chest in respiration affect considerably the size of the smaller radial pulse. Indeed, a deep inspiration will often abolish the inequality, and a forced expiration will exaggerate it—a phenomenon that is to be explained by the fact that in the majority of cases the inequality is the result of compression of the artery by the sac rather than internal narrowing of the lumen of the vessel, which pressure is relieved by the expansion of the chest. Not only may the pulse be reduced in size, but it is often delayed.

The dysphagia resulting from pressure of a sac from the descending transverse portion of the arch upon the oesophagus seldom amounts to serious obstruction, and may affect both fluids and solids, but more frequently the latter. The symptom varies much from week to week, and not infrequently passes off altogether. The patient, as a rule, points to the lower end of the sternum as the fancied site of obstruction.

Paralysis of the vocal cords is not always attended by hoarseness, therefore a searching laryngoscopic examination should be made in every case. The abductors are first affected, and later the adductors, which only become paralysed after considerable pressure on the recurrent; and abductor paralysis does not always produce change in the voice.

Tracheal tug is detected by gently grasping and attempting to elevate the cricoid cartilage, when a jerk can be felt synchronous with the cardiac systole.

Tracheal whiff may be heard either in the trachea or in the mouth; it is usually systolic, but may be double, and is loudest when the patient is expiring slowly after a deep inspiration with the mouth wide open.

PRIMARY SARCOMA OF THE LUNG.

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PRIMARY sarcoma of the lung is admittedly a rare disease, and the following example is therefore, I think, worthy of record.

HISTORY OF THE CASE.

The patient, a shepherd, aged 43 years, was admitted to hospital on May 2nd, 1907. He was in his usual good health until early in March, 1907, when he says he suffered from a bad "cold." About the first week of April he first noticed that his face commenced to swell, and about the same time he began to suffer from shortness of breath. Towards the end of April both legs became swollen. The dyspnoea gradually increased, and for a fortnight before he was admitted to hospital he had been unable to lie down in bed at night owing to the great difficulty in breathing which occurred when he assumed a reclining position. The only other complaints made by the patient were those of pain in the right side of the chest, and of "wind."

Previous History.

His previous health had always been excellent; he had had no venereal disease, and had not drunk immoderately. He is a married man with eight children, all of whom are in good health, as is also his wife.

Condition on Admission.

He is a powerfully-built man. There is considerable distress in breathing, but there is no stridor, and the voice is natural. The temperature on admission was 99.4° F., the respirations were 22, and the pulse-rate 123 to the minute. Both radial pulses were equal; there was no irregularity nor inequality of the beats, and there was no appreciable arterial thickening. The appetite was bad, the tongue slightly coated, and flatulence was troublesome; the bowels acted daily. There was very little cough, and only a small amount of mucous expectoration.

The face and neck were swollen, the eyelids puffy, and there were numerous enlarged venules on the nose and cheeks. The skin of the face, neck, and lobes of the ears was markedly cyanotic in hue. The pupils were equal, and reacted normally. There was no difficulty in swallowing. The lips and tongue were distinctly cyanosed. The lower part of the neck appeared markedly full, the external jugular veins were considerably distended, and there were a few enlarged subcutaneous veins to be seen coursing over the upper part of the chest, back and front. Tracheal tugging was not obtained. The superficial veins of both arms were very prominent, the hands congested, and the nails dusky. Slight pitting could be obtained over the front and back of chest and over the lumbar regions. Both legs, from the feet upwards, were markedly oedematous, as were also the penis and scrotum.

There was no abnormal bulging or pulsation to be seen or felt anywhere over the chest walls. Chest expansion was poor. Vocal fremitus was increased over the upper part of the right

lung in front. Above the right clavicle and below it as far as the fourth rib in front, and from the apex of the right lung behind to a point just below the spine of the scapula, the percussion note was almost quite dull, as it was also in the upper part of the right axilla. Over these dull areas the breath sounds, which were very feeble, possessed a distant bronchial character, and bronchophony and pectoriloquy were to be heard over these parts. Elsewhere the pulmonary regions appeared healthy.

The heart's apex beat could not be located, but the first sound was to be heard best in the normal position. The cardiac dullness was not increased in extent, the heart sounds were clear and free from murmurs, whilst the second sound appeared distinctly accented over the dull area of the right lung.

A large tributary of the internal mammary vein was seen coursing from the region of the navel towards the xiphoid cartilage. The anterior abdominal wall was somewhat oedematous, the liver and spleen could not be felt, and there was no evidence of ascites. Urine was passed with difficulty, owing to oedema of the prepuce; it was of normal appearance, and contained neither albumen nor sugar.

In the right axilla were a few enlarged and tender glands, the largest being about the size of a filbert. No other enlarged glands were to be felt.

Owing to the distressed state of the patient an x-ray examination of the chest was not attempted.

Diagnosis.

A diagnosis of probably malignant growth involving the right lung was made.

Progress of the Case.

On the first night after admission the patient was allowed to sit by the bedside, as the reclining posture was unbearable to him. At the side of the bed, with his elbows resting on the edge and with his body well forward, he used to sit night and day, and in this position get whatever snatches of sleep he could. After a few days even this position became intolerable, and he then took to lying on the bed, resting on elbows and knees. During the last few days of his life he assumed the genu-pectoral position on the bed, and held his head over the edge considerably below the level of the rest of his body.

As the disease progressed, the venous distension of the upper parts of the body gradually increased, and the oedema of these parts became extreme. The face and neck became enormously swollen, the eyelids became completely closed from the oedema and the conjunctivae extremely injected and chemotic. The legs, abdomen, and scrotum became very oedematous; urine was passed in very small quantities, and before death occurred the whole surface of the body became markedly dropsical.

Frequent attacks of extreme difficulty in breathing occurred from time to time; these were somewhat relieved by inhalations of oxygen, but most relief, although only very fleeting, was obtained from venesection, which was several times carried out.

During the last few days of the patient's life transient attacks of delirium occurred from time to time, unconsciousness gradually developed, and death took place on May 12th.

The temperature chart of the patient showed a slight irregular fever.

Post mortem Examination.

The upper parts of the body were cyanotic, and there was generalized surface oedema. The veins of the neck were enormously dilated and contained dark fluid blood. There were no enlarged glands to be found in the neck.

The right lung was completely adherent to the chest wall, and, with the exception of a small piece at its base, was occupied by a firm whitish growth, mottled with grey in parts, and in which were seen a few small haemorrhagic foci. From the lung the growth had extended forwards into the anterior mediastinum and had partly eroded the overlying ribs. The structures at the root of the right lung were compressed and invaded by the growth, which had also extended to the posterior mediastinum and had eroded parts of the bodies of the adjacent vertebrae on both sides. The glands at the bifurcation of the trachea were of a deep black colour and were invaded by extensions of the growth from the lung.

The left pleural cavity contained some clear serous fluid and the lung was oedematous; there were no secondary growths in these parts.

The pericardium contained several ounces of dark fluid blood, and its parietal layer was speckled with small seed-like secondary growths. The heart was collapsed, and on the surfaces of both auricles and ventricles were to be seen numerous nodules of secondary growth, varying in size from a pea to a cherry, a few, however, being flat and covering a larger area. At the base of the heart the large arterial and venous trunks were completely obscured by disseminated secondary nodules, which had rendered these parts very stiff and rigid.

The peritoneal cavity contained a considerable amount of flaky serous fluid. The liver, spleen, and kidneys were greatly engorged with blood and the stomach and intestines greatly distended with gas; there were, however, no secondary growths to be seen anywhere in the abdomen.

The enlarged glands in the right axilla were infiltrated with new growth.

Microscopical examination of sections from the lung tumour and from the nodules on the heart wall showed the typical structure of a small round-celled sarcoma, into parts of which abundant blood extravasation had occurred.

The diagnosis of this case during life lay between a new growth involving the lung and an aneurysm of the ascending aortic arch pressing upon the right bronchus and causing collapse of the lung.

In favour of new growth were the marked pressure effects, not only on the superior but also on the inferior vena cava. An aneurysm causing obstruction in both these vessels would need to be very large, and would almost certainly have given signs of its presence in the form of pulsation on the chest wall; further, the high grade of venous distension and cyanosis exhibited by the patient was far greater than one would expect from aneurysmal pressure. Assistance in excluding aneurysm was given by the absence of any history of syphilis or of injury to the chest wall. In fact, with the exception of the accented second sound over the dull right lung, signs and symptoms pointed to new growth. The accented second sound was probably more apparent than real, and I believe was the result of increased sound conduction through the solid lung. As confirmatory evidence in favour of new growth, one found enlarged and tender glands in the right axilla.

The history of the case and the progressive increase in the signs of venous obstruction were sufficient to exclude the diagnosis of a localized empyema.

Interesting features in the case were the entire absence of blood spitting, the extremely rapid course of the disease (about ten weeks from the time the first symptoms were noticed), and the postural changes assumed by the patient during the progress of his disease—postures which were those most likely to counteract, as far as possible, the constricting effect of the growth on the large venous trunks at the base of the heart.

The only other case of primary sarcoma of the lung which has been reported in recent years appears to be that described by Dr. Langmead. In this case the patient was a child 5 years of age in whom signs of empyema appeared, the growth itself being entirely unsuspected.¹

For the notes of this case I am indebted to Dr. Russell Squara, my house-physician, whose unremitting care the patient received.

REFERENCE.

¹ Reports of the Society for the Study of Disease in Children. Vol. vi, 1906, p. 242.

MYALGIA.

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I USE this term here in a restricted sense—namely, pain in the muscles caused by strain.

One has frequently to treat patients suffering from this condition, and yet the subject is one about which little at the present time is written from which help can be obtained. Several years ago I had the happiness to fall in with a book, now long out of print—Dr. Thomas Inman's *On Myalgia*—which gives an exhaustive account of the subject. I take this opportunity of saying how much I owe to the perusal of this book, for without its assistance the true nature of many cases which have come under my notice must have passed unrecognized by me.

It may be easily mistaken for other affections—for example, rheumatism, acute inflammatory maladies, and diseases of visceral organs. The pain may be of the most acute character, and suggest the presence of some grave internal lesion.

A few weeks ago I was called to attend a young woman who had been suddenly seized with severe abdominal pain. The appearance of the abdomen was the same as that found in cases of visceral rupture, there being present great rigidity with tenderness. A previous history of overstrain of the abdominal muscles which had occurred not long before the onset of the attack indicated the true nature of the condition.

When the muscles affected are those in the right iliac region, appendicular colic may be closely simulated by the pain, tenderness, and rigidity which are present.

Many instances of what is supposed to be rheumatism

are in reality painful muscles due to strain. Thus, myalgia of the trapezius at its attachment to the occiput is liable to be mistaken for rheumatism of the scalp, of the same muscle at its scapular insertion for omodynia, of the intercostals or serratus magnus for pleurodynia, and so on. When the pectorals in females are affected the mamma may be swollen and tender. When females complain of pain in the lower part of the abdomen careful attention should be given in order to discover its exact locality, as in many cases it will be found to have its seat at the attachment of one or both recti to the pubes. Such patients through modesty assert that the seat of pain is in the hypogastrium.

DIAGNOSIS.

In severe attacks of myalgia resembling acute inflammatory conditions, the previous history, the normal temperature, and the pulse, which in the great majority of cases is little accelerated, will generally indicate the true character of the disease. In more chronic cases the position of the pain and tenderness, which in these instances is generally at the origin and insertion of the muscles, the beneficial effects of rest—the pain being always less in the morning and increasing during the day—with careful inquiry into the general health, habits, and occupation of the patient, will enable a diagnosis to be made. When one is consulted by the overworked mother of a large family who complains of a swollen and tender mamma, or by a grocer's assistant with painful rhomboids, it may be very helpful in forming a correct opinion to learn that the former is in the habit of ending her arduous day's labours with a three hours' sewing, or that the latter felt the pain develop shortly after lifting some unusually heavy boxes.

It is important to bear in mind that in the first of these groups—those resembling acute inflammatory maladies—the pain may suddenly make its appearance some time after the exciting cause has ceased to be in action.

TREATMENT.

The most essential point is to place the painful muscle or muscles in the most restful position possible. In severe abdominal cases rest in bed, with morphine hypodermically or anodyne fomentations, is requisite. In less acute forms the patient may be able to continue his usual avocation if he is provided with a stout abdominal belt. All lowering measures should be avoided. In pectoral myalgia the arm on the same side as the painful muscle should be kept in a sling. When the serratus magnus or intercostals are affected, three or more strips of stout adhesive plaster, applied as in fractured ribs, give great relief. When the trapezius is involved at its origin with the occiput, the use of a high-backed chair is of great benefit. For the gas-trocemil in ambulatory patients nothing answers so well as Wharton Hood's method of strapping the leg, described in his *Treatment of Injuries by Friction and Movement*.

In weakly patients investigation must be made as to any existing cause of debility, such as anaemia, menorrhagia, leucorrhoea, oral sepsis, &c., and specific treatment with general tonics prescribed.

I am glad to see that a protest has been raised against the neglect of so instructive an author as Dr. Inman by Dr. H. Cameron Gillies in his *Theory and Practice of Counter-irritation*, where he says:

If first class men produce first-class work only to lie buried in dusty heaps of tomes in out-of-the-way corners of our museums, it is no wonder that medical progress has been so slow and uncertain. Dr. Inman is one whose contributions to the literature of practical medicine should not be allowed to be forgotten and unknown.

Myalgia is, as a rule, found in two classes of patients—the robust, who have undergone unusually hard exertion, and the debilitated, in whom the condition has supervened during the course of their ordinary work.

A CLINIC of women's diseases, officered by medical women, has recently been opened in Berlin. The medical staff consists of Dr. Franziska and Dr. Agnes Hacker.

UNDER the will of the late Mrs. Alice Need, of Bishops Stortford, the following institutions benefit to the extent of the sums placed against their names: The Cancer Hospital, Brompton. £500; Earlwood Asylum for Idiots. £1,600; the Royal Hospital for Incurables, Putney, and the National Hospital for the Paralysed and Epileptic, £200 each; and the Free Home for the Dying, £100.