day; she has not taken opening medicine since leaving the infirmary.

It would be impossible to adduce stronger evidence against the view that bile plays any important part in the digestive processes. It can in no sense be considered an essential digestive juice.

Being anxious to ascertain if the bile had undergone any change in amount or composition since the patient was under observation, I requested her to keep the whole bile secreted during two periods of twenty-four hours, and to send it to me at the laboratory. This she did, and on February 27th I received two specimens. 1. Passed between 4 p.m. on February 24th to 4 p.m. on February 25th. 2. Passed between 4 p.m. on February 25th to 4 p.m. on February 26th.

I did not consider it necessary to make a detailed examination of all the various constituents. A determination of the amount of solids soluble in ether, of solids soluble in alcohol after extraction with ether, of solids insoluble in alcohol and ether, but soluble in water, and of the insoluble residue, affords data sufficiently full for our purpose.

The following table gives the amount and composition of the bile on the above two days, the average of these two, and, in the fourth column, the average amount and composition of the bile during our previous series of observations:

	Feb. 24th-25th, 1892.	Feb. 25th-26th, 1892.	Average of Two Days.	Average of Former Series of Observations.
Amount secreted... ..	500	680	590	638
Specific gravity—				
Ether extract—percent. (cholesterin, lecithin, fats)...	0.069	0.07	0.0699	0.075*
Alcohol extract—percent. (salts of bile acids, with some pigment and soaps)...	1.469	1.192	1.331	0.35
Watery extract (mucin, soluble salts, and pigment)...	0.910	0.884	0.923	1.102*
Insoluble residue (insoluble salts and pigment)...	—	0.053		
Total solids—				
Per cent.	2.248	2.199	2.323	1.31
In twenty-four hours...	12.240	14.953	13.596	8.378

* Average of analysis of September 7th, 1890, on which day the total solids amounted to 8.556 grammes.

This table shows that, with the patient no longer under hospital restraint, but living at home, eating well, and doing plenty of hard work, the following changes have occurred in the bile:

1. The total amount secreted is not increased. 2. The total solids are much increased. 3. This increase in the solids is due chiefly to an increase in the salts of the bile acids, which form the chief part of the alcoholic extract. 4. The ether extract (cholesterin, lecithin, and fats) is practically unaltered. 5. The mucin and salts are also unaltered in amount.

This increase in the bile acids, which are of the nature of amido compounds, is doubtless the result of a diet richer in proteids, and of a more active proteid metabolism. The absence of any increase in the cholesterin and lecithin would indicate, if my view of the source of these substances in the bile is correct, that no increase in the hæmolysis had occurred.

THE summer session of the London Post-Graduate Course commenced on May 2nd, and will end on June 25th. Lectures and demonstrations will be given at the Hospital for Consumption, Brompton; the Hospital for Sick Children, Great Ormond Street; the Hospital for the Paralysed and Epileptic, Queen Square; the Moorfields Ophthalmic Hospital, the Blackfriars Skin Hospital, Bethlem Hospital, the London Throat Hospital, at the Bacteriological Department of King's College, at the Pathological Department of the Great Northern Central Hospital, and at the Parkes Museum. The course on Midwifery and Diseases of Women is given at Charing Cross Hospital. The Secretary, Dr. Fletcher Little (60, Welbeck Street), will furnish any additional information.

REMARKS ON A CASE OF TRIPLE BIRTH.

By T. ARTHUR HELME, M.D., F.R.S.E.,
Manchester.

Mrs. McH., aged 35, multipara, was delivered of triplets on March 2nd, 1892. She had had five previous pregnancies; the first four went on to full time, and ended in the birth of living children, two male and two female; the fifth pregnancy was interrupted at the third month, ending in a miscarriage fifteen months ago.

No special fecundity or tendency to multiple pregnancy was to be noted in her family history. No multiple birth was known to have occurred either among the husband's or the patient's relatives, with the exception of one twin birth in the case of the patient's own sister. The patient's mother bore four children, three girls and one boy, all being single births. Of the two sisters, one had been married eight years, and had no children (though her husband was a widower who has children by a previous wife), the other had had ten children, and borne twins once.

During this, her sixth, pregnancy the patient had suffered greatly from the sixth month, owing to her unusually large size and consequent difficulty in breathing; for three weeks before confinement she was confined to bed on account of the dyspnoea, abdominal distension, and oedema of legs. The urine was quite healthy, and the heart sounds were normal, though the beat was feeble and rapid. The question of induction of premature labour because of the dyspnoea and cardiac embarrassment was discussed, but eventually pregnancy ended spontaneously at the eighth month.

The diagnosis of triplets before labour was impossible; it was evident that the uterus was over-distended, but palpation revealed no foetal parts, nor could any heart sounds be heard on auscultation.

Labour lasted 17 hours, 13½ being occupied by the first, 2½ by the second, and one by the third stage. Before the membranes ruptured a footling presentation was recognised, but as soon as the waters (of which there was a huge quantity) escaped, four feet and a funis were felt occupying the cervical canal. The first child (female) was stillborn and had evidently been dead for some days. After a short interval of ten minutes, a second child, also a female, was born living. Examination of the patient showed the uterus to be very large, the fundus still reaching above the umbilicus, and on vaginal examination another bag of membranes was felt filling the cervix, and in it another foetus presenting by the breech. After an interval of twenty minutes I ruptured the membranes, and the third child, a male, was born alive a quarter of an hour later. After this there was a cessation of uterine action for nearly an hour; at the end of that time, owing to the occurrence of some hæmorrhage, it was necessary to strip off the placenta manually; this seemed to clothe the whole interior of the uterus except a small area on the posterior wall. Examination of the afterbirth showed it to consist of one large placental mass, with the foetal sacs each having its own amnion and chorion with a common decidua; one sac had contained the male child, the other sac had contained the two female children, and the umbilical cord of one of the latter (the stillborn child) had a velamentous insertion, its vessels separating and being attached to the membranes 3 inches from the placental margin.

This case presented almost all the typical features of a multiple birth.

1. *Date of Onset of Labour.*—Premature labour is very frequent in multiple pregnancies, due partly, no doubt, to the over-distension of the uterus. Even in twins this is so. "Of 192 twin births reported by Reuss from the Würzburg clinic, 51 did not complete the full term of gestation" (Lusk). And this agrees with our every-day experience. In this case pregnancy ended spontaneously at the beginning of the eighth month.

2. *Character of Labour.*—Labour presented the usual features: the first child was born without difficulty, followed by the second and third, with the usual intervals (10 minutes between the first and second, and 35 minutes between the second and third). Owing to the uterine inertia and the misdirection of what little uterine force there was on account of the pendulous state of the abdomen the third stage had to be artificially completed.

3. *Presentation.*—This was unusual, the first two children presenting by the feet and the third by the breech. In twin cases the relative frequency of head and pelvic presentation is as follows:—Both heads, 49 per cent.; head and breech, 31.7 per cent.; both pelves, 8.6 per cent.; other, 10.7.

4. *Origin.*—In this feature, too, the present case illustrates the general rule. The three children were developed from two ova; the male child being developed from one ovum

while the other ovum gave rise to two fetuses, the latter, as is always the case in twins developed from a single ovum, being of the same sex (female).

5. *Frequency*.—In general it is calculated that triplets occur about once in 7,000 births. At St. Mary's Hospital, however, during the past 10 years, in 29,334 births there have been 9 triplets, that is about 1 in 3,200.

6. *Differential Diagnosis*.—The diagnosis lay between (1) over-distension of the abdomen by an over-distended pregnant uterus alone, that is, hydramnios with or without multiple pregnancy; and (2) over-distension by a normal pregnant uterus associated with ascites or some abdominal tumour, for example, ovarian cyst. Careful palpation and percussion, however, showed that the fluid was all contained within one sac, the walls of which though somewhat tense possessed the soft elasticity and varying consistence of the thin and contractile walls of the pregnant uterus, contrasting markedly with the tense and non-contractile character of the ovarian cyst wall. That the tumour was due to a pregnancy was supported by many of the usual signs and symptoms of pregnancy.

A CASE OF PROLONGED GESTATION WITH COMPLETE OCCLUSION OF THE OS EXTERNUM.

By ROBERT JARDINE, M.D. EDIN., M.R.C.S. ENG.,
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I VENTURE to record this case as it seems to me to be one of considerable interest, combining in itself, as it does, two rare conditions.

In Austria and France 300 days is the extreme limit of gestation recognised by law; in this country no definite time is fixed, but each case is decided on its own merits. There is no doubt that in a considerable number of cases gestation is prolonged beyond the average of 278 days. Dr. James Reid, in his well-known paper on "The Duration of Human Pregnancy," gives several instances of pregnancy after a single coitus. The five longest periods he records are as follows: One of 291, two of 293, one of 296, and one of 300 days. Professor Leishman gives a case which lasted 295 days after a single act of coitus. The child weighed 12 lbs. 3 ounces. Matthews Duncan considered that the child would necessarily be very large in all cases. It was exceptionally large in the case which I report below. In Sir James Simpson's *Memoirs* four cases are recorded, lasting respectively 336, 332, 319, and 324 days, the latter six months and 6 days from the time of quickening. Playfair mentions a curious case of his own, and also one of Joulin's. In the former labour began on the 273rd day, and the os dilated to the size of a florin, but the pains then ceased and delivery was delayed until the 304th day. There was no obstruction, and delivery was easy and natural. Joulin's case was similar, but the uterus was anteverted, causing an obstruction. Professor Meigs, of Philadelphia, mentions an extraordinary case in which the membranes were said to have ruptured at the ninth month, while the child was not born until the 420th day. It was alive. Dr. Thomson has reported to the London Obstetrical Society a case which lasted 317 days from the last menstruation and 301 days from the last act of coitus.

Mrs. C., a primipara, aged 30, was confined on February 1st, 1888. She had an attack of eclampsia, and was blind during the twelve hours she was in labour. The delivery of a dead child was effected by means of forceps, the cervix being slightly lacerated. She made a good recovery except that her sight remained affected. Menstruation began a month after delivery, and was very profuse and frequent, occurring every fortnight. She did not seek advice for this.

On July 5th, 1889, she menstruated very profusely, and then it ceased. She was quite definite about the date, as the profuse flow had prevented her attending the marriage of a relative on that day. During her first pregnancy she had been troubled very much with sickness, but this time she remained remarkably well. Her urine never showed any trace of albumen, and there was no dropsy. She expected her confinement to take place during the first week of April, 1889, and on the 3rd of that month sent to tell me the pains were beginning. I saw her in the evening, but as she shrank from examination I did not insist upon it, but directed that I should be summoned as soon as the pains became at all severe. They, however, ceased during the night, and for the next four weeks she remained tolerably free from them. On May 5th, one month and two days from the first time, I was again called in, and found her in labour. The pains had begun in the afternoon, and when I saw her, late

at night, they were recurring at intervals of from ten to twelve minutes, but were not very strong. The head was presenting 1. o. a., but very high up, and no external os could be felt. The cervix was obliterated, and the vaginal vault felt very like distended membranes, but the continuity with the walls was easily made out. Near the centre of the vault a depression between two small elevations I took to indicate the position of the occluded os. I tried to scrape through the obstruction with my finger nail, but failed.

Dr. Beaton kindly saw her with me, and under chloroform we made a thorough examination, which confirmed my opinion as to the position of the occluded os. He also tried to scrape through with his finger nail, but was unsuccessful, so we decided to incise it. A small incision was made by means of a guarded knife, and a pair of narrow bladed forceps used to dilate it sufficiently to admit one finger. A dense ring could be felt all round. It was necessary to incise this in several places, and then dilatation was easily effected by means of the fingers. There was practically no hæmorrhage. As the head did not advance, I applied forceps, and delivered it without much trouble. External rotation occurred at once, but there was no advance of the shoulders. Firm pressure from above, combined with traction, failed to effect delivery. With very great difficulty I managed to free the posterior arm and deliver. The child, a girl, could not be resuscitated, although various methods of artificial respiration were tried for over an hour. It was very large, the shoulders especially being remarkably broad. This great breadth of shoulders had been the cause of obstruction. Unfortunately I did not take any measurements or ascertain the weight, but it was undoubtedly the largest child I have ever seen delivered. The mother is a large woman with a very roomy pelvis. The placenta was quickly expelled and there was very little hæmorrhage. The cervix was rather ragged, but there was no deep laceration. The perineum was intact. She made a good recovery, and was up on the tenth day. Three months afterwards the cervix felt quite normal, and she was menstruating regularly.

The date of the cessation of menstruation was so definitely fixed in her memory by the circumstance before mentioned, that she is hardly likely to have been mistaken. From July 5th, 1888, to April 3rd, 1889, gives 272 days. This was the date of her first pains, and it seems quite probable that labour would have gone on to completion if the os had been patent. If we count up to May 6th, when she was delivered, it gives 304 days, exclusive of the sixth, from the cessation of menstruation.

With some women prolonged gestation seems the rule. A case of this kind was reported by Dr. Armstrong, of Liverpool, in the *Liverpool Medico-Chirurgical Journal*. Her second pregnancy lasted 303 days, and her fourth 319 days, delivery being very difficult. In her fifth she dreaded a similar prolongation, so he induced labour on the 276th day, and delivered her of a strong healthy child. Mrs. C. in her first pregnancy thought she had gone full three weeks over her time, but she could not be sure of her dates.

Why pregnancy should be prolonged in some cases is a very difficult question to answer. In cows and mares it is not uncommon, and in these cases the period can be definitely calculated. In Mrs. C.'s case, I think, occlusion of the os was very probably the cause. Dr. Anvard, of Paris, gives obstruction of the cervix as a cause of prolonged gestation, and mentions a case of Cohnstein's where this was caused by cancer. A living child was born after ten months and a-half.

Complete occlusion of the os externum is a very rare complication of parturition. The adhesions must necessarily form during gestation, otherwise conception would be prevented. Vaginitis or cervical endometritis is usually looked upon as the cause. Tyler Smith, however, remarks that "in some of the most perfect cases of occluded os it is found, moreover, that no signs of inflammation have existed during pregnancy." My case seems to bear this out. Anteversion of the uterus sometimes tilts the os out of reach, and simulates occlusion. This should be borne in mind, or a serious mistake may be made if incision is attempted. As regards treatment, if the occlusion cannot be scraped through with the finger nail, it is best to incise with a guarded knife, and afterwards either dilate and deliver, or leave the case to Nature. In cancerous cases, Cæsarean section may be necessary in the interest of the child. In suitable cases the entire uterus should be removed; Cæsarean section has been done in America on simple cases, but it seems to me to be an unjustifiable proceeding unless the pelvis is contracted.

HYDROPHOBIA IN BOMBAY.—Something like a panic is said to prevail in the native town of Bombay on account of numerous cases of dog bite which have recently occurred. There were eight deaths from hydrophobia in 1891, and one has taken place since the beginning of the present year. A war of extermination is being waged against ownerless dogs, no fewer than 6,796 having been poisoned in the course of the twelve months ending October, 1891, and 3,342 having since shared the same fate. In this work, however, considerable difficulty is met with the Jains, Hindus, and other castes putting collars on pariah dogs, and placing all other possible obstacles in the way.