and purging, with great prostration of strength, and sometimes with convulsions (Wood and Bache, *United States Dispensatory*, 869, p. 646). The preparation employed by us was a substance termed "phytolaccin", prepared from the root of the plant by Keith and Co. of New York, after the same manner as menispermis, above mentioned. The dose for a man is from one to three grains. The physiological actions of the Phytolacca have not hitherto been investigated.

Experiment 7.—Dog that had fasted eighteen hours. Weight 31.1 kilogrammes. (Fig. 7.) Two grains of phytolaccin triturated with 2 cc. of bile and 4 cc. of water were injected into the duodenum at *p*. The subsequent excitement of the liver was unequivocal. When the increase of secretion was well declared, one-tenth of a grain of atropia-sulphate dissolved in ten minims of water was injected into the jugular vein at *a*, and again at *a'*, *a''*, *a'''*—in all four-tenths of a grain; but the stimulating effect of the phytolaccin was not antagonised thereby. Had this experiment been performed after instead of before Experiment 1, a larger dose of atropia would have been given. Remembering the non-exciting effect of atropia on the liver, the high secretion at the close of the experiment may be safely referred to the continued action of the phytolaccin.

NECROPSY.—The duodenal mucous membrane was slightly redened, but there was no evidence of purgative action worthy of mention.

Experiment 8.—Dog that had fasted seventeen hours. Weight 19.2 kilogrammes. (Fig. 8.) Two cc. of bile and 2 cc. of water were in-

Fig. 8.

Secretion of bile before and after phytolaccin. 2 cc. of bile and 2 cc. of water injected into the duodenum at *p*; 2 grains of phytolaccin with 2 cc. of bile and 2 cc. of water injected at *p*.

jected into the duodenum at *p*, and two grains of phytolaccin triturated with the same fluids were injected at *p*. A considerable increase of bile-secretion ensued. Owing to the high secretion previous to the administration of the drug, the result is less striking than in the preceding experiment; yet, in this case, the coefficient of secretion was much higher than in the former experiment (Table 3), a circumstance which was probably largely due to the fact that, while the same dose was given in both cases, the subject of Experiment 8 was much smaller than that of Experiment 7. The liver of the eighth dog was, therefore, more powerfully affected than that of the seventh.

NECROPSY.—The small intestine contained 40 cc. of liquid, indicating a mild purgative effect.

TABLE III.

Phytolaccin.	Total Dose in Grains.	Grains per Kilogramme of Body-Weight.	Secretion of Bile per Kilogramme of Body-Weight: per Hour.	
			Before.	After.
Experiment 7	2 with bile	0.064	0.144 cc.	0.299 cc.
" 8	2 "	0.104	0.338 cc.	0.471 cc.

Result of Experiments with Phytolaccin.—It is a mild intestinal, but a powerful hepatic stimulant, as is shown by Table 3.

Considering the small dose that was given, the high coefficient of secretion in Experiment 8 is probably to be regarded as a nearer indication than that in Experiment 7 of the power of phytolaccin as a hepatic stimulant. This substance appears to be eminently worthy of the attention of physicians.

[To be continued.]

OBSTETRICS AS A BRANCH OF EDUCATION:

*Being an Address introductory to the Course of Lectures in Obstetric Medicine in the Queen's College, Galway, for the Session 1878-79.**

By R. J. KINKEAD, A.B., M.D.Dub.,

Professor of Midwifery, Queen's College, Galway; Examiner in Midwifery, Queen's University in Ireland.

I HAVE now to prove the importance of obstetrics in relation to the practice of medicine and surgery in general. I have shown that you will be almost daily concerned with some one or other of the ailments of the female genital system. Is it a case of suspected phthisis for which you are consulted? You must be able to tell whether the deficiency of the menstrual flux is due to the constitutional disease, or whether that bad habit of body which has predisposed the patient to the invasion of tubercle is the result of some derangement. Is it a case of chlorosis? You must be able to decide whether the amenorrhoea is the cause or the result of the affection.

Again, so various are the symptoms, so Protean are the phenomena of uterine disease, that, unless you have a competent knowledge of gynaecology, you will infallibly fall into errors in diagnosis alike injurious to your patients and yourselves. This is no idle warning. I have seen patients treated for gastric derangement, pulmonary consumption, hepatic disorders, and stone in the bladder, where the uterine system was alone at fault. I have known patients (some who could hardly afford it) sent abroad winter after winter for a consumptive tendency, where the sole cause of their ill-health was some uterine or ovarian disorder. Make the case your own; fancy yourself a professional man with a small income, a business man struggling up in the world, able to get along respectably, but badly able to afford extra expenditure. You take your wife, who has a nasty pain in the side, who is becoming thin and pale, and perhaps has a cough, to your doctor. He tells you that there is no absolute disease in the lung yet, but that there is great delicacy; that this country is too trying in winter for her in her present low condition, and that she must go to a warmer climate. You feel all the difficulty of your situation: the separation from her in her delicate state of health; your house left without a head; your limited means insufficient. And yet for her sake it must be done; and you pinch and save; you wear shabbier clothes; you stint yourself and your children; and yet she comes back no better than she went. Then you try some other doctor, until finally you find out that all along it was some uterine affection which was the source of all the ailments, and which probably could have been set right in a short time. I ask you, What would be your feelings towards the man who needlessly caused you all this trouble and expense; who occasioned you many a sleepless night, many a weary hour? Would you think it a valid excuse, if he told you he did not undertake diseases of women? Would you not reply, "You have a perfect right to decline to treat such affections; but you are bound to be able to recognise them when they exist, and to send me to some one who would and could have remedied them".

Gastric and nervous disorders will be simulated and even produced by abnormal conditions of the genital organs. Epileptiform fits, peritonitis, retention of urine, symptoms closely resembling stone in the bladder, obstruction in the bowels, will be produced by various genital ailments; so that it is absolutely essential that, if you never touch a speculum or make a vaginal examination, you should be thoroughly conversant with the general symptoms of these diseases, so that you may avoid errors of diagnosis alike injurious to your patients and discreditable to yourselves.

But, apart from and beyond this, the study of obstetrics and gynaecology has a most important bearing on the investigation and treatment of disease. No man can rightly understand or properly treat disease unless he has a competent knowledge of physiology.

Disease being a deviation from the laws of normal life, how can you estimate the amount of deviation? How can you tell what changes, either immediate or remote, that deviation may produce? How can you gauge the results of the changes thus produced in any organ or in

* Concluded from page 871 of last number.

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.