dangerous during gestation to the extent of leading in even a small proportion of cases to abortion or premature labour, one must act warily; but is this a fact? Is it not rather the fact that nowadays the abdomen is opened for the relief of morbid conditions there during pregnancy, and that the uterus does not empty itself in consequence so long as asepsis is maintained. I have performed abdominal section in several different conditions during pregnancy, and have not had to deplore an interruption of pregnancy in any of them. The risk due to caring for the teeth and even of extracting them must be considerably less than that arising from operations situated so near to the uterus as, say, appendicectomy or ovariectomy. At any rate, it is surely well worth while to reopen this question and ask for cases in which modern dentistry is responsible for obstetric accidents. Until this has been done it is obvious that women who may at any time become expectant mothers should have their dental house, so to say, set in order.

In the last place, the further investigations of these and similar sets of cases at ante-natal clinics may throw some light upon the causation of dental caries in pregnancy. Certainly in some of the cases the bad state of the teeth coincided with heartburn, but whether as cause, effect, or mere concomitant, could not be definitely stated.

THE ACTION OF SYPHILIS ON NATIVE COMPLEMENT.

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WHEN studying the activity of human complement in various disorders, certain facts were elicited as regards syphilis which, so far as I am aware, have not previously been noted.

Syphilitic serum, it is already known, shows, as compared with normal serum, a diminution of complementary activity in varying degrees when incubated with sensitized cells. For example, normal serum showed complete haemolysis when incubated in a water-bath at 37° C. for six minutes (in the proportion of 1 vol. of 1 in 10 serum) with 1 vol. of sensitized cells 3 per cent. and 2 vols. of normal saline, whereas a similar amount of syphilitic serum under similar conditions took thirty minutes to bring about complete haemolysis. The specific serum in this instance was from a case of tertiary syphilis. I have noticed that in cases of early acquired syphilis after successful treatment by salvarsan, etc., and resulting negative reaction of the "Wassermann" test, the serums are also deficient in complementary activity to a very marked degree. The following illustrates this:

Complement fixation tests were done (Harrison's method) on a series of serums, from which I select:

		Result.
B.	For diagnosis	Neg.
C.	" (general paralysis)	++
E.	" (locomotor ataxy)	±
G.	" (general paralysis)	+++
H.	Early treated	Neg.
H.E.	For diagnosis	Neg.

The fresh serums (1 vol. of 1 in 10) of these cases were put up with 1 vol. sensitized cells and 2 vols. of normal saline added to make up the total used in the ordinary test. The results after ten and fifteen minutes in the water-bath are given in the following table:

	10 min.	15 min.
B.	C.H.	C.H.
C.	M.H.	C.H.
E.	V.M.H.	C.H.
G.	V.S.H.	M.H.
H.	M.H.	C.H.
H.E.	C.H.	C.H.

C.H. = Complete haemolysis.
M.H. = Marked haemolysis.
V.M.H. = Very marked haemolysis.
V.S.H. = Very slight haemolysis.

Here Case H., treated syphilis, shows complete haemolysis in fifteen minutes, whereas G. (general paralysis) untreated, only shows marked haemolysis. These serums, which were all drawn on the same day (day of test) and kept under aseptic conditions on ice, were again tested on

the fourth day afterwards, results on this occasion being as follow:

	15 min. in water-bath.	30 min. in water-bath.	Overnight in- cubation at 37° C.
B.	C.H.		
C.	C.H.		
E.	C.H.		
G.	N.H.	N.H.	*C.H.
H.	N.H.	N.H.	N.H.
H.E.	C.H.		

N.H. = No haemolysis.

* This was not apparently due to bacterial action.

The same series examined on the sixth day gave the following results:

B.	C.H. in six minutes.
C.	C.H. in fifteen minutes.
E.	C.H. in fifteen minutes.
G.	N.H. in sixty minutes.
H.	N.H. in sixty minutes.
H.E.	C.H. in fifteen minutes.

Guinea-pig serum kept under similar conditions and a like period showed complete haemolysis in six minutes.

Complementary activity of serum does not diminish so rapidly as is generally thought, when the serum is kept under suitable conditions, but this diminution is more rapid in proportion to the degree of positivity of the complement fixation test, and the return of a serum to normal conditions as regards the "Wassermann" test does not appear to effect any corresponding change in complementary activity. This result is not what would be expected on the supposition that deficient haemolysis is due to the presence of antigenic substances in the serum.

First, why does it persist after efficient treatment and in the presence of a negative Wassermann reaction? Secondly, when the serum is freshly drawn the complementary action is fairly active, more active in early treated syphilis than in tertiary untreated, and yet after a few days the reverse is the case, indicating a certain debility or fragility of complement (if one may use such a term), and not the presence of any anticomplementary substance.

It is important to ask what the relation is between the presence of syphilitic poison in the system and the lesion of complement; also, after recovery from syphilis, as evidenced by a negative reaction to the "Wassermann" test, does the serum recover its normal activity, and, if so, when? I have examined cases three months afterwards, but have not found that there has been much recovery in this respect.

I have not many opportunities for examining cases of early treated syphilis, but desire to bring to the notice of those who have the urgency of deciding what relation exists between complete recovery of complementary activity in syphilis and the disease process.

ANKYLOSTOMIASIS IN LONDON.

BY

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THE occurrence of ankylostomiasis in a subject who has neither been abroad nor resided in a mining district does not appear to have been recorded. The following is a description of a case which was complicated by the coexistence of Addison's disease.

A boy, aged 15, who had been employed at the Admiralty, was admitted to the Middlesex Hospital under the care of Dr. A. F. Voelcker. He complained of fainting attacks, lassitude, headache, shortness of breath following exertion, and, latterly, of morning sickness and constipation. He was emaciated and the skin was somewhat yellow in tint without patchy pigmentation. In hospital he usually vomited immediately after breakfast, but for the remainder of the day he could take food satisfactorily. The temperature had a subnormal tendency; there was no oedema, and the ophthalmoscope revealed no abnormality.

Examination of the blood showed red corpuscles 1,924,000 and white corpuscles 7,400 per c.mm., haemoglobin 60 per cent., and colour index 1.5. The differential leucocyte count was as follows: Polymorphonuclear cells 47.5 per cent., lymphocytes 30 per cent., large lymphocytes and transitional cells 15 per cent., eosinophiles 6 per cent., and mast cells 1.5 per cent. In view of the eosinophilia the faeces were examined, and numerous typical ova of *Ankylostoma duodenale* were seen on several occasions; once an immature worm was found.

Thymol was administered in cachets, but the whole dose, apparently, was at once returned by vomiting. On the next day the patient became comatose with a scarcely palpable pulse. Under treatment with stimulants he regained his previous condition in the course of a day or two and no more thymol was given, but a week later a similar attack of collapse ended fatally. The duration of the illness was, in all, three months.

Post-mortem Examination.—Contrary to expectation, only one mature ankylostome was found in the intestine, and little or no change was seen in the lining mucous membrane. The increase in the number of lymphocytes had suggested the possibility of tuberculosis, and, in view of the history of fainting attacks, headache, and vomiting, it was thought that a tuberculous mass might be found in the cerebellum. The brain was found to be normal, but extensive tuberculous disease, with marked caseation, was found in both suprarenal bodies, and the symptoms were doubtless due chiefly to this condition.

The patient had never been out of England, nor had he visited Cornwall or any other mining district; he had not, in fact, travelled farther from London than Dover. The boy had, however, associated to a considerable extent with soldiers who had been abroad, and it is possible that he acquired the ankylostoma infection in this manner. The case is put on record on account of the clinical interest attaching to its rarity and obscurity. Whether as a result of the war ankylostomiasis will become somewhat less restricted in its incidence remains to be seen.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE CONE DIAPHRAGM IN X-RAY WORK.

THE localization of foreign bodies in the orbit by most of the ordinary methods is tedious and not always accurate. While in France I set about designing a new form of localizer. I was anxious to obtain the sharpest possible shadows and therefore investigated the question of diaphragms in x-ray work. I knew that the results obtained normally with a plane diaphragm were inferior to those obtained with the aid of a cylinder cone or tube diaphragm. The usual explanations of this phenomenon did not appear to me to satisfy all the facts, and I therefore carried out some experiments. From the results I obtained I convinced myself and several others who have repeated the work that

1. Most, if not all, of the general fog and blurring of the shadow of a foreign body in an x-ray negative is due to secondary rays set up in the tissues by primary rays arising from the anti-cathode.
2. The usual plane diaphragm is not opaque to all the hard rays from the A.C.
3. The tube cone or cylinder diaphragm is superior to the plane diaphragm only in so far as it is opaque to these primary rays owing to its greater thickness.
4. With a plane diaphragm of lead 6 mm. thick one obtains as good results as with any cone diaphragm.

Further, the amount of secondary rays set up in aluminium is less than that set up in human tissues, and therefore thin aluminium sheets may possibly be placed with advantage between the patient and the plate to filter off some of these softer fogging secondary rays with resulting greater contrast. An account of the experiments will shortly appear in the *Archives of Radiology and Electro-Therapeutics*.

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PURULENT MENINGITIS WITH RECOVERY.

ON March 23rd, 1919, a man was admitted to a casualty clearing station suffering from a lacerated scalp the result of a fall from his horse two days previously. The wound had been cleaned and sutured at the field ambulance. He complained of severe headache, and gave a history of having been unconscious for a short time after the accident. Temperature, pulse, and reflexes were normal. There was slight tenderness and suppuration around the wound, and the stitches were removed. Some hæmorrhage under the conjunctiva of the right eye externally came apparently from behind the orbit. The following day the temperature was 101.2°. He complained of headache, and pain radiating down the spine; the head was retracted, the pupils equal, the knee-jerks

brisk, and Kernig's sign was present. Under an anaesthetic lumbar puncture was performed. The fluid was under considerable pressure and opalescent; about one ounce was withdrawn. The pathological report showed "polymorphs abundant, and lymph cells; no organisms seen." The man's condition steadily improved from that time onwards. Urotropin was given, gr. x every eight hours. He was evacuated on April 5th, apparently perfectly well.

T. W. HANCOCK, Major R.A.M.C.(T.),
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Rebiews.

IN FLANDERS FIELDS.

It is very meet and our bounden duty in these days of rejoicing to think of those who made victory possible, being mindful, not alone of their deeds and sacrifices, but of the spirit that impelled them—a spirit shared then by the nations of which they were the champions. Already it has become difficult to recapture the spirit of 1915, when all knew that the war would be long, though the fighting men were sure of the final result if only the civilians held firm. To those into whose hands shall fall a small volume, *In Flanders Fields*,¹ the memory of the spirit of 1915 will return, for John McCrae's poem, "born of fire and blood in the hottest part of the second battle of Ypres," gave "expression to a mood which at the time was universal, and will remain as a permanent record when the mood is passed." To a collection of some thirty of McCrae's poems Sir ANDREW MACPHAIL has added, not a formal biography, but "an essay in character," and vivid is his picture of the sterling qualities and lovable disposition of John McCrae. On one side of him he was a type of the physician of the twentieth century; beginning with pathology, he went on to be lecturer in medicine at McGill, working unceasingly in clinic, hospital, laboratory, and class-room, and with his pen. But he found time to make friends among all sorts and conditions of men, and the friends he made he did not lose. Through it all, like many another young physician, he found relief and solace in good books, and knew the rarer joy of creation. The poem that gives its title to this book was not his first, nor was it the first in a form which, as he devised and used it, has a haunting melody; all his early verses were contributed to the *University Magazine of Canada*, and Sir Andrew Macphail, who was its editor, writes that when he brought his work it "was finished to the last point." In July, 1914, McCrae completed the heavy task of revising for a new edition the *Textbook of Pathology* he had written with Professor Adami. He never doubted where his duty lay. But he went into the war without illusion, for he had served in South Africa and knew that this war would be terrible. His first experience of what it could be was with the artillery in the second battle of Ypres—"at the end of the first day if any one had told us we had to spend seventeen days there, we would have folded our hands and said it could not be done." General Morrison describes the circumstances: "My headquarters were in a trench on the top of the bank of Ypres Canal, and John had his dressing station in a hole dug in the foot of the bank. During periods in the battle men who were shot actually rolled down the bank into his dressing station." It was in this dug-out, a square hole, 8 by 8, roofed over with remnants to keep out the rain, and having a little sandbag parapet at the back to keep out pieces of back-kick shells, that he wrote the appealing piece of verse that was to stir so many hearts. It came straight from his heart, in its revolt, its doubt, and its hope. The effect it produced on both sides of the Atlantic is part of the history of the war.

Sir Andrew Macphail's essay is a joy and a consolation. He makes no attempt to impress his own estimate, but gradually, by a fine disdain of chronological order and seeming irrelevance of incident, he builds up in the reader's mind with cunning hand a conception of McCrae the more convincing that the building has seemed devoid of art.

¹ *In Flanders Fields. And Other Poems.* By Lieut.-Colonel John McCrae, M.D. With an Essay in Character by Sir Andrew Macphail. New York: G. P. Putnam's Sons. London: Hodder and Stoughton. 1919. (Demy 8vo, pp. ix + 141; 4 illustrations. 6s. net.)