particularly below, and the whole lateral region, including also the lower costal cartilages in front, flattened, or even at some points rendered irregularly concave.”

One result of this collapse of the cartilages of the ribs is that they do not stand out from the sternum as they should; but decline from it at too acute an angle, narrowing and elongating the scrobiculus cordis.

Fig 2, a very good example of this configuration, is taken from a photograph of an asthmatic who suffered from his disease from the age of three months. The condition has existed from his earliest recollection, and during his childhood was much more considerable, for since he has grown up his disease has left him, and the shape of his chest has much improved.

ILLUSTRATIONS OF THE USE OF THE OPHTHALMOSCOPE.

By WILLIAM MARTIN, F.R.C.S., late Professor of Ophthalmic Surgery in the Calcutta Medical College.

[Continued from page 624.]

RETINA.

THE affections called *amaurosis* and *amblyopia* will be noted together. Although these are not accurate scientific terms, they do well enough, in the present state of our knowledge, to indicate the physical symptoms and the derangement of vision attendant upon a well known condition, involving local and constitutional changes, the causes of which are, in the very large majority of cases, not ascertainable. It is only now that, since the introduction of examination by the ophthalmoscope, we are beginning to discover the local conditions upon which the derangements depend. In time, we shall be able to know something of the efficient and proximate causes of these conditions. We may even at present classify, in most instances, *amaurosis* as being organic or incurable, or only functional or curable; as being caused by disease of the brain or of the optic nerve, retina, or choroid, principally; and this we do chiefly by our observation of the state of the fundus, and of the condition of the optic papilla and its vicinity. If the disease, however, lie somewhere between the optic nerve and the brain, it will not be discoverable by the ophthalmoscope; and if we find changes in the optic nerve, we may not know whether this is the essential disease, or whether it may be only symptomatic of diseased brain. It may be observed, that where we find the papilla compressed and atrophied, we have one indication for concluding that the efficient cause of the disease is external to the globe. The great practical utility of this improved means of diagnosis is, that whereas formerly, in a very large number of cases of *amaurosis*, various heroic measures were resorted to, in the way both of depletion and stimulation, where we find a state of organic *amaurosis*, or have seen strong reason to suspect that such a state exists, we shall avoid any such heroic remedies. On the other hand, whereas in many cases of *amaurosis*, they were set down from the first as incurable, and

* I have seen it strongly marked in the inspiration of laryngitis, even in adults.

treatment was considered absolutely useless, we shall now find a certain proportion in which we have every reason to conclude that the cause is of a functional or curable nature, and that appropriate treatment, sometimes of an active character, in the way of depletion or stimulation, will be likely to be attended with the best results.

Amaurosis in connexion with Albuminuria. We shall see portions of the retina, generally near the papilla, covered with small patches of a vivid red colour; and in these, again, small white spots, as in retinal apoplexies. These spots enlarge as the red patch diminishes, and seem to be due to absorption of pigment at the same time with that of effused blood; and concurrently we may have signs of œdema with infiltration of the papilla, white tracts in the course of the retinal vessels; and this may end in fatty transformation of the retina. Vision will become deteriorated according as the macula lutea becomes encroached upon, and will be gradually lost altogether. Desmarres figures a case in vol. iii, p. 520. Hogg, at p. 70, notices some observations of Quadri, who found, in some cases, the retina almost entirely detached, with œdema; in other cases, great hyperæmia, sanguineous effusion, fatty deposits, etc.

Amaurosis with Glycosuria or Diabetes Mellitus. Observers have found the fundus of a pale grey colour; turbid vitreous humour; patches, the result of old ecchymoses which have become absorbed; patches of accumulated pigment; maceration of pigment. Cases are figured at pages 524 and 526, Desmarres, vol. iii.

Amaurosis with Syphilis. Two things are generally observable in eye diseases, where the constitution has become affected by a syphilitic taint. First, there are flocculi floating in the vitreous humour; secondly, a disorganised state of the retinal circulation. One or the other, or both these, in combination with other morbid changes, were observed in the following cases:—In a case of Mr. Poland's, May 31st, 1858 (see Bader, in *Ophthalmic Hospital Reports*, October 1858), there was primary syphilis. The right eye was affected with frequent inflammation; the left suddenly failed lately; there was no pain or inflammation. The fundus in both was lighted up naturally. The retina was hazy; there were no flocculi in the vitreous body. The papilla was ill defined, surrounded by a yellow halo; its surface was grey, with a greyish white centre. The vessels were irregularly dilated; at certain parts of the fundus, in the left eye, chiefly at and near the macula lutea, were brilliant yellow white and brown patches. Dr. Bader remarks, that the brilliant cherry red œdematous appearance of the fundus, with well defined optic papilla, are often met with in syphilitic persons, particularly if they have taken much mercury or quinine. Vision in this case was very bad. In a case of Mr. Wordsworth's, January 27th, 1857 (see Plates 4 and 5, *Ophthalmic Hospital Reports*, October 1858)—inflammation had existed in both eyes—the right had recovered. In the left there was, during the intervals between the attacks, only perception of shadows. The general appearances were those of hereditary syphilis. In both, the papillæ were unusually distinct; they could be seen without the convex lens. The right one was normal, but was surrounded by a brilliant white patch, well defined by a line of pigment between it and the choroidal red: in the left, the same patches appeared; the vessels were tortuous. Further from the papilla were many small patches, some with a dot in the centre. The macula lutea was normal in both eyes. It is remarked, that the patches round the papilla in the left eye were not enough to account for the bad sight. It is probable that some change has taken place in the optic nerve; and it is unusual to see the larger choroidal vessels next to the white patches. In normal eyes, it is only uniformly red. There are no positive evidences of syphilis, but many indirect signs.

Cerebral Amaurosis. The ophthalmoscopic signs are by no means satisfactory.

Acute or Inflammatory Amaurosis. Mr. Hogg, at page 117, notices a case related by Ruete, in which the amaurosis was sudden; the papilla was hazy, and there was over the centre a black spot with a grey ring; there were retinal exudations, with anæmia of the optic-nerve vessels. And, at page 123, he gives a case of amaurosis complicated with inflammation of the posterior tunics, in which the papilla in the left eye was covered by a dark spot which extended as far as the macula lutea; there was also excessive vascularity of the choroid and retina.

Traumatic Amaurosis. Mr. Hogg, at page 117, relates a case of amaurosis from injury; there were found, besides lenticular opacity and some floating bodies in the vitreous, serous effusion on the retina, and beneath it irregular white patches.

Amaurosis with Congestion. Mr. Hogg, at page 57, relates a case in which the patient had lost the faculty of seeing any but large letters, and a bright star seemed to be constantly floating before the eyes; there was no pain or inflammation. The principal appearances in both were great congestion of the retinal vessels; and the centre of the fundus, over the macula lutea, was covered by a small black spot.

Amaurosis with Effusion. Mr. Hogg, at page 58, relates a case where, with symptoms somewhat like those of glaucoma, in the right eye, the papilla was surrounded by an irregular margin and dark lines of pigment; in the left, the portion of the fundus in which most vessels were conspicuous was covered by a grey film.

Amaurosis with Hemiopia. Mr. Hogg, at page 39, notices a case in which this was the most prominent symptom. There was cupping of the papilla; a black patch over the fundus, partly covering the papilla; floating pigmentary masses, etc. And, at page 40, he describes another case, in which the retina had become partly detached. At page 41, he quotes one from Anagnostakis, in which floating flocculi were observed in the vitreous humour; and a mass which sank to the bottom when the eye was at rest, which he suggests was the remains, probably, of an old hæmorrhagic clot.

Amaurosis with Anæmia. Mr. Hogg, at page 59, gives a case from Anagnostakis, in which an amaurotic state supervened upon attacks of dysentery. An examination showed much congestion of the retina, with many hæmorrhagic patches.

Amaurosis with Exudation. Mr. Hogg, at page 122, relates a case of amaurosis, partial or temporary, where he found the fundus covered in certain spots with irregular white patches. A pinkish cloud looked as if suspended before the papillæ, which were quite undefined at the margins.

Amaurosis Congenital. Mr. Hogg relates a case at page 141, in which, with congenital defect of sight, there were many signs of want of development of parts, a very pale fundus, and general want of pigment. The papilla looked unusually distinct and white. The vessels were very small.

Amaurosis with Nyctalopia. Mr. Hogg, at page 115, notices a case given by Anagnostakis, where, as a result of injury, nyctalopia came on. He found the vessels of the fundus much congested, and haziness of the tunics from effusion. Near the papillæ were three cretaceous scales, slightly raising the surface.

Myopia, Presbyopia, etc. The defective power of adjustment of the eye to distances, including the affection called asthenopia, may generally be distinguished from amaurosis by negative signs. If we find the fundus and papilla and media in a natural condition, we may conclude that the derangement of vision is caused by loss of this power. Myopia may generally be detected by the ophthalmoscope, by two signs principally: firstly, an unnatural distinctness of the choroid, as well as the retinal circulation, which enables us to see the fundus, often even to trace the papilla, the macula lutea, etc., without the aid of the convex lens; secondly, the myopic arch or crescent, which consists of a bluish white crescent, describing the half or more of a circle, concentric with the margin of the papilla, comprising, at the thickest, about two lines in breadth, often irregular at the margin, and surrounded by a black line or mark, showing accumulation of the pigment. The cause of this appearance in myopic subjects is at present involved in obscurity; but the appearance seems to answer in great measure to that described above, from Desmarres, under the head of "sclero-choroiditis". In both cases, there must be change in the choroidal circulation, and in the distribution of the pigmentary elements. The above may be the only ophthalmoscopic signs observable; but, in aggravated cases of myopia, we have others superadded. Dr. Bader, in *Ophthalmic Hospital Reports* for April 1858, states that he has known this crescent, as well as the myopia, disappear in a woman after her bearing a third child; and, in another case, observed it disappearing gradually, losing its crescentic shape, and normal and choroidal red appearing in its place. The fundus seems to become pale red before the spreading of the crescent. In some cases he states that great myopia is present without the crescent, and the only peculiarity is that we can see the fundus, etc., quite clearly without the convex lens, and sometimes we find cases of weak sight with patches similar to those above described, but without myopia, concave glasses giving no benefit.

Asthenopia is the disease, the essential nature of which is inability to keep the attention fixed long on letters, etc., with loss of adjusting power. We commonly find no signs, but Mr. Hogg, at page 110, relates a case where he found the fundus pale. The retinal vessels covered by a greyish web; the vessels

few; anæmic retina, as shown by an unnaturally white papilla.

Glaucoma. There are three principal signs by which we diagnose this affection as regards the ophthalmoscopic characters. Firstly, the optic papilla is altered and cupped. Secondly, the vessels are altered in direction. Thirdly, there is spontaneous pulsation of the arteries. First, cupped papilla. There is a clearer distinction between the papilla and the rest of the fundus than usual; the outer border looks prominent, like a picture frame, and has a yellowish appearance, while the interior has a greenish hue. The choroid in the vicinity shows some maceration of pigment. The vessels at the border are seen to curve over and disappear, and to reappear in a position differing from what they would have if they had proceeded in a straight direction. This is best seen as regards the veins. Then the vessels are seen to have a pulsation isochronous with that of the heart. All, or any one of these signs may be present. As regards the pulsation, it is to be observed that spontaneous pulsation is observable in some other eye affections, of which amaurosis is the result; and even in the healthy eye of persons in whom general pulsation and muscular action are unusually strong. We can also often produce it by pressing upon the globe while we are observing with the ophthalmoscope. If we press the globe until we distinctly see the arteries pulsate, we shall find the patient's vision diminish from the circumference inwards, until it ceases altogether. This fact may give us some measure of the amount of deterioration of vision following the changes which occur from pressure in glaucoma; but in some cases, where we find a great amount of compression exerted, the vision is not proportionately affected. Mr. Hogg, at page 59, notices a case of glaucoma in which the principal appearances were great congestion of the fundus, with œdema of the retina; the papilla was discoloured by pigment deposit. Also he mentions other cases in which there were signs of bloody effusion, or simply hyperæmia of the retina. For information on the subject of glaucoma, the reader is referred to articles in the *Ophthalmic Hospital Reports*, by Critchett, Bader, etc.; in the *Medical Times and Gazette*, by Hulke; also reports of a paper on the subject read by Mr. Hulke before the Royal Medical and Chirurgical Society; etc., etc.

[To be continued.]

Transactions of Branches.

BATH AND BRISTOL BRANCH.

PRESIDENT'S ADDRESS.

By JAMES GEORGE DAVEY, M.D., Northwoods.

[Delivered July 14th, 1859.]

GENTLEMEN,—When seven years since I became a member of the Bath and Bristol Branch of the British Medical Association, I did not anticipate—nor had I any right so to do—the proud position I have the honour to hold this day. My best thanks are due to you for having elected me your President during this present year. It will be my endeavour to deserve the confidence you have, to all appearance, reposed in me; and not the less to promote, during my year of office, the interests of medical science, and those especially of our own important Branch. I confess to you I feel not a little diffident of myself, and of my abilities to do credit to the office you have elected me to fill. I am aware that I succeed many excellent and accomplished men, and that comparisons may be looked for as between them and myself; comparisons which may not unlikely reflect indifferently on my own endeavours to gain your satisfaction: however, I promise you to do my best, at all times, and under all circumstances; and in doing this, I doubt not I may rely on your kindly sympathies and support.

Gentlemen, within the walls of this institution you have listened to addresses from many with whom I may not venture to compete; you will, therefore, not expect to find in my address this day anything startling or original, such as has emanated, in times now gone by, from such men as the late Dr. Prichard and Dr. Carpenter. These walls have, as you are aware, echoed their thoughts, resounded the force and beauty of their sentiments; thoughts and sentiments which have, doubtless, not been without their good effects on the youthful and painstaking among the audience occupying the benches whereon you now sit. The lessons here taught by Drs. Prichard and Carpenter have, in all probability, borne fruit;

their labours in the great cause of truth have not been without good results.

Standing thus in the area once occupied by these illustrious men, I will do my best to imitate the means whereby their successes were achieved; and to follow on this occasion in their footsteps.

The present is an opportunity of which I will avail myself to make a few remarks on the medical calling, on our duties to ourselves, and to the public generally. It occurs to me that our profession is, at length, taking a start in the right direction; that individually we are beginning to appreciate the position we occupy as members of a learned body; that our universities, and colleges, and halls, are opening their senses to a new and brighter view of things, and that the public sympathy is more than ever inclined to go with us. Experience seems to have done much for us and for our institutions; it would appear to have led us to perceive the real character of our mission, as members of the social body; it has taught us to realize the fact of our having duties to perform, both towards ourselves and towards our neighbours, *i.e.*, society. Truly this experience has been dearly bought; but, on this account, is it not the more valuable? I think so. How recently have we had evidence of the beneficial results of this same experience! Within the space of a year or two, we have seen the Colleges of Physicians and of Surgeons, both of London and of Edinburgh, acknowledge the error of their past ways, and adopt a better system—one of a liberal and progressive character. We have seen, too, the Provincial Medical and Surgical Association struggle through its brief and abnormal being, and come out of its chronic and almost fatal asphyxia—an asphyxia at the heart-core; the result, mind you, of an attempt to fasten the old and the obsolete to the last new fashion; in other words, to amalgamate the conservative tendencies of a bygone day with the newest inventions and the most modern requirements. The existence of the British Medical Association, as we see it now, demonstrates to us, though on a small and medical scale, the fact that no mere party or exclusive government of a body of men, be they doctors or what not, provided they are of the Anglo-Saxon race, can at this day prevail; and for this simple reason, that exclusive government strikes at the root of all justice and self-respect; it excites an unnatural or morbid relationship between the governing and the governed.

On these grounds, I say, let a part of our mission be to well organise ourselves; to place ourselves in the most favourable position as members of a learned and honourable calling.

Young men of good acquirements, and of honourable views of life, are more than likely to be well disposed and attracted towards a profession like ours, when they hear and perceive that our corporate bodies, or colleges, and associations, rank high—*i.e.*, embrace in their forms of government whatever is just and reasonable, and take no cognisance of *cliqueism*. Such young men it is who will do honour to the medical profession, both in a moral and in an intellectual sense; and such young men it is on whom we must depend for our Harveys, and Jenners, our Thompsons, Livingstones, and Owens;—names these, never to be forgotten; names these, the mention of any one of which is sufficient to assure us that both science and humanity, even religion, are more than safe in our keeping. Each one of the five named was or is a *hero*, in Carlyle's acceptance of the word; each one had or has the fire of genius within, prompting him to the leadership among even the able and the good.

Whether we contemplate the learning of the great Harvey, or the patient research of the immortal Jenner, or the heroism of Thompson on the battle field, or the enthusiasm and courage of Livingstone in the wilds of Africa, or the very able and successful investigations of Owen, we are led, as it were, irresistibly to realise this plain matter of fact so well embodied by the poet—

"'Tis in the advance of individual minds
That the slow crowd should ground their expectation
Eventually to follow—as the sea
Waits ages in its bed, till some one wave
Out of the multitude aspires, extends
The empire of the whole, some feet perhaps,
Over the strip of sand which could confine
Its fellows so long time: thenceforth the rest,
Even to the meanest, hurry in at once,
And so much is clear gained."

Here is good reason then why we should do what in us lies to render our calling attractive to the youthful and ardent, who are seeking a position of usefulness and honour in the world.

The alterations and improvements which have, of late, grown into existence, in the constitution and government of