

glass was placed on the water bath and from 15 to 20 grammes of chlorate of potash were added together with about 100 cubic centimetres of strong hydrochloric acid. The mixture was warmed until the development of the chlorine was made apparent by the mixture becoming lighter in colour. It is advisable to attach a short inverted condenser. By the action of the nascent chlorine the organic constituents are for the most part destroyed and the mercury which is presumed to be in combination with them is changed into bichloride of mercury. The retort was then taken from the water bath and allowed to stand for 12 hours in order that the chlorine might act on the organic substances for a sufficiently long time. Afterwards it was again gently warmed and about 100 cubic centimetres of clear stannous chloride solution (prepared by warming excess of tin in concentrated hydrochloric acid and filtering through a hard filter) were added. After cooling a little it was filtered through an asbestos filter by means of the exhaust-pump and slightly washed. The asbestos filter was prepared from pure shredded asbestos on a porcelain filter which was placed in a moderately sized ordinary glass funnel. What adhered to the sides of the funnel was washed down with slightly warmed water from the wash-bottle, otherwise it adhered very firmly. The deposit, which along with the organic substances containing the mercury, together with a little hydrate of potash and some water, was placed in a retort holding about 300 cubic centimetres, into which it was entirely transferred by washing the funnel with warm liquor potassæ. The retort was placed in the water bath, slightly warmed, and allowed to cool. The organic substance was thus brought into solution and the action of the chlorine later was more thorough and took place quite quietly. Then (after the cooling) some crystals of chlorate of potash and concentrated hydrochloric acid were added. The chlorine formed destroyed the remainder of the organic substances entirely, and the mercury was all brought into solution as chloride. The solution was then filtered, best with the suction-pump (through a small filter plate on which there was a round close-fitting filter-paper, washed with as little water as possible). Afterwards the warm solution was mixed with from 10 to 20 cubic centimetres of stannous chloride and filtered through a filter amalgam tube filled with "gold asbest" and finely divided granular gold. The smallest particles of mercury were retained by this. The filter tube was then washed with diluted hydrochloric acid and water and afterwards three times with alcohol, then three times with ether, well dried in the dry air stream by which it was warmed a little at the start, and weighed till the weight was constant. Then the mercury was volatilised, the air current being again passed through. It had to be heated strongly as the "gold asbest" was a very bad conductor of heat, and the heating had to go on till the gold amalgam was thoroughly decomposed and the mercury entirely driven off. The tube was then weighed again till the weight was constant. The weight of the mercury contained in the sample of urine was the difference between the two weights. Three test experiments made by this method gave the following results:—

	Experiment I.	Experiment II.	Experiment III.
Mercury (decimilligrammes) added to each litre of normal mercury-free urine ... ..	25	44	0
Mercury (decimilligrammes) found in urine ... ..	28	37	5

A series of three experiments was then made with pathological urine, each litre of which on an average of many analyses contained 20 decimilligrammes of mercury.

	Experiment I.	Experiment II.	Experiment III.
Decimilligrammes of mercury added per litre ... ..	30	40.5	67
Decimilligrammes of mercury already present ... ..	20	20	20
Totals ... ..	50	60.5	87
Decimilligrammes of mercury found	60	55	77

We think that these figures sufficiently prove the usefulness of our method with respect to accuracy, and it can be carried out in a proportionately quick and easy way when once one has the apparatus for its performance, so that, with sufficient practice, three or four analyses can be made in 24 hours. Our method is very well suited to carrying out an extensive series of experiments which we have undertaken on the amount of mercury eliminated in the urine of persons who were undergoing a course of inunctions.

In conclusion we can confidently state that the method in the case of urine containing at least one milligramme of mercury per litre, by proper and careful work, according to our directions, gives absolutely accurate results. The results, as shown in the figures supplied, in cases where the urine contained less than one milligramme per litre, are only approximate. Our method has the advantage over that of Winternitz of being considerably quicker and easier in carrying out, and over the method of Jolles of being more certain and accurate with almost the same readiness and facility in working. The presence of an iodide does not interfere with the results obtained.

## PROTRACTED GESTATION.

BY JOHN PHILLIPS, M.B., C.M., L.R.C.P. EDIN.

THE question of the duration of pregnancy being of considerable interest, not only from a medico-legal point of view, but also from that of general practice, I venture to report what I believe to be an authentic case in which it was prolonged to much beyond the usual period.

My patient was a primipara and unmarried. Intercourse was declared to have taken place on one occasion only—Sept. 6th, 1898—the girl's age at that time being only 16 years and four months. Her menstrual periods had occurred at regular intervals and they usually lasted about a week. Her last period had occurred in August, 1898, and had entirely ceased by the 24th of that month, this being the first day on which she considered herself "well," and it was from this date that I calculated the probable duration of pregnancy. In consequence of her missing her next two periods in September and October her aunt with whom she lived took her on Oct. 24th to a medical man in London, to whom the girl confessed, when questioned, that she had had intercourse, and he expressed the opinion that she was most probably pregnant. This proved to be the case and in April of the present year she came under my observation, and I was asked to attend her in her confinement, which I calculated would take place somewhere about May 29th, this being the usual average period of 278 days from the cessation of her last menstrual period (August 24th, 1898), from which I reckoned. Instead, however, of the confinement occurring at the expected time she not only went through the whole of June without a single pain, but labour did not set in until July 13th, on which date the pains began at 6 P.M.—323 days after the cessation of her last period and 310 days after the date of coitus, the child being born on the following day at 4.30 P.M. There is not the slightest doubt that no menstrual period occurred subsequently to that in August, as in addition to the girl's own statement her aunt, who always looked after her linen and who consequently always knew when her niece was unwell, declares that there "was not a stain" subsequently to the August period. During the entire pregnancy the girl had excellent health and there were no pains of any description prior to the onset of labour, which was perfectly normal and the presentation the usual cephalic one. Unfortunately at the time I had no opportunity of having the child (a female) weighed as it was sent away to be nursed almost immediately after its birth (within three hours), but although well proportioned and of good size it did not seem at all unusually large.

The late Dr. Matthews Duncan in his book, "Fecundity, Fertility, Sterility, and Allied Topics" (p. 348), is inclined to disbelieve in any case of supposed protracted gestation unless the size and weight of the child are above the average, considering that increased growth must follow lengthened gestation, but this cannot be taken as proved and, as Dr. Playfair points out, even if it be admitted the foetus may have been originally small, so that at the end of the protracted gestation it may be of no more than the average weight and

there is certainly no reason to believe that the foetus must necessarily be large simply because it has been retained longer than usual in the uterus.

This case, then, which lasted 323 days after the cessation of menstruation, is thus a parallel to the four instances reported by Simpson in which, reckoning from the same period, gestation was prolonged to 319, 324, 332, and 336 days respectively, and other instances as curious may be found scattered through obstetric literature. The case, however, becomes more exceptional and interesting when we consider the prolonged interval which elapsed between the date of actual intercourse and the onset of labour—310 days. Of the 46 cases reported by Dr. Matthews Duncan, who probably devoted more consideration to this subject than any other writer has done, he calculates an average interval between what he calls insemination (intercourse) and parturition of 275 days and other authors give other estimates—from 271 to 276 days. The longest of the series of cases recorded by Dr. James Reid in which he reckoned from a single coitus was 293 days and this he believed to be the extreme limit. Leishman, however, mentions one in which the interval was 295 days and Hedrich has recorded the case of a primipara who was delivered on the three hundred and ninth day after intercourse, whilst of those cases in which the duration of gestation has been determined by the death or departure of the husband Sir James Simpson reports one lasting 313 days and Dr. Hewitt another lasting 308 days. In more recent times Mr. Woollett reports<sup>1</sup> the case of a girl, 16 years of age, in whom gestation lasted 315 days from the date of coitus. In this case, however, labour pains occurred on the two hundred and eightieth day but passed off again, and another observer—Dr. R. McBride—has reported another case in which there was an interval of 296 days between a single intercourse and the occurrence of labour. It will thus be seen that the case of 310 days which I report is somewhat exceptional, and cases like these are of considerable importance from a medico-legal point of view.

In cases of contested legitimacy the English law and also the American, leaves the subject of the duration of pregnancy an open question, each case being decided on its individual merits, but in France and also in Austria a possible limit of 300 days is allowed, and this is extended to 302 days in Prussia.

There are still many practitioners who disbelieve in cases of prolonged gestation simply because they have not met with them in their own practice. There can, however, be little doubt not only that they occur, but that they probably do so with more frequency than is generally supposed.

Southsea.

## Clinical Notes:

### MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

#### POISONING BY CORROSIVE SUBLIMATE IN A PREGNANT WOMAN;

RECOVERY; DELIVERY OF TWINS AT TERM; POST-PARTUM HÆMORRHAGE.

BY M. D. EDER, M.R.C.S. ENG., L.R.C.P. LOND.

ON March 11th a primipara, over 30 years of age and six months pregnant, took by accident two grammes (30 grains) of corrosive sublimate in powder with a draught of water. I saw her some three hours later. There were great pain in the mouth, throat, and abdomen, persistent vomiting, and considerable collapse. The lips, mouth, tongue, and pharynx were much injured. The stomach-pump was not used, but large quantities of white of egg in water were given assiduously. A quarter of a grain of morphia was injected hypodermically and warmth was applied, and later hypodermic injections of ether were resorted to. The following day the vomiting had ceased, the fresh symptom being diarrhoea with bloody mucus. The same treatment was pursued and small quantities of milk and beef-tea were given at short intervals. As soon as the patient was out of danger antiseptic mouth-wash and gargles were used. In about

a month the patient was able to take solid food. No œso-phageal stricture had resulted.

On July 4th I received an urgent call to the same patient. She had been in labour since July 1st. There was general œdema of the legs, vulva, arms, and face so as to make her quite unrecognisable. I was told that she had been thus swollen for two months but had not sought medical aid. The waters had broken, but nobody knew when; the presentation was normal. With the aid of forceps a full-term male child was delivered. Abdominal palpation showed another child with normal presentation. After waiting half an hour, good labour pains having returned, I ruptured the membranes and in a few minutes a dead female child was born. The placenta came away almost immediately by itself. The uterus contracted well, the pulse remained bad, but I was obliged to leave for other work. Some two hours later I was recalled to find my patient in a critical condition from post-partum hæmorrhage, a furious hæmorrhage taking place when I arrived. The radial pulse was not to be felt. The hæmorrhage was controlled by bimanual compression of the uterus, or rather by the one hand inside the uterus. As soon as hot water was obtainable hot douches were given and  $\frac{1}{100}$ th of a grain of ergotinine citrate tabloid was administered hypodermically. The bleeding was controlled and a transfusion of some two quarts of saline solution was given. The patient rallied considerably after this and fortunately no further hæmorrhage occurred. Her condition was critical for some days, but eventually a good recovery was made. The œdema entirely disappeared before she was out of bed. My requests for a sample of the urine at the time and since then have not been complied with.

Palmira, Cauca, Republic of Colombia.

#### A CASE OF ENORMOUS NASAL AND POST-NASAL POLYPUS; PARALYSIS AND DEATH.

BY ATUL CHANDRA MUKHERJI, C.M.S.,

IN MEDICAL CHARGE, RAI DOORYA PRASAD GHOSH BAHADOOR,  
CHARITABLE DISPENSARY, SOLAGHUR (DACCA).

A MAHOMEDAN male, aged 20 years, was brought to me in May, 1896, with an enormous nasal polypus which, distending the upper part of the nose to such an extent as to produce amaurosis of the left eye (from pressure) and enlarging the nasal bridge to four inches in width when measured from eye to eye, passed down the left nostril and almost occluded his mouth—so much so that it was difficult to feed him even with a spoon. Finding all other measures fail I advised removal by operation at Dacca which he declined to submit to. I then suggested minor surgical intervention, but as the tumour was more or less cartilaginous and some portion of it might have intruded into the cranial cavity and implicated the anterior lobe of the brain I did not feel justified in operating, and the patient ultimately died, but a fortnight before he died complete paralysis, without coma or loss of intellect, supervened, and during the 11 days just preceding his demise he had incontinence of urine and fæces. No post-mortem examination was allowed.

**BRISTOL DISPENSARY.**—The annual report of the committee of this institution has just been issued and shows that during 1899 there were 10,835 patients treated who, with 1165 remaining at the end of 1898, made a total of 12,000. During 1898 there were 10,176 patients treated. The report adds that during the past year medical assistance has been given in 25 difficult midwifery cases and the three beds at the Bristol Convalescent Home are much appreciated by the patients.

**NEW WORKHOUSE INFIRMARY AT LISKEARD.**—At Liskeard on Dec. 30th, 1899, the new infirmary erected in connexion with the Liskeard Workhouse was formally opened by Mr. Preston Thomas, the Local Government Board Inspector. The building contains 60 "Lawson Tait" beds and has been erected at a cost of about £5500. Mr. Henry Chaplin, M.P., President of the Local Government Board, telegraphed "congratulating the guardians on the excellent work they have accomplished on behalf of the sick poor of their union."

<sup>1</sup> Brit. Med. Jour., vol. ii., 1886.