THE ANTE-NATAL TREATMENT OF CONGENITAL SYPHILIS WITH SALVARSAN AND MERCURY.

BY

JOHN ADAMS, F.R.C.S.

IN his article in the JOURNAL of November 26th (in the course of which he refers appreciatively to my cases at the Thavies Inn Clinic) Dr. Leonard Findlay states, "That the curative treatment of congenital syphilis, if not a failure, is at least a great disappointment, no one who has had much experience will deny." As this statement is opposed to my experience, I should wish to point out some difficulties Dr. Findlay has had to contend with in treating his cases, and to express the opinion that, had other methods been used, very different results would probably have ensued.

I will begin with Dr. Findlay's last paragraph, in which he says that all his cases were out-patients. In such circumstances the treatment of congenital syphilis would certainly be unsatisfactory and disappointing, for a large number of syphilitic babies would have died before it was possible for them to be treated as out-patients.

I would strongly urge that the best time to treat all cases of syphilis, whether ante-natal, post-natal, or acquired, is the earliest possible moment available, and this applies especially to newly born babies. I have seen several cases which, had treatment been delayed for a few days, would certainly have died. Babies have been treated at the Thavies Inn Clinic within a few hours of birth, and one of the earliest under an hour, with good results and perfect safety.

Pain is mentioned as a drawback to the treatment of post-natal syphilis, but if galyl in glucose is used intramuscularly in appropriate doses according to the age and weight of the child, no discomfort follows its use, and all the advantages of salvarsan are obtained.

Dr. Findlay's reference to "limits of curative treatment" is somewhat confusing, for he states: "In any case the curative treatment has the great shortcoming that it only influences the disease in children born alive, and neglects altogether the ravages during intrauterine life." If this paragraph refers to post-natal syphilis, one knows how difficult such cases are to deal with if allowed to go untreated for a year or more.

Under the heading of technique it is stated: "Administration of salvarsan in infants and children by the intravenous method considerably limits its use." Intravenous injection for babies and young children appears quite unnecessary, and in many cases would be impossible; injection into the superior longitudinal sinus is open to still greater objection, as at all times there must be a certain amount of danger; but intramuscular injection of galyl in glucose in the gluteal region is perfectly safe, painless, and effective, and should be adhered to in all cases of newly born babies and young children.

In his remarks on the time of election of treatment Dr. Findlay asks the question, "Should the treatment be carried out as soon as the diagnosis is made, or should it be delayed until the woman is pregnant?" My practice is to treat the patient at the very earliest opportunity and continue for a prolonged period—two years if possible.

The method of breast feeding as advocated by Dr. Findlay has brought about the best results in the cases under my care, but it is frequently found necessary to supplement it by some form of artificial food, and all patients, whether babies or adults, should be given mercury as well as salvarsan.

The accompanying table shows the result of treatment of women during pregnancy and of the newly born children at the Thavies Inn Venereal Centre for Pregnant Women during the four years it has been open. I append also a tabular outline showing the method of treating babies adopted at the clinic.

Result of Treatment of Women during Pregnancy and of the newly born Children.

Years (September 1st to August 31st).	Mothers Admitted with Syphilis.	Babies Born Alive. Wassermann Reaction: Positive.	Negative.	Babies Dying of Syphilis.	Foetus Stillborn from Syphilis.
1917-1918 ...	23	17	6	Three at the ages of 3, 14, 35 days respectively	5
1918-1919 ...	30	8	21	One, 2 months	1
1919-1920 ...	37	1	36	None	0
1920-1921 ..	23	5	16	None	2*

*Neither of the mothers had treatment before admission and both were confined of macerated babies soon after.

Treatment of Babies.

	Wassermann test of Mother	Placenta	Baby
Treatment	+ ... + ... +	+ ... + ... +	+ —* —*
No treatment	— ... — ... —		

	Intramuscular Galyl in glucose†	Intramuscular Hg‡	Oral Hg
1st day	1.75 cg.	... — ...	—
8th ,, ...	1.5 cg.	... 1/6 gr. ...	1/2 gr. daily Hyd. ℂ creta
22nd ,, ...	2 cg.	... 1/4 gr. ...	,,
36th ,, ...	2.5 cg.	... 1/1 gr. ...	,,
Wassermann test.			
50th ,, ...	2.5 cg.	... 1/3 gr. ...	,,
64th ,, ...	3 cg.	... 1/3 gr. ...	,,
78th ,, ...	3 cg.	... 1/3 gr. ...	,,
Wassermann test: Nearly all babies become negative before or at this period.			
120th day...	3.5 cg.	... 1/3 gr.)	Intermediate
134th ,, ...	3.5 cg.	... 1/3 gr.)	treatment.
148th ,, ...	3.5 cg.	... 1/3 gr.	
176th ,, Wassermann test.			

At the ninth and twelfth months courses of three injections of 4 to 5 cg. galyl and 1/2 grain mercury should be given, and gr. 1 hyd. ℂ creta daily for a month. Further treatment is governed by the progress of the case. Should the Wassermann test become positive at any future date intensive treatment should be begun immediately. These doses are calculated for babies of normal weight for their age.

* Do not usually require the full course of treatment.

† To be obtained in 2.5 and 5 cg. ampoules from the Anglo-French Drug Co., Ltd., 238a, Gray's Inn Road, London, W.C 1.

‡ Mercurial cream for adults, 40 per cent.; for babies, 20 per cent. Can be obtained from Squire, 415, Oxford Street, W. A special syringe, which can be obtained from Montague, 69, New Bond Street, W., marked with fifteen divisions, each of which is one-fortieth of a cubic centimetre, is recommended. With 40 per cent. mercurial cream each division contains 1 cg. or gr. 1/5 of mercury.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF MENINGITIS SIMULATING TETANUS.

H. S., aged 47, came to the Casualty Department of the Radcliffe Infirmary, Oxford, on November 4th complaining of pain in the neck and abdomen and stiffness of the lower jaw. Six days previously he had fallen off his bicycle, cutting the inner aspect of the left thumb on a bucket he was carrying. The wound was carefully cleaned at the time and dressed on the succeeding days.

On admission there was some slight rigidity of the neck muscles and definite stiffness of the lower jaw, which he was unable to open more than about half an inch. A provisional diagnosis of tetanus was made and he was admitted, although in view of the fact that since the day of the injury he had repeatedly expressed his fear of contracting tetanus, it was thought the symptoms might eventually prove to be functional. On admission antitetanus serum was given as follows: Intrathecally 7,000 units, intravenously 10,000, and subcutaneously 10,000. The cerebro-spinal fluid removed was clear and not under increased pressure. The following day his condition was much the same; there was trismus and rigidity of the neck, but no opisthotonos, risus sardonicus or general muscular spasm, squint or photophobia were noted, but he complained of headache. The knee-jerks were brisk and the plantar reflex flexor; the bowels were constipated. There was retention of urine; on passing a catheter a urethral discharge was noted.

Later in the day he was seized with a sudden spasm of the glottis and became cyanosed and pulseless, but was revived by artificial respiration, etc. He was now unable to swallow either solids or liquids, as any attempt to feed by mouth tended to bring on another spasm of the glottis. The case was now diagnosed as one of cephalic tetanus.

In the course of the next day, forty-eight hours from the onset of symptoms, he had several similar spasms, and died during one of them, in spite of the hurried performance of tracheotomy. The temperature was subnormal throughout; the pulse varied between 60 and 80. There was never any general muscular rigidity, but the spasm of the jaw never relaxed.

The patient was seen by several medical men familiar with tetanus, and the general consensus of opinion was that the clinical picture, whilst not quite that of ordinary tetanus, most nearly resembled that of so-called cephalic tetanus.

At the necropsy the lungs and the right side of the heart were found deeply engorged; there was no tracheal or laryngeal obstruction. The convex surfaces of both cerebral hemispheres were

covered with a yellow purulent exudate. The base of the brain was normal in appearance. In a direct smear from its surface no organisms were seen. A culture unfortunately was not made.

Although direct evidence is lacking, it seems possible, in view of the chronic gleet, that the case may have been one of gonococcal meningitis.

I am indebted to Dr. Collier, under whose care in hospital the case was, for permission to publish these notes.

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Late House-Physician, Radcliffe Infirmary, Oxford.

OESOPHAGEAL POUCH.

S. L., aged 5, was admitted to the Glan Ely Tuberculosis Hospital of the Welsh National Memorial Association on October 22nd, 1921, as a suspected case of tuberculous peritonitis and cervical adenitis. The history was that the child had been quite well until eighteen months earlier, when she swallowed caustic soda accidentally. Since then she had been ailing and getting progressively thinner, vomiting more or less regularly every few days. The child was wasted and emaciated and weighed only 1 st. 10 lb. 10 oz.; although showing possibly some of the stigmata of tubercle there was no definite evidence of any active disease. The abdomen on physical examination did not show any marked pathological condition.

The child was put on a light diet, but it was found that she was able to take very little; she vomited very frequently and probably brought back the greater part of whatever was swallowed. The vomited matter was alkaline or faintly acid; a fluid diet was tried with no better result. The bowels acted fairly regularly; the motions were loose and pale. The vomiting took place without effort and independent of the time of taking food; after some days of observation the possibility of an oesophageal pouch was suggested by Dr. Clark, the senior assistant medical officer. A fortnight after admission a bismuth meal was given and the chest screened, when a dark image, in shape a somewhat oval pouch, was seen. An *x*-ray plate showed a distinct pouch of the oesophagus at the level of the third to the seventh dorsal vertebrae.

As the child was too weak and emaciated to stand any severe or prolonged operation a gastrostomy was suggested as a means of getting her into suitable condition for possible removal of the pouch. The parents, however, refused operative treatment and took her home.

ALEX. BROWNLEE,
Medical Superintendent.

LABOUR COMPLICATED BY MALIGNANT GROWTH.

AT 3.30 a.m. on July 22nd, 1920, I was asked by my partner to assist him at a midwifery case. Neither of us had been engaged for the confinement, but a certified midwife was in attendance and had sent for help in the approved form. The woman was 38 years of age, a multipara, and this was her fifth confinement. She was very pale and cachectic, with oedema of the lower extremities and vulva, her pulse small and rapid, the rate 160 per minute, and her respiration sighing.

She had had an extensive haemorrhage, and the vagina was filled with a huge cauliflower growth, which bled readily when touched; the foetor was indescribable. After the most gentle manipulation, I found that the greater part of the growth arose from the anterior lip of the cervix. She was anaesthetized with chloroform, and upon passing my whole hand into the vagina I found that the head was presenting but not yet engaged in the pelvic outlet. I also made out that the head was fairly movable. I attempted to pass the lower blade of Barnes's long forceps, but on account of the free haemorrhage I had to desist. The patient was now *in extremis*. Foetal movements had not been felt by the mother for the last forty-eight hours; the foetal heart could not be heard; the child was evidently dead. I therefore performed bipolar version and was able to grasp the left foot; the child was easily delivered, but for a little delay caused by the head. The placenta was expressed and appeared healthy; the uterus contracted well. I gave the patient a half-grain morphine suppository. Convalescence from the labour was rapid, but the malignant growth increased, and in the course of a month presented at the vulva. She was then admitted into a neighbouring infirmary and transferred to a Liverpool hospital, where an exploratory laparotomy was performed; the growth was inoperable. She died from secondary deposits in the liver and lungs in June, 1921, eleven months after her confinement.

Wrexham, North Wales. J. C. DAVIES, M.D.

Reports of Societies.

SEPTIC INFECTIONS OF THE BLADDER AND KIDNEY.

AT meetings of the Royal Medico-Chirurgical Society of Glasgow, held on December 2nd and 16th, 1921, a general discussion took place on "The diagnosis and treatment of septic (non-venereal) infections of the bladder and kidney."

The opener, Dr. JOSHUA FERGUSON, confined his remarks to the infections associated with the *Bacillus coli communis*. This organism, normally harmless and useful, acquired, after leaving its ordinary nidus, a noxious and often dangerous character. In this respect, he suggested that just as the passage of a culture through various special media or certain susceptible hosts exalted its virulence, so the result of implantation upon new tissues might develop the morbific properties of the *B. coli*. The detection merely of coliform bacilli in the urine did not in itself prove the existence of a morbid infection. Often a bacilluria might indicate no more than the elimination of micro-organisms from the body. The lesions of the urinary tract dependent upon infection by *coli* organisms were cystitis, pyelitis, pyelonephritis, and pyonephrosis, or two or more of these may exist in combination or in sequence. The age and sex incidence was of considerable importance in diagnosis, and they occurred with almost equal frequency among the comfortable and among the less favoured classes, suggesting that the well-to-do were relatively more susceptible. Dr. Ferguson described 6 cases of cystitis and pyelitis, more particularly with regard to etiology and treatment, and concluded by emphasizing certain considerations relating to the treatment. In infants especially, but also in others, the early recognition of premonitory symptoms was important, as was, from the point of view of prophylaxis, the development of sound and cleanly functional habits. Diet, modified so as to ensure free internal lavage of the urinary channels, was all-important. Alkalinization of the urine should be obtained at the earliest possible opportunity; where this failed urinary antiseptics of the formaldehyde type (the best seemed to be hexamethylene-tetramine salicylate) were often successful. Regular free action of the intestine was an indispensable part of treatment, and in the infections under consideration the regular use of suitable doses of magnesium sulphate and sodium sulphate had usually a specially beneficent effect. Vaccine therapy in Dr. Ferguson's hands had produced inconstant results.

Dr. LEONARD FINDLAY dealt first with the varied symptomatology, which was especially so in infancy. The clinical picture was, as a rule, that of anything but an infection of the urinary tract, and very many diseases were simulated. Rarely, if ever, was the condition in infancy admitted to hospital with the correct diagnosis. In part this was due to the fact that routine examination of the urine was not carried out in infants. Besides thorough chemical examination of the urine, a microscopic and bacteriological investigation also was essential. An occasional pus cell seemed to be a normal finding, and in febrile conditions shreds of mucin and leucocytes were frequently present. Culture of the sediment of almost any specimen, taken with all due precautions, showed an occasional colony of *B. coli communis* or some other organism. In pyuria pus was present, in most cases, in sufficient abundance to be recognizable without centrifugalization. In a few cases the pus appeared in the urine only some time after the onset of illness. In bacilluria or bacteriuria, again, the organisms could readily be seen in a fresh drop without centrifugalization, and in films were abundant and cultivated readily (without centrifugalization). Dr. Findlay insisted on the need for obtaining over several months a pus-free and organism-free urine, as far as the fresh drop was concerned, before claiming a cure. One much discussed point was the mode of entrance of the infecting organism. Much experimental work had been done, and the conclusion reached that the passage of the infecting agent up the urethra, if the urinary tract was healthy, was improbable, but this was not so in the presence of abnormality, such as congenital hydronephrosis. Free drainage was necessary to secure the excretion of organisms such as *B. coli*, which passes through the kidney, but where anything interfered with the emptying of the urinary system the organisms multiplied and produced infection. While many clinicians believed that infection per urethram was probable Dr. Findlay did not favour this view.

With regard to the seat of origin, while many believed

surgeon-lieutenant-colonel in 1895, and retired with an extra compensation pension on August 19th, 1898. His first ten years' service were spent in military employment in the Assam Light Infantry, and during this time he served on the North-East Frontier, in the Naga Hills campaign of 1879–80, when he was present in the action at Koruma, was specially mentioned in dispatches in 1880, and received the frontier medal with a clasp. In May, 1881, he went into civil employ in Bengal, where he served as civil surgeon of Arrah, Bardwan, and Darjiling successively. In April, 1892, he was appointed Professor of Anatomy in the Medical College, Calcutta, and second surgeon to the College Hospital, appointments in which he had previously acted in 1884–5; he held these posts till his retirement. The late Colonel Bartholomew O'Brien, I.M.S., was his younger brother.

Major Laurence Campbell Vigor Hardwicke, R.A.M.C.(T.F.), died in the Military Hospital at Haifa, Palestine, on December 10th. He was the younger son of the late Mr. John Hardwicke of Portishead, Somerset, and was educated at Edinburgh, where he graduated M.B. and Ch.B. in 1904, and took the special certificate for tropical diseases. After filling the post of resident medical officer of Paddington Infirmary he entered the Egyptian Medical Service, where he served as medical officer of the Assouan reservoir district, with medical charge of the hospital and engineering works of the Assouan dam He took a commission as lieutenant, R.A.M.C.(T.F.), and medical officer of the 1st Battalion of the City of London Regiment, the Territorial battalion of the Royal Fusiliers, on July 22nd, 1905, becoming captain on January 22nd, 1909, and major on July 23rd, 1917; he served as such throughout the war.

Surgeon Commander Thomas Francis O'Keeffe, R.N. (retired), died at Richmond on December 23rd, aged 47. He graduated M.B., B.Ch., and B.A.O. in the Royal University, Ireland, in 1899, after which he entered the navy, attaining the rank of surgeon commander on February 1st, 1915, and retiring in 1920.

Medical News.

THE Home Secretary has appointed Lieut.-Colonel P. S. Lelean, C.B., C.M.G. (formerly of the Royal Army Medical College), to be an inspector under the Cruelty to Animals Act, 1876, which relates to experiments on living animals.

IN view of the importance of the early diagnosis of small-pox the London County Council has issued to medical practitioners in the metropolis a circular regarding the arrangements under which in doubtful cases the certifying practitioner confers with the medical officer of health of the borough. Should a further opinion be required, on application to the Public Health Department of the Council, 2, Savoy Hill, W.C.2 (Tel. No. Gerrard 3641), the services of Dr. Wanklyn will be available at any time of the day or night and during week-ends.

A COURSE of twelve lectures on the management and feeding of infants and young children will be given to medical practitioners by Dr. Eric Pritchard at the St. Marylebone General Dispensary, Welbeck Street, W., on Wednesdays and Fridays at 6 p.m., commencing on February 8th. Practitioners attending the course will be entitled to attend the infant consultations at the Dispensary on Tuesdays and Thursdays at 11 a.m. and 3 p.m. respectively, when demonstrations will be given. Opportunities will also be afforded of visiting on Saturday afternoons the Nursing Training School at Golders Green.

THE annual dinner of past and present students of the Royal London Ophthalmic Hospital (Moorfields) will be held at the Langham Hotel, on Thursday, February 9th, at 7 for 7.30 p.m., under the presidency of Dr. James Taylor, consulting physician. The price of tickets (excluding wine) is 15s.; application should be made to Sir William Lister, 24, Devonshire Place, W.1.

AT a meeting of the Medico-Legal Society, to be held at 11, Chandos Street, W.1, on Tuesday, January 17th, at 8.30 p.m., Professor Harvey Littlejohn will read a paper on "The proof of live birth in criminal cases."

AT the National Colonial Exhibition at Marseilles this year a congress of public health will take place, from September 11th to 17th, under the presidency of Dr. Paul Gouzien, President of the Superior Council of Health for the French Colonies. Further information may be obtained from the Central Organizing Committee, 55, Rue Paradis, Marseilles.

DR. LOUIS CASSIDY, F.R.C.S.I., has been elected Master of the Coombe Lying-in Hospital, Dublin, in succession to Dr. MacLaverty, whose period of office has expired.

THE period for which Mr. G. B. Mower White, F.R.C.S., was appointed honorary surgeon to the Royal Northern Hospital (formerly the Great Northern Central Hospital) having expired, he has been appointed emeritus surgeon in order that his services may be retained.

SIR ARTHUR KEITH will give six Hunterian lectures in the theatre of the Royal College of Surgeons, Lincoln's Inn Fields, on the facial characteristics of living races of mankind, illustrated by specimens from the collection of human osteology in the museum of the College. The first lecture, to be delivered on Monday, January 16th, will deal with the facial characters of the Australian aborigines and allied native people; the second, on January 18th, with the negro and negroid types of face and skull; the third, on Friday, January 20th, with the Mongolian face and its modifications; the fourth, on January 23rd, with the European face and its chief variations in type; the fifth, on January 25th, with the study of certain aberrant types—bushmen, Eskimo, Lapp, and Ainu; and the sixth, on January 27th, with the facial characteristics of the races native to India. The lectures will be given on each day at 5 p.m.

THE number of deaths from influenza in the week ending January 7th is stated provisionally as follows: For the great towns, 795; for London, 352 (151 in the previous week).

POST-GRADUATE courses will be given during the next three months at the National Hospital for the Paralysed and Epileptic, Queen Square, W.C.1, as follows: (1) A course of clinical lectures and demonstrations; (2) a course of neuropathology; (3) a course of six lectures and demonstrations in neurological ophthalmology. The complete syllabus and information regarding fees may be obtained from the Dean of the Medical School, Dr. C. M. Hinds Howell. Courses (1) and (2) will begin on Monday, January 16th, and Course (3) on Wednesday, February 1st.

DR. IAN MACDONALD of Huelva and Seville, Spain, has been elected a corresponding member of the Society of Surgeons of Paris.

MUCH interest is being shown by the American medical profession in a series of questions put by the *Journal of the American Medical Association* to over 54,000 practitioners in the United States on the uses of alcohol; over 30,000 answers have already been received and are being examined. The purpose of our contemporary is to obtain an authoritative expression of opinion from the medical profession on alcohol as a therapeutic agent. The inquiries have been sent to every other practitioner whose name appears on the mailing list of that journal, and to some 10,000 other practitioners throughout the country. The questions relate to the type of practice in which the practitioner is engaged; whether he regards spirits, beer, and wine as necessary therapeutic agents in the practice of medicine; whether in his experience unnecessary suffering or death has resulted from prohibition; how often he has found it necessary to prescribe these liquors; and whether he considers restrictions should be imposed upon members of the medical profession in prescribing them. The answers will be tabulated.

A MONUMENT to J. B. A. Chauveau, formerly president of the Académie des Sciences and of the Académie de Médecine and professor at the Natural History Museum at Paris, is to be erected at the Veterinary School at Lyons, where his principal discoveries were made.

ACCORDING to the *Wiener klinische Wochenschrift* the medical profession in Brazil have collected the equivalent of 150 to 160 million kronen to relieve distress among the medical profession in Austria and Germany.

THE late Mr. William Henry Clarke, of Southwick Crescent, Hyde Park, who died in October, 1921, leaving £70,124, has bequeathed £500 each to the London Hospital, Middlesex Hospital, St. Mary's Hospital, West London Hospital, St. Thomas's Hospital, Guy's Hospital, University College Hospital, and King's College Hospital; £300 each to the Cancer Hospital, Fulham Road, East London Hospital for Children, the Florence Nightingale Hospital, the Chelsea Hospital for Women, and St. Bartholomew's Hospital; £250 to the London Fever Hospital; £200 each to the Metropolitan Hospital, Kensington Dispensary and Children's Hospital, and the Poplar Hospital; £100 each to the Royal Dental Hospital, Leicester Square, the Paddington Dispensary for the Prevention of Consumption, Queen Charlotte's Lying-in Hospital, Royal London Ophthalmic Hospital, St. George's Hospital, St. Paul's Hospital for Skin and Genito-Urinary Diseases, Hospital for Diseases of the Heart, Westmoreland Street, W., Lock Hospital, and St. Peter's Hospital. After the payment of these and other legacies the residue of the estate is left to such institutions, societies, or nursing homes as assist or provide for persons of moderate means who may not be able or eligible to benefit under the National Health Insurance Act or old-age pensions. Under the provisions of the will of his sister, Mary Ann Clarke, he appoints £9,500 to various hospitals and charitable institutions, and the ultimate residue of her estate is devoted to the Church Army, the West London Hospital, and the National Lifeboat Institution.