

addressed to medical practitioners respecting deaths certified as due to dropsy, tumour, hæmorrhage, and certain other indefinite conditions. In the course of the year 4706 replies to these inquiries were received, resulting in most cases in a more precise classification of the causes of death. For example, 448 deaths from malignant disease, 367 from tuberculous disease, 165 from appendicitis, 153 from puerperal septic diseases, and 111 from gastric ulcer were transferred to their proper headings, as a result of the additional information so obtained.

I have taken somewhat haphazard from the list of returns for one year made to me by the registrar of deaths. These returns are also sent to the Registrar-General in London. The following are given as causes of death:—

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| 1. Acute pneumonia. | 1. Gangrene of foot. |
| 2. Cardiac failure. | 2. Lymphangitis ten days. |
| 1. Scarlet fever 14 days. | 3. Operation. |
| 2. Otitis media. | 4. Exhaustion. |
| 1. Bronchitis. | 1. Scarlet fever and measles 20 days. |
| 2. Cardiac failure. | 2. Bronchitis six days. |
| 1. Premature birth. | 1. Teething. |
| 2. Asthenia. | 2. Congestion of lungs. |
| 1. Pneumonia two days. | 1. Acute suppurative periostitis six days. |
| 2. Syncope. | 2. Exhaustion. |
| 1. Severe pressure during birth. | 1. Valvular lesion of heart five and a half years. |
| 1. Acute mania. | 2. Ascites 20 days. |
| 2. Gangrene of both feet. | 3. Operation (tapping) two days. |
| 1. Broncho-pneumonia. | 4. Syncope. |
| 2. Cardiac failure. | 1. Carcinoma breast (scirrhous). |
| 1. Malignant tumour of colon 12 months. | 2. Operation. |
| 2. Exhaustion. | 3. Recurrence. |
| 1. Tubercular ulceration of stomach. | 4. Exhaustion. |
| 2. Exhaustion. | 1. Measles. |
| 1. Enteritis. | 2. Pneumonia. |
| 2. Meningitis. | 3. Cardiac failure. |
| 1. Bright's disease three months. | 1. Chronic nephritis. |
| 2. Hæmorrhage from brain one day. | 2. Suppression of urine. |
| 1. Zymotic enteritis. | 1. Chronic ovaritis. |
| 2. Collapse. | 2. Salpingitis 12 months. |
| 1. General tuberculosis. | 3. Operation. |
| 2. Convulsions. | 4. Syncope. |
| 1. Severe burn on knee (left) nine months. | 1. Acute congestive laryngitis five days. |
| 2. Disease of knee-joint probably tubercular. | 2. Cyanosis. |
| 3. Operation 24 days. | 3. Asphyxia. |
| 4. Pyæmia six days. | 1. Interstitial nephritis. |
| 1. Senile decay. | 2. Embolism. |
| 2. Cerebral hæmorrhage. | 3. Heart failure. |
| 1. Bronchitis with abscess one year probably tubercular. | 1. Tubercular ulceration of intestines. |
| 2. Asthenia. | 2. Diarrhœa. |
| 1. Cerebral hæmorrhage. | 1. Enlargement of liver. |
| Coma. | 2. Abdominal tumour. |
| | 3. Dropsy. |
| | 4. Heart failure. |

Examples of Coroners' Verdicts.

Burns caused by getting his shirt ignited at the fire.
Suicide by cutting his throat (temporarily insane).
Natural causes. Probably bronchitis and syncope.
Burns by getting her clothes on fire same day.
General break-up of system accelerated by injuries while unloading on Lancashire and Yorkshire Railway.
Burns by getting clothes ignited accidentally.
Self-neglect and alcohol.

You will see from this list that the certification is not *precise* and *brief* but is too full, and records in many instances symptoms for a disease. Tanner in his synopsis gives a good classification and one which meets all requirements.

[Mr. Berry here introduced an elaborate classification in tabular form which we are compelled to omit on account of its length. It contained 30 principal headings with a number of subdivisions under each.]

The Registrar's register is divided into columns and he has very little space for putting in the diseases. Although English is recommended by the Registrar-General as the simplest it is not always elegant or precise. The term "inflammation of the bowels" is unsightly and not precise and is much better expressed by "peritonitis" or "enteritis"; "inflammation of the lungs" also is better expressed by "pneumonia." Latin, I think, enables us to certify a cause of death precisely and briefly, and, again, it is not always wise to let the relatives know the cause of death in plain language; they are better pleased if the name of the disease has a jaw-breaking pronunciation and is a term not easily "understood of the people." *Pew-mon*ia is a favourite disease from which many of our friends die, according to information supplied to us by relatives; the term certainly pleases the public.

In conclusion, I would suggest that a definite idea should

be formed as to the filling up of the certificate and then the cause of death should be as brief as possible; if a primary disease is sufficient, then leave out the secondary one; for instance, "pneumonia acuta" is sufficient without putting "cardiac failure" or "syncope." Never give a third cause if possible.

P.S.—Since the above was written the following have been registered:—1. —, aged three years: (1) acute toxæmia; (2) gastro-enteritis; (3) vomiting; (4) diarrhœa; (5) exhaustion; (6) collapse; (7) cardiac failure. 2. —, aged seven months: (1) improper feeding; (2) rickets; (3) vomiting; (4) diarrhœa; (5) cardiac failure.

Wigan.

A NOTE ON THE PATHOLOGY OF LATERAL CURVATURE OF THE SPINE.

By G. C. STEELE-PERKINS, M.D.

It is not my intention to enter at all fully into the morbid anatomy and pathology of lateral curvature of the spine, as they have been fully dealt with by many authors. It will be sufficient to remark that in those cases in which there is a lateral deviation without rotation no structural changes are present; there are only weakness and want of development of the muscles. In cases in which there is lateral deviation with more or less rotation the changes present are dependent upon the amount of rotation that has taken place; in slight cases of this description little more than muscular wasting and relaxation of muscles are noticed, whereas in more advanced cases the changes include an alteration in the thickness of the bodies and intervertebral discs.

In severe cases the bodies of the vertebræ become very dense in structure on the side of the concavity and their cancellous tissue even becomes compact. The spinal muscles in severe and long-standing cases are often found to have undergone fatty degeneration and even fibroid changes are sometimes present. The thorax has its respiratory capacity much diminished and the viscera undergo alterations in their positions. The pelvis is more or less altered in shape according to the severity of the case and the lumbo-sacral angle trespasses either on the left or right of the cavity according as to whether the convexity of the curve in the lumbar region be to the one side or the other.

Any disease, constitutional or otherwise, which produces general debility and loss of stamina, gives rise to more or less difficulty in maintaining the erect position and the result is an increase in the normal antero-posterior convexity of the spine in the dorsal region—a condition which is known as kyphosis or stooping. This general want of muscular strength if associated with some determining factor causes a lateral deviation of the spine to occur, which when persistent and if more than to a limited degree, and accompanied as it is with a weakening of the spinal ligaments, must of necessity give rise to rotation of the bodies of the vertebræ. Where there is a general falling off in muscular power it is the spinal muscles that suffer more than any other part, as they have to maintain the body in the erect position. "Determining factors" may be instanced by the standing on one leg, writing in wrong attitudes, and various positions which have to be adopted when following certain occupations. The spinal muscles are prominent on the convex side of the curve and flattened on the side of the concavity. This is due to the transverse processes on the convex side being more prominent owing to the rotation of the bodies to that side, which of necessity causes the transverse processes to come backwards, and to the transverse processes on the concave side being less prominent owing to their being rotated forwards, added to which is the fact that the muscles on the concave side are weakened.

A curvature having taken place in one part of the spine, sooner or later a compensating curve will occur in another part. It is always an important point, as far as treatment is concerned, to decide which curve is primary and which secondary. The most common deformity met with is a curve in the dorsal region with the convexity to the right and a curve in the lumbar region with the convexity to the left. In many cases the dorsal is the primary and the lumbar the compensating or secondary curve, whilst in other cases the lumbar curve is primary and the dorsal secondary. For instance, if the determining factor be the excessive use

of the right arm then the dorsal curvature would be primary and the lumbar secondary, whereas on the other hand if the determining factor be due to the fact that one leg is shorter than the other the lumbar curve will be primary and the dorsal curve secondary. In many cases it is very difficult to determine which of two curves is primary, nevertheless no trouble should be spared in endeavouring to form a correct diagnosis on the point. The importance of it lies in the fact that in treating the case it is the secondary curve that first disappears, although at the same time a reduction in the primary curve is taking place and it is the primary curve that is straightened last. We have first, therefore, to direct our main attention to the reduction of the secondary curve and when this has been rectified we can bring our energies to bear on the straightening of what remains of the primary curve. The cause of the deformity will in a large number of cases enable us to decide at once which is the primary curve. The primary curve is generally greater than the secondary, although sometimes the secondary curve is the greater of the two, in which case a third curve will often be found which is really compensatory to the second curve, and in the treatment of such a case the third curve must receive the greatest attention at first, then the second curve, and, finally, what then remains of the primary curve. A third curve may, of course, occur, and often does, without the secondary curve becoming greater than the primary curve, but nevertheless it is compensating to the secondary curve. The primary curve may be in the cervical, dorsal, or lumbar region; most usually it is in the dorsal region, but primary lumbar curves frequently occur, being caused by one leg being shorter than the other or a tilting of the pelvis to one side. It is to be noticed that a shortening of one leg does not necessarily, although it does usually, result in a lumbar curve with the convexity on the side of the shorter leg, as one would expect, but that sometimes the convexity of the lumbar curve is on the opposite side to that of the shortened leg. The pathology of this is obscure but the fact remains. A compensating curve is naturally always on the opposite side to the curve which it compensates. A dorsal curve is not always compensated by a lumbar curve but sometimes by a curve lower down in the dorsal or else in the dorso-lumbar region.

Wimpole-street, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI De Sed. et Caus. Morb., lib. iv., Proœmium.

ST. MARY'S HOSPITAL.

TWO CASES OF RICHTER'S HERNIA WITH PERFORATION AND PERITONITIS.

(Under the care of Mr. V. W. Low.)

CASE 1.—A woman, aged 30 years, was admitted to St. Mary's Hospital on Feb. 3rd, 1904. In September, 1903, she had a doughy swelling in the right groin accompanied by pain; no impulse could be felt and there was neither vomiting nor constipation. The case was regarded as being one of inflammation of a crural gland and cleared up under local treatment. On Jan. 30th, 1904, the lump again appeared, accompanied by pain, and there was in addition some redness in Scarpa's triangle; no impulse could be felt on the patient coughing. The bowels did not act on this day. On the 31st there was some vomiting and the pain was worse; the bowels acted slightly. On Feb. 1st the vomiting ceased but the bowels did not act. On the 2nd the vomiting recurred in the evening and there was considerable pain in the region of the umbilicus. On the 3rd the pain became intense and the vomited matter was dark in colour and of a foul odour. There had been now no action of the bowels for

three days in spite of repeated enemata and Dr. S. G. Felce, to whom Mr. Low is indebted for the history, sent her at once to St. Mary's Hospital.

On admission the woman appeared to be ill but was not collapsed. Her temperature was normal, her pulse was 96, and her respirations were 18. There was a soft, tender, non-expansile and irreducible swelling in the right groin in the position of a femoral hernia. The skin over the swelling was œdematous and red. The abdomen was slightly distended but the abdominal walls moved on respiration. There were no rigidity and only the slightest degree of tenderness. The patient was four months pregnant.

At the operation, which was performed within half an hour of her admission, on exposing and opening the sac of the hernia it was found to contain a quantity of foul pus and feculent material but no bowel. The abdomen was then opened in the middle line below the umbilicus and a condition of advanced general purulent peritonitis was discovered, the peritoneal cavity containing fluid fœces. Near the internal opening of the femoral canal was a coil of intestine about two inches above the ileo-cæcal junction, two-thirds of the lumen of which had been nipped by the opening of the femoral ring to form a Richter's hernia. The herniated portion was gangrenous and had perforated in two places. About four inches of intestine were excised, including the gangrenous patch, and two Paul's tubes were tied into the patent ends of the intestine. The abdominal cavity was thoroughly irrigated with hot saline solution and a glass drainage-tube was inserted into the pelvis. The patient appeared at first better after the operation but gradually sank and died 20 hours afterwards.

CASE 2.—A woman, aged 41 years, was admitted to St. Mary's Hospital on March 5th, 1904. She was in her usual health till Feb. 25th. She had previously suffered from pain in the right groin for two years and this pain had been accentuated during her last pregnancy, which terminated in August, 1903. No local swelling had ever been seen before the onset of the present illness. On the 25th the patient noticed a sudden pain in the right groin and she vomited. At the same time a swelling appeared in the groin. The pain was sharp and continuous and any food she took was immediately vomited. The pain continued and she was unable to do her work, though she still remained up and got about the house. The bowels were confined from the beginning of the attack, neither fœces nor flatus being passed. Enemata were prescribed without result. On the 28th she took to her bed, the symptoms having become more severe and the pain intolerable. Her condition became steadily worse till she was admitted to hospital on March 5th. Her bowels had not been opened for eight days and for four days she had scarcely taken any food owing to the persistent vomiting.

On admission her pulse was 120, her respirations were 28, and her temperature was 97° F. There was no marked evidence of collapse and the woman was cheerful. The abdomen was flaccid and not in the least degree tender. There was a swelling in the position of a right femoral hernia which was irreducible to slight taxis and non-expansile; it was, however, tender and the overlying skin was slightly œdematous. On opening the sac purulent fluid escaped but no bowel was present. The abdomen was then opened in the middle line and a condition of general suppurative peritonitis was discovered; the pelvis was filled with a purulent fluid similar to that which had escaped from the wound in the groin. The peritoneal surface of the intestines was injected and covered with flakes of yellow lymph, adjacent coils being adherent to each other. A coil of lower ileum was found, of which roughly half the circumference had evidently been strangulated, the strangulated portion still retaining the shape in which it had occupied the hernial sac. No obvious perforation was demonstrable but the herniated portion was covered with thick yellow recent lymph. The coil in which the strangulated area was situated was laid on the abdominal wall outside the peritoneal cavity, being fixed in position by a mesenteric stitch. The peritoneal cavity was thoroughly washed out with hot saline solution and a glass drainage-tube was placed in the pelvis. The wound in the groin was left open with a large rubber drainage-tube leading into the abdominal cavity. On the next day the general condition was favourable and the patient was in good spirits; the pulse-rate varied from 106 to 94, the respirations were 24, and the temperature was normal. The bowels were opened in the evening. The temperature rose to 100° on the 8th but otherwise was never above 99°. On the 7th the coil of