for "drink," and more especially if the probation officer is both judicious and zealous, the man, after the first week of hospital treatment, may be permitted to continue the treatment in the form of office treatment. We find that the great majority of the cases that come under our care can be satisfactorily treated as office patients. This is less expensive than hospital treatment, and has enabled us to reach a much larger number than would have been possible otherwise.

With the office treatment the hypodermic injections of strychnine and apomorphine are omitted. Either the calomel and salts treatment, or a laxative of some sort is given at the outset, and the bowels kept loose for a few days. The medical treatment proper is commenced with the following mixture: Tincture of capsicum, 1 drachm; tincture of ignatia (or nux vomica), $1\frac{1}{2}$ drachms; water, 8 oz. Dose, a tablespoonful every hour while awake. After ten days this mixture is changed to the following: Fluid extract of quassia, 2 drachms, and tincture of ignatia (or nux vomica), $1\frac{1}{2}$ drachms; water, 8 oz. Dose, a tablespoonful every hour while awake. This mixture is continued until the end of the third week of treatment. The patient calls for treatment every day during the first week, every second day during the second week, and every third day during the third week. After this he is seen occasionally by the probation officer, who is expected to keep in touch with the case as long as possible, and especially so if the trouble is periodic.

While, with our treatment, the crave for drink is relieved in less than three weeks, we do not claim that this crave is removed permanently. Some of our cases go for years without making a break, while others make a break in a few months. We warn periodical cases to return in good time for prophylactic treatment. We have on our list a few cases that require to be nursed in this manner. Between times they are respectable, and supporters of their families. Some of them go for many months without making a break.

Our treatment is a tonic for the nerve centres, and leaves the patient wonderfully improved in health and strength, with good appetite and good digestion.

In some cases, for convenience sake, I sometimes give strychnine tablets instead of medicine in a liquid form—the $\frac{1}{10}$ grain every hour for from twelve to fourteen hours a day, but I never give a prescription for such strong medication; they are given to the patients personally.

After my experience of ten years with ignatia, nux vomica, and strychnine with the doses mentioned, I fail to understand the timidity of high authorities in making use of these drugs. One high authority speaks of the use of strychnine in these cases as follows: "A cautious use of strychnine in small doses, $\frac{1}{10}$ grain every four hours, will be found valuable." Another high authority speaks of using the extract of nux vomica, $\frac{1}{4}$ grain, night and morning in these cases. The same authority speaks of giving strychnine, $\frac{3}{16}$ grain once a day, or the $\frac{1}{10}$ grain twice a day. For several years in Montreal, police-court cases have received medical treatment very similar to the treatment herein described.

The Emetic Treatment.

In the case of a number of our repeaters I have made use of the emetic treatment, lasting three or four days, and with encouraging results. The treatment is followed up, however, with a full course of the nerve tonic. The treatment has its advantages and its disadvantages. It places the inebriate on his feet, enables him to go to work in less than a week, gives him a disgust for the sight and smell of all intoxicants, and this disgust may last from a few months to a year or more. The drawbacks are that it requires the constant attendance of the physician, or a specially trained nurse for six or eight hours a day for at least three days; and, secondly, it cannot be administered with safety to a patient with a weak heart.

THE first Congress of the Association of French-speaking Gynaecologists and Obstetricians will be held at Lyons in October (1st to 3rd). The questions proposed for discussion are: (1) The value of the different laparotomy incisions in gynaecology and obstetrics, (2) the biological diagnosis of gestation, (3) early getting up after delivery and operation, (4) indications and technique of hysterectomy in suppurative conditions of the appendages.

The Milroy Lectures

ON

THE HYGIENIC ASPECT OF THE COAL-MINING INDUSTRY IN THE UNITED KINGDOM.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

By FRANK SHUFFLEBOTHAM, M.A.,
M.D.CANTAB., J.P.,

MEDICAL REFEREE UNDER THE WORKMEN'S COMPENSATION ACT FOR THE NORTH STAFFORDSHIRE DISTRICT.

LECTURE IV.

MINERS' NYSTAGMUS.

(Continued from page 651.)

THE CAUSATION OF MINERS' NYSTAGMUS.

THE four most important factors which we have to consider are:

1. Defective illumination in the mine caused by the low candle power of the safety lamp.
2. The peculiar cramped position in which miners work, especially the holers and other workers employed at the coal face.
3. The refractive errors found among the miners themselves.
4. The frequent injuries which miners sustain during their employment and more especially injuries to the eye itself.

It cannot be said in any case that miners' nystagmus can be caused by any one of these conditions alone, and the truth probably is that the onset of the disease is due to a combination of circumstances.

Defective Illumination.

We may say, however, that except at the pit bottom we always have defective illumination in the coal mines of this country; further, in perhaps the majority of cases we have a cramped position at work; refractive errors are at least as common among miners as among other sections of the community, and there is no doubt miners are, by the nature of their employment, especially liable to small injuries to the eye such as abrasions of the cornea. On the surface a worker can see when danger is coming and protect his eyes by means of his eyelids, but in the defectively lighted pit this is impossible.

The general feeling at the present time is that deficient illumination of the mine is the principal factor. In the evidence given before the Departmental Committee on Industrial Diseases in 1907 the opinion was expressed by many experienced miners that nystagmus had come into existence among miners since the introduction of the safety lamp, and statistics undoubtedly show that at the present time nystagmus is much more frequent among men who work in pits lighted by safety lamps than in those in which open lights or candles are employed.

In the experience of Sir Frank Brain, in the collieries in the Forest of Dean, where open lights are entirely used, only one case of nystagmus has come within the scope of the Workmen's Compensation Act since it became a scheduled disease seven years ago; and in the Black Country, where the illumination has been almost entirely carried out by open lights, miners' nystagmus is comparatively rare. In Scotland, again, where candles are used to a very large extent instead of safety lamps, nystagmus is much less frequent than in England and Wales.

In the metalliferous mines of this country (not including ironstone mines), where naked lights are universally used, miners' nystagmus is an unknown disease, and in the ironstone mines it is rare. Coal is often found along with ironstone in the same workings, and in such mines it may be necessary to use safety lamps; again, iron and coal are usually found in the same districts, and men frequently pass from one class of work to another. In the last ten years I have only seen three cases of miners' nystagmus among ironstone workers who have always been employed in naked-light pits and who have never worked in coal seams, and it is generally admitted that such cases are comparatively rare.

The candle power of a tallow candle will vary according to the number of candles to the pound, but roughly speaking we may say that the candle power of an ordinary

naked light varies from 0.75 to 1.5. The candle power of a new Davy safety lamp is 0.2, of a Clanny 0.68, but these figures are materially reduced when the lamp is in use in the pit. The illuminating power begins to be reduced as soon as the miner commences to work, and slowly and progressively diminishes on account of the dusty atmosphere and also from the fact that no attention can be paid to the condition of the wick or the inside of the glass. In order to give the maximum candle power the lamp must be kept perfectly cleaned, the wick trimmed, and the oil good; the miner always has to contend with the shadows which are cast by the bonnet and the oil reservoir, while in the case of an open light, whether it be a lamp or a candle, the illumination is constant throughout the day. There is no doubt, too, that the miner does not get the full benefit in the mine of the candle power of his lamp on account of a certain amount of absorption of light by the coal surface, and another factor which will tend to diminish the candle power of the lamp is deficient ventilation in the workings. The difference of the candle power between the readings measured in the main intake and the main return may vary to the extent of from 25 to 35 per cent.

Cramped Position.

The second factor in the production of this disease—the cramped position of the miner while at work—is one to which the late Simeon Snell paid special importance. He believed that the nystagmus of miners was a myopathy dependent on the peculiar position assumed by a certain class of men in the mine. Tomlin states that Snell's position depends upon three points: (1) The strain on the elevators (oblique) of the eyeball; (2) the position of the miner; and (3) the consequent fatigue of the elevator muscles of the eyes, that is to say, the superior rectus, the inferior oblique, and the internal and external recti muscles. Snell believed that the position of the miner at his work was the prime and essential cause of miners' nystagmus irrespective of the deficient illumination in the pit. A great controversy has waged around Snell's theory. He was under the impression that the disease was practically confined to holers and deputies, the workers who might be subjected to the strain of the elevator muscles, but observations from every coalfield in England now go to prove that the disease is found to a very large extent among the other workers in a pit, the timberers, the datallers, the roadmen, as well as those employed in other occupations. In the Forest of Dean and in Somerset, owing to the thin seams of coal, the collier is obliged to assume a more or less reclining position, and if Snell's theory be correct one would expect nystagmus to be very common in these coalfields, but I have already stated it practically does not exist. On the other hand, according to Elworthy, the great majority of the colliers in Ebbw Vale work in the upright position, and yet nystagmus exists in a considerable percentage of the men employed.

Refraction Errors.

There is a growing opinion that errors of refraction play a most important part in the causation of the disease, and there is no doubt that injuries to the eye or general injuries to other parts of the body may be the determining factor in the onset of symptoms.

Injuries.

In Llewellyn's series of cases there was an injury to the eyes in 36 patients, an injury to the head in 35 cases, and injuries to other parts of the body in 23 cases.

It is the common experience of medical men working in colliery districts that symptoms of miners' nystagmus are frequently set up after an injury to the back, and occasionally shock by itself and without any injury to the body may be regarded as responsible for the beginning of the disease.

In considering the symptoms of miners' nystagmus, I paid special attention to the association with neurasthenia, and I believe, with Jamieson Evans, that there is a distinct type of this disease. I am not prepared to say unreservedly that miners' nystagmus is a local manifestation of neurasthenia, nor, on the other hand, that neurasthenia in these cases is directly due to miners' nystagmus, but one cannot dissociate these two conditions in a large number of cases.

Heredity.

The personal factor is a point that has to be taken into consideration. Certain workers seem to be specially prone to the complaint, and Snell suggested that in certain families an undoubted hereditary tendency to the disease prevailed. Jamieson Evans and Llewellyn have also found an apparently hereditary tendency in a certain number of their cases.

Prognosis.

Speaking generally, if treatment is conscientiously carried out, the outlook is quite favourable. Mild cases recover in the course of a few months if the patient be removed from his work underground, but the symptoms in severe cases may not abate for many years, even when the miner has been properly treated and has not worked under adverse conditions.

If the symptoms result from an injury to the eye, or if they are associated with an error of refraction or such a condition as cataract or glaucoma, the prognosis is not favourable, and while the correction of refractive errors does a great deal to shorten the course of the disease, still, when the refractive error is of a high degree, even the correction for this defect may not cause speedy recovery.

When neurasthenia is present to any extent the prognosis is less favourable than under any other conditions. There is a great tendency for patients suffering from this neurasthenic type to look on their future in the gloomiest way, and many believe their working days are over. This frame of mind not only keeps alight the general nervous symptoms, but retards the cure of the eye trouble.

Marked interference with the visual acuity, the presence of nystagmus in a plane below the horizontal, muscular tremors of the neck and shoulders, and ataxic gait must all be regarded as most serious symptoms, and just as a drinking bout or excessive smoking may hasten the onset of symptoms which will prevent the man from working, so over-indulgence will in these respects cause exacerbation of the severity of the complaint.

When a young miner contracts this disease it may be taken that there is some predisposition to it, and a tendency to relapse should he return to work in the mine; in the case of old men the difficulty lies in the slowness of the recovery on account of age and lessened powers of resistance.

In all uncomplicated cases, by which I mean those in which there is no permanent injury to the eye such as a corneal opacity or traumatic cataract, the chances of recovery are greater the sooner the man gives up underground work, and some of the worst cases in Llewellyn's experience have occurred in men who have struggled on with their work in spite of the disease.

Mild cases which have apparently recovered may frequently be followed by a relapse if the patients return to their old occupation underground, especially when they are employed at the coal face. Even in miners suffering from this disease who do not go back to their work, and when apparently their symptoms have cleared up under treatment there may be a relapse after influenza or an injury, or, as has already been indicated, after excessive drinking, and in one case I have known, a relapse has occurred after going to a cinematograph performance.

TREATMENT.

Personal.

In severe cases it is necessary for the man to give up work entirely and to have complete rest. If the examination of the eyes shows any refractive error this should be corrected by glasses, and in many cases after the patient has become accustomed to the altered conditions under which the muscles of the eye work he obtains some relief, at all events from such subjective symptoms as headaches, giddiness, and nausea, while in some cases these symptoms disappear altogether.

Neurasthenic symptoms must be treated in the ordinary way, and if the patient is suffering from neurasthenia of a marked degree Weir Mitchell treatment may be advised for a period of from four to six weeks. I do not think sufficient attention has been paid to the application of Weir Mitchell treatment in cases of nystagmus, and I believe that the association of miners' nystagmus with neurasthenia has not been sufficiently recognized. As far as I know, Weir Mitchell treatment is only properly

carried out in England in nursing institutions, or in perhaps, one or two hospitals in London devoted exclusively to the treatment of nervous diseases, but in view of the fact that there are many hundreds, if not several thousands, of coal-miners in the different colliery districts of this country incapacitated for work on account of miners' nystagmus associated with neurasthenia, from an economic point of view it is most desirable that arrangements should be made in the hospital centres of colliery districts to provide the best possible treatment in order to bring about speedy recovery. The best that can be done at the present time is generally to advise massage in the patient's home, although this cannot be carried out unless the employer or insurance company is prepared to bear the burden of the expense, as the charges, speaking generally, are beyond the means of the average working man. In some cases the patient may be sent to such a hospital as the Devonshire Hospital at Buxton, where a course of massage and baths will do a great deal of good. Convalescent cases derive great benefit from change of air, especially at bracing seaside resorts.

In mild cases and in cases which are convalescent a change of employment on the surface may result in great benefit, because the patient's mind is occupied, and he is not worrying about himself; further, the exercise which ordinary manual work necessitates will do a great deal towards improving the nervous system.

Some consider that on recovery the miner may be allowed to work in the pit again, and this practice is prevalent to a large extent in all mining districts, but I think to reduce the risk of recurrence it is advisable to place the man at work of such a kind that he is less liable to contract the disease than at his previous employment; for instance, a man who has worked as a holer might be employed as a roadman or a dataller; but if there be any recurrence after this return to different work, then the man should never be allowed to work in the pit again.

If the nervous symptoms are pronounced, and if the appetite is poor and there is sleeplessness, glycerophosphates and bromides may be given with good results, and among the other drugs which have been found to be successful are strychnine, quinine, and nuxvomica. Romice has advised the local application to the eye of eserine drops in a 3 per cent. solution three times a day. Atropine has been tried without success. Tenotomy has been recommended, but in every case, as far as I know, has yielded disappointing results.

PREVENTIVE MEASURES.

Improvement in Illumination of the Mine.

Even with the introduction of a safety lamp of higher candle power than those used at the present time it is essential that the lamp should be kept clean, and Llewellyn points out that the importance of careful cleaning with machine brushes cannot be over-estimated, and that great care should be taken to use good glass, to keep the lamp in proper repair, and to replace any loose and worn-out burner or washer. Every man on his way to and from the face should be compelled to use a shade. In many districts, where this has been the custom, any man omitting this precaution would be at once assailed by his fellow-workmen. The dancing of the lamps in front is very trying to all, but it is most serious to a man with nystagmus.

Coal-cutting Machines.

It is generally recognized that holers and miners working at the coal face are more frequently affected with miners' nystagmus than the other workers in the mine, and the substitution of mechanical power for manual labour will undoubtedly cause a reduction in the number of cases of nystagmus. Llewellyn has pointed out that in six collieries where coal-cutting machines were used exclusively the percentage of cases of nystagmus was 0.49, whereas in twenty-two collieries in which no machines were used the percentage was 0.81. It is pleasing to note that the number of coal-cutting machines is extended considerably every year, and it is to be hoped that this will have its effect in reducing the number of cases of this disease.

Ventilation.

It is the general opinion of working miners themselves that bad air in the mine is the exciting cause of this

disease. Whether this be so or not, there is no doubt that bad air has a deleterious effect upon the general conditions of the miner, and, as impaired general health is a predisposing cause of the onset of the disease, efficient ventilation in the mine is an important factor in its prevention.

Examination for Ocular Defect.

McMurray has suggested that all miners should be subjected to a systematic examination of the eyes, so that cases with any refractive error, or with any other ocular defect, can be prevented from commencing or continuing this kind of work. In my opinion this would greatly diminish the incidence of nystagmic cases, but I question whether the Miners' Federation would consent to the institution of such an examination, as it would mean at the present time dismissal of thousands of miners who have worked in the pit all their lives, and who are continuing to do regular and efficient work; and, further, it would mean the constant elimination at each periodic examination of numbers of workers, who would be deprived of their means of livelihood, and with little chance of gaining employment elsewhere, unless it be in the ranks of the casual labourer. If, however, a periodic examination were made, and the power of dismissal were prohibited in case of any ocular defects other than miners' nystagmus being discovered, then it has been suggested that the workers should be induced to wear spectacles when on the surface in the hope that by the correction of the refractive error the symptoms of the disease will be decreased in severity.

INCAPACITY FOR WORK.

Miners' nystagmus is essentially an industrial disease. In spite of the various theories for the explanation of the symptoms, it cannot be denied that the complaint is one which is a direct result of the conditions under which the miner works; and in view of the fact that it is a disease to which the Workmen's Compensation Act applies, it is important to consider to what extent incapacity for work may result from this complaint.

There is no necessary relation between the objective and subjective symptoms. Cases in which the movements are very slight may be accompanied by distressing headaches, attacks of giddiness, and other subjective symptoms, while well-marked oscillations sometimes cause no trouble. It is difficult to tell whether a miner suffering from nystagmus is incapacitated from work or not, and Dr. Moody of Stoke-upon-Trent, when giving evidence before the Departmental Committee on Industrial Diseases in 1907, said that it was almost impossible to distinguish between a coal-miner who has oscillation of the eyeballs but who is able to work, and the miner who has the same symptom and is incapacitated; the only way in which he was able to judge was by the past history of the man; and Professor Murray, in his evidence before the same committee, admitted that it was very difficult to disprove the assertions of a coal-miner with the characteristic nystagmic movements of the eyeballs who stated that he was unable to work.

The objective symptoms by themselves may not cause any discomfort or incapacity for work, but when associated with subjective symptoms we may have a case of total incapacity for work. A great deal, however, depends upon the subjective symptoms, for the existence and severity of which we are compelled to trust to the patient's honesty.

When tremors of the head, clonic spasms of the eyelids, or neurasthenic symptoms are observed, there can be no doubt as to the severity of the symptoms. In doubtful cases we must be guided by the man's own record. If he has been a steady, hardworking man, his account of the subjective symptoms must have due weight, and it cannot be forgotten that, speaking generally, miners' nystagmus occurs among those workers who are most attentive to their work, and who are regarded as the best workmen.

Meighan has classified the degrees of incapacity for work under three headings:

1. Those slightly affected—men who suffer to a slight extent from the characteristic oscillations of the eyeballs, especially when they assume positions that strain the muscles of the eye. These men continue work, and never become incapacitated. He believes that 5 per cent. of all miners are affected slightly.
2. Those who suffer from the oscillations and feel giddy at times. These should be obliged to leave off the work in which

they are engaged. They may require a rest for six months, but should not return to their old employment.

3. Those who suffer badly from oscillations, headaches, giddiness, and the other symptoms mentioned previously. These should give up underground work entirely, and never return to it.

When the large proportion of underground workers in whom nystagmic movements of the eye can be observed is remembered it cannot be doubted that the disease may cause little inconvenience, but cases of a severe and distressing nature cause total incapacity for work for a considerable period of time. In some instances patients have been unable to do any kind of work, even light work on the surface of the mine, for several years.

It is most important that firemen and deputies who have suffered from this disease should be able to detect the blue cap which appears over the flame of the safety lamp before they are allowed to return to their own employment, and it has been suggested that, considering the great responsibility that rests upon them for the safety of the pit, if they have once had the disease and been incapacitated on account of it, they should have their eyes tested once in every three months.

Complete incapacity for work undoubtedly may occur in cases in which nystagmus is absent or has disappeared, but in which clonic spasm and other subjective symptoms of miners' nystagmus are complained of.

Giddiness is the most troublesome subjective symptom from the point of view of capacity for work, and even when the other symptoms, whether they be subjective or objective, are only slight, if attacks of giddiness are at all frequent and come on without any warning, then the patient must be regarded as totally incapable of work, and it is not safe to give him light work, even on the surface of the mine.

I have shown the frequent association of ocular defects with miners' nystagmus, and the capacity for work after a proper course of treatment will undoubtedly depend upon the actual condition of the eye, and one-eyed men who suffer to any pronounced extent from this disease must be regarded as totally and permanently incapacitated for work underground.

Cases of miners' nystagmus in which neurasthenia is a prominent symptom must be regarded as of a severe type, and although the eye symptoms may be not of a pronounced character, the nervous symptoms are such as to cause total disability for work. Like all other neurasthenic conditions, this may last for years, unless the patient undergoes a suitable course of treatment, such as prescribed by Weir Mitchell.

Malingering.

In considering the question of malingering we must not lose sight of the fact that the disease is not merely localized to the eye, but may affect the general nervous system.

All observers are agreed that it is impossible to imitate the nystagmic movements of the eye, so that there can be no malingering with regard to this the most prominent objective symptom. There is a difference of opinion as to whether clonic spasm of the eyelids can be simulated or not, but careful observation in any given case will easily detect malingering, as it is impossible for the patient to sustain, for more than a minute or so, the twitching of the eyelids, and further, a skilled observer will perceive that the voluntary movements induced by a malingerer are altogether different from those seen in true cases of clonic spasm of the eyelids. Dr. Moody has pointed out that the movements in the latter case are quicker and finer, and if a miner attempts voluntarily to blink his eyelids quickly he must bring other muscles into play, apart from those which actually blink the eyes, and, in Dr. Moody's opinion, the man would be easily found out. It should be clearly and widely known among all miners who may have imagined that the simulation of this symptom is an easy matter, that they are entirely mistaken, and that if they try to do so before a skilled observer they will be almost immediately found out.

We may therefore say that the two principal objective symptoms cannot be simulated, and if a man is known to have attacks of giddiness and to fall about, to be suffering from night blindness, and when tested by Cridland's method, from a diminished field of vision, there can be no question as to the genuineness of the case. Difficulty may arise in mild cases where patients are capable of following

some kind of employment, such as light work on the surface or in an occupation independent of coal-mining. In many cases miners with a definite oscillation of the eye-balls are able to do their work without any complaint for years in the absence of headache, dizziness, and other subjective symptoms; but if a miner suffering from such a mild degree of the disease suddenly becomes aware of the presence of nystagmus, should he, for the purpose of claiming compensation under the Workmen's Compensation Act, desire to make complaints of headache, giddiness, feelings of sickness, and other symptoms for the existence of which we have to trust to his honesty, it would be most difficult to disprove the statements. The examining doctor would have to take into consideration the man's record for work and his demeanour while under observation, and assistance might be given by friends and neighbours who could testify one way or another as to the man's general state of health.

In dealing with such cases it is absolutely necessary to make a complete examination of the man and a special examination of his eyes, and I believe that a great deal of help would be obtained by paying special attention to the extent to which the field of vision is limited.

There are undoubtedly many cases of miners who know that they are suffering from miners' nystagmus, but who go on working in spite of the complaint, and it is only when they give up work, either on account of bad trade or a strike, or because of some quarrel with an official or their employer, that they make a claim for compensation. During the coal strike of 1912 many such cases were recorded in the different coal districts of this country.

In all disputed cases I would suggest that the medical referee under the Workmen's Compensation Act should rely not only upon his own examination and the reports submitted to him by the medical advisers of the workmen and the employers, but that he should also take into consideration either verbal or written statements of work-people or other persons who can speak as to the man's previous history and his general condition of health.

Memoranda :

MEDICAL, SURGICAL, OBSTETRICAL.

DEFICIENCY OF LEFT HALF OF DIAPHRAGM WITH DISPLACEMENT OF STOMACH AND OTHER ABDOMINAL ORGANS.

A MAN aged 43 years, working in a coal mine, was hurt last year by a stone falling on his head. He apparently recovered from this injury; he died recently. I was instructed by the coroner to make a *post-mortem* examination to ascertain whether the injury received had anything to do with the cause of death. I was also informed that this man had had other injuries previously, among them a fractured femur.

At the *post-mortem* examination I found the following anomalies:

On opening the chest and examining the left half I found it occupied by the whole of the stomach, which was distended and as large as a Rugby football; with it was the transverse colon, the left lobe of the liver, and the omentum. The left lung was lying compressed against the vertebral column, and weighed only 9½ oz. The heart was pushed over to the right side, resting upon the left lobe of the liver, upon which it had made a distinct depression. In the left half of the diaphragm was a large opening, through which the stomach and other organs mentioned had passed. Through this hole I was able to pass my fist with ease; the edges of the opening were smooth, and did not show any signs of recent tearing. The right lung occupied the whole of the right half of the chest and was in a state of red hepatization. The cause of death I gave as pneumonia.

The interesting points in this case are: The abnormal position of the abdominal organs had not been diagnosed during life. The man had been anaesthetized without any ill effects.

I notice in the Paris Letter in the BRITISH MEDICAL JOURNAL of January 24th, 1914, mention of a case of diaphragmatic hernia, where the *x* rays revealed the greater part of the intestines in the left chest.