the system at large? How can you know how these changes are to be treated, how morbid products are to be removed, how injured organs are to be repaired, how damage to the tissues or loss of life is to be prevented, unless you know, and know thoroughly, what the normal processes are that go on in the human body? You must first understand the natural process, before hoping to comprehend the changes produced by disease. Our knowledge of both has of late years greatly increased, owing not only to more accurate observation both in health and sickness, but from what we have observed of the functions of the various organs of the body, from the variations or diseases produced by experiments. Now, however, "in response to perhaps a well-meaning, but certainly foolish, portion of the community, led astray by ignorant self-interested itinerant lecturers,"* a law has been passed which makes it penal to inflict pain on animals if the intention be to benefit mankind; whereas exquisite torture may safely be inflicted either to gratify the palate of the epicure, to amuse the wealthy, or render enjoyment to the mob. We must, therefore, the more earnestly and carefully investigate the grand experiments which Nature herself performs, and see if we cannot learn something from them.

I cannot do better here than quote the words of Dr. Barnes in his address to the British Medical Association at Manchester in 1877, the report of which, and his paper on the Relations of Pregnancy to General Pathology in the first volume of the *Transactions of the American Gynecological Society*, will amply repay you for the time spent in their perusal. "All disease is the reaction of the living economy under the influence of conditions accidentally applied. These accidental conditions are in reality experiments. Pregnancy taking place in a healthy woman may be regarded as an experiment performed under the most simple conditions, from which the complications which disturb and thwart observations in man are eliminated."

How is this? I will try to convey to you, in as few words as possible, the ideas worked out by him. In the healthy female, in the unimpregnated condition, the functions of life are equally balanced; to each part the nerve-force and blood-supply necessary to carry on its functions are supplied, and no more; but, when impregnation takes place, all this becomes changed. The nerve-force is altered. The cerebral, ganglionic, and spinal systems develop new force. The emotional system of the female, at all times greater than that of man, now becomes more sensitive. She is now more responsive to psychical and physical impressions. The uterus and its contents grow; for both require more blood, and more nutritive material in the blood, and hence increased blood-flow and altered quality and consistency; to supply this increased flow, augmented hydraulic power is requisite, and we find cardiac hypertrophy and increased vascular tension; increased growth and activity predicate increased waste, and, therefore, increased elimination. The glandular system is, therefore, affected; the most notable glandular growth is that of the breasts; but, although the changes in them are obvious to all, the other glands are likewise disturbed. Thus not only is the womb altered, but the entire system sympathises, as it were, with it. If the body be healthy, if there be no weak spot in it, these changes finally culminate in that explosion of nerve-force and muscular effort which we designate labour. But, after this culmination, we see a no less wonderful physiological function performed, by which the enormously increased uterus is removed, and out of its debris a new one formed by the process we call involution. Now, although in the normal condition these changes follow a regular course, yet, if there be some lesion which, under ordinary conditions, may not be sufficient to affect the normal functions of the body, it may, and often does, cause a break-down under the severe strain to which the system is subjected, and thus we may have convulsive mania, failure of the heart, albuminuria, clots of blood in the heart or vessels, establishing the morbid conditions known as embolism, thrombosis, and phlegmasia dolens. As all these changes occur within a definite period, we can watch this experiment from its inception to its conclusion. How much may we not learn with regard to the causation of similar diseases in the unimpregnated state and in the male, and all with regard to the morbid condition produced in the various organs? The diseases of the female genital system, apart from pregnancy, teach us lessons of no less importance. The production of epilepsy and other nervous affections; the cachexia frequently resulting from defects of menstruation or morbid ovarian conditions; the changes of structure producing or produced by uterine displacements—are all pregnant with instruction. Time would fail me to tell of the knowledge to be gained about chorea, jaundice, hepatic disorders, glycosuria, Addison's disease, cardiac derangements, syphilis, and hereditary maladies; or, to commence from the very beginning, the effects produced on the constitution of the child from defects of nutrition or morbid condition of the mother.

But I have said enough to show you what a vast field here lies open for your study, and how important is the bearing of pregnancy and uterine pathology and physiology on the study of medicine and surgery. I have, I believe, proved that obstetrics and gynaecology are not a separate branch, no mere ignoble specialty, but an integral part of the great science of medicine, demanding your most earnest attention, and which will amply repay the time and labour you devote to them.

And now, gentlemen, in conclusion, as the emergencies of this branch of your profession are so grave, the accidents so sudden, the results of ignorance or malpraxis so disastrous; as, whatever line of practice you may adopt, you must be largely occupied with diseases of women; as the life or death of the mother and child may at any moment depend on your knowledge and skill; as the happiness or misery of families, and the health and usefulness of many a woman will rest on you; as the responsibilities are great: I entreat of you to study now,—now, whilst you have ample leisure,—now, whilst you have no responsibilities,—to prepare yourselves for the hour of trial, that, when it comes, you may not be found wanting. And I trust that none of you will ever feel the agony, the deep remorse, that time will hardly ever efface, of knowing that you have caused, by your idleness or carelessness, the death of a human being, or that you have rendered a once happy home desolate or a parent childless.

We may do our best and we may fail; we may make mistakes, aye, and fatal ones too; to do so is merely to prove that we are human; but we can have the satisfaction of knowing that it has not occurred through any default of ours; that we have worked hard, and have availed ourselves of all the means of information within our reach. But this source of consolation is denied to the man who has neglected to master his subject; who has merely acquired the minimum amount of information to pass his examination; and who, when face to face with an emergency, is unable to cope with it. Although innocent in the sight of man; although perchance guiltless in the eye of the law, yet he stands convicted by his own conscience, and on his soul rests the blood of the innocent and helpless. I beseech you, then, to leave no cause for such after-remorse.

Remember also that I cannot make you learn; I can only show you the way; you must walk in it yourselves. In one course of lectures, I could not tell you a tithe of what you should learn; you must read the works of the great masters who have departed and of those who remain with us; and, above all, when you have the opportunity, you must test the information you thus gain by the bedside. Thus, and thus alone, will you be able, when you go forth into the world, to win the confidence and respect of the public, and to feel that, whatever be the result of your labours, you have, as far as in you lies, done your duty, and you will respect yourselves and fear no man.

CASE OF CIRRHOSIS IN A BOY AGED ELEVEN YEARS: JAUNDICE OF NEARLY THREE YEARS' DURATION.

By ARTHUR W. FOX, M.B.,

President of the Bath Pathological Society; Physician to the Eastern Dispensary and Bellott's (Mineral Water) Hospital, Bath.

ON January 2nd, 1878, J. D., aged 11, was admitted as a patient under my care at the Eastern Dispensary. He complained of no pain, but sought advice on account of his being jaundiced.

When four years old, he had a severe illness, which ended in his passing a large round worm. His father noticed that after this his stomach was always unusually big. He had had scarlet fever, measles, and chicken-pox. For more than two years, he had been jaundiced, and had been more than once an in-patient at the United Hospital. The jaundice came on gradually. There was no history of chill or indulgence in alcohol. He had a brother and two sisters living perfectly healthy. His mother was a drinker; she had had three miscarriages. She presented no signs of syphilis, nor could any history of such be elicited. His father never had syphilis; but from boyhood had suffered from diseased right tibia, which had exfoliated; otherwise he was healthy.

His general appearance was that of a boy of great intelligence. He bore an excellent character. His hair was dark; his irides brown. The conjunctivæ and body were deeply jaundiced; the skin unusually hairy. There was some emaciation. He had clubbing of the finger-ends; an ecchymosis on the left leg; and two petechial spots on the anterior surface of the chest. There was some enlargement of the glands in the inguinal regions and left axilla, and a small subcutaneous

* Spencer Wells, Address in Surgery, 1877.

pea-like body on the extensor surface of the left forearm. The teeth had a tendency to a serrated condition of the lower border of the two upper incisors; the gums were inclined to bleed; the tongue clean. His appetite was fair; he was thirsty. His bowels were open four or five times a day. The stools were sometimes formed, at others were pulsaticeous; always of a light yellow colour. This had been the case, his mother said, for twelve months. He had frequently vomited blood.

His abdomen generally was distended, with marked prominence of the upper part. The liver-dulness in the right mammary line began at the sixth rib; in the right axillary line, at the eighth rib; in the vertical nipple-line, it extended three good fingers' breadth below the costal margin. The surface was smooth and hard; the margin slightly rounded. There was no tenderness on palpation. There was a distinct sulcus between the liver and a large tumour which occupied the left side of the abdomen. This tumour descended from below the left costal margin downwards and forwards, crossing the middle line just below the umbilicus. The lower border reached a point nearly an inch below a line drawn horizontally through the superior spinous processes of the ilium. The anterior edge was sharp and notched; the left border slightly rounded; the surface smooth. It was absolutely dull upon percussion, and descended nearly an inch and a half with a full inspiration. There was no evidence of fluid in his peritoneal cavity, neither was there any visible enlargement of the veins of his abdominal wall. His circulatory and respiratory systems were normal. His urine was amber-coloured. Gmelin's test showed the presence of bile-pigment, but not to any amount. There was no albumen nor sugar. From this time to the date of his death, on May 7th, he got gradually worse. His abdominal veins became enlarged, and fluid was poured out into his peritoneal cavity, his legs subsequently becoming anasarcaous. The ascites varied in amount from time to time, but never was sufficiently great as to embarrass his breathing.

Towards the close of his life, he occasionally complained of abdominal pain, but it was never severe. His jaundice was persistent throughout. His urine remained much the same as when first seen, specific gravity ranging between 1007 and 1010, of a deep yellow colour; bile-pigment was always present, but never to any great extent; never any albumen. On one occasion, I found a few granular casts. His midday temperature varied between 99 deg. Fahr. and 100 deg. Fahr.; generally 99½ deg. Fahr.; once it reached 100½ deg. Fahr. He never had any perspirations nor rigors. His pulse ranged between 80 and 120, but tended more frequently to the latter number towards the end of his life. Ecchymoses and petechial spots were occasionally visible on his skin; the small pea-like body upon his left forearm completely disappeared. He had repeated attacks of hæmatemesis. During the last two or three days of his life, he vomited large quantities of blood. For the last nine weeks, there was a systolic murmur audible all over his cardiac region, its point of maximum intensity being situated at the pulmonary orifice. During the last three weeks, his legs, especially the left, were affected by constant coarse tremor. He died comatose.

The necropsy was made thirty-six hours after death, on May 8th, in my presence, by Dr. Maunsell, then resident medical officer to the dispensary. The body was emaciated. Rigor mortis was absent. The peritoneal cavity contained nearly six pints of fluid. The liver was much enlarged; unfortunately there was no possibility of weighing the organ; it gave one the impression of an unusually big liver that was undergoing contraction, and the capsule here and there thickened; the general surface of the liver was finely granular. Upon the upper part of the right lobe, that portion which was up under the costal margin during life, were some rounded eminences about the size of a small pea. The tissue of the liver was tough and leathery. Upon section, it was deeply bile-stained, and presented the usual appearance of cirrhosis. There was no amyloid reaction. The gall-bladder contained bile; the ducts were patent and bile-stained. The portal vein was natural. The glands in the portal fissure were much enlarged and deeply pigmented. The spleen was enormously enlarged, gorged with blood, and somewhat friable. The kidneys were rather large; the capsules separated easily; the surface of each was lobulated; on section, bile-stained; the structure, to the naked eye, was normal. The pericardium was natural. The left ventricle was somewhat thickened; the cavities and valves of the heart were normal. The left lung was normal; the right contained a small spot of cretaceous matter at the apex. The mediastinal and bronchial glands were enlarged. The microscopic examination of the liver, spleen, heart, and kidneys was made by Mr. E. Lawrence. "Specimens were first hardened in spirit and water, afterwards in solution of chromic acid. The liver presented an abnormal amount of fibroid overgrowth, especially in the interlobular spaces, with more or less amorphous granular matter, some few cells only containing oily matter. The spleen was congested throughout. The Malpighian

corpuscles were somewhat increased in size; the trabeculae were rather more fibrous than usual. The heart had a very slight trace of fatty degeneration; the muscular fibres were inclined to break. There was no fat deposited between the muscular fibres. The kidney was congested, otherwise normal."

REMARKS.—When this lad first came under my notice, I felt in considerable doubt as to the nature of his hepatic and splenic enlargement, there being an absence of all the usual factors of cirrhosis. His large, painless, and seemingly smooth liver, when coupled with his unusually big dense spleen, rather inclined me to regard his case as one of lardaceous disease, with enlarged glands in his portal fissure; but against this view was the apparent integrity of his kidneys and other organs, and the fact of there having been none of the usual causes which give rise to lardaceous disease; besides, there was a slight amount of pyrexia present, which is not, according to Dr. Murchison, a symptom of lardaceous disease any more than are jaundice and ascites, unless there be enlarged glands in the portal fissure. The intense jaundice in the boy was infinitely more persistent than in any case of cirrhosis that I have hitherto met with, and was probably due, I imagine, to the pressure which must have been exercised during life upon his bile-duct by the enlarged glands; not sufficient, however, to entirely occlude it, as there was always a certain amount of pigment present in his motions; while, on the other hand, his urine never showed any great amount of the same. Dr. Fagge, in *Guy's Hospital Reports*, 1875, refers to a case of cirrhosis where there was persistent jaundice for seven years, the patient dying at last of hæmatemesis; and he remarks that, when cirrhosis is associated with jaundice, "the liver is not contracted, as a rule, but is increased in size". The point of paramount interest in connection with this case is its etiology. The boy was certainly not a drunkard, neither was there any history of congenital syphilis, or of his having received a chill. After his death, I was informed that, during the last two or three months, he had a "craving" for beer and porter, and I remember his asking me for some eight or nine days before he died. It appears to me rather unlikely that a boy of his age should evince such a "craving" for stimulants, unless he had previously indulged in them. His mother had been a chronic drinker for years, and, during the whole of the time that she was pregnant with him, and the year that she suckled him, she drank more or less to excess, frequently being intoxicated. Now, Gintrac remarks (Dr. Taquet on "Hereditary Alcoholism", *London Medical Record*, Jan. 15, 1878), that the children of female drunkards, if they survive their birth, are often "idiots, imbeciles, insane, or epileptic", the consequences of "congestion or hæmorrhage into the membrane or nervous substance". Why, therefore, may not cirrhosis in children be to some extent one of the manifestations of alcoholic heredity? For, as Dr. Taquet observes, "that alcohol carries into the composition of the fecundating material modifications of which we are ignorant, must be admitted". I believe, however, with Dr. Wickham Legg (*St. Bartholomew's Hospital Reports*, 1877: Cases bearing on Liver-Disease), that cirrhosis may occur independently of alcohol, and may be merely the local expression of some grave general disease. Apart from some of the recorded cases, such as the late Dr. Hillier's, Dr. Hayden's, and the case of a child aged three years, mentioned in Dr. Payne's edition of Drs. Jones and Sieveking's *Pathological Anatomy*, where there has been no history of alcohol, how can we otherwise account for this condition occurring in animals? for Dr. Walshe states (*Diseases of the Lungs*, fourth edition, Art. Cirrhosis) that "the liver of the cow exhibits as perfect specimens of cirrhosis as are ever seen in the human viscus".

ON SPINAL EPILEPSY.

By ALEXANDER M. McALDOWIE, M.B.,
House Physician to the North Staffordshire Infirmary.

THE term "spinal epilepsy", applied by Brown-Séquard to paroxysmal convulsions limited to the lower extremities, with persistence of consciousness and sensibility, has been objected to by those authorities who regard epilepsy solely as an idiopathic affection, and who exclude all convulsions resulting from lesion of the cerebro-spinal centres, all excentric convulsions, and, in short, all convulsions occurring when any definite exciting cause can be shown to exist. By these authorities, epilepsy is classed amongst the purely functional diseases, along with hysteria, neuralgia, and some other nervous affections in which no lesions have as yet been detected; and, with them, included under the generic term *neuroses*. In this restricted sense, epilepsy could not correctly be applied to the convulsions described below. But with this limited meaning attached to it, the word becomes merely an expression of our ignorance of the nature of the affection; for we may fairly assume that some