Victoria Zenana Hospital,
DELHI.

March 1909.

I hereby certify on soul and conscience that the following cases with notes have been compiled entirely by myself, and are submitted by me as a Thesis for the approval of the Faculty of Medicine for the degree of M.D., Edinburgh.

The notes are very incomplete in many instances and the discussion on treatment unfinished, but time for case taking was often limited and literature for reference except from journals, not procurable, so that the treatment of the material has fallen very short of what one would have wished it to be.

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THESIS FOR DEGREE OF DOCTOR OF MEDICINE.

Notes on Pathological Conditions during Pregnancy, Labour and the Puerperium observed during two years' work in Women's Hospitals in India.

by

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March 1909.
Notes on pathological Conditions during Pregnancy, Labour and the Puerperium, seen during two years' work in India.

The following cases have been treated during 2 years' work in Women's Hospitals in India, and in self defence, because of incomplete histories and unfinished records, it is but fair to state that one's staff has been limited as to numbers and efficiency.

One had to act as doctor, house-surgeon, matron and nurse in one, as for 1½ years no matron was provided, and the so-called nurses were ignorant native women trained for one year only, and sent out to work as midwives at the end of that period.

In consequence the quality of this work becomes less good and the notes less scientific than one could have wished.

The patients in many instances refused what one felt was best, and frequently insisted on going home before cure was complete.

Temperature charts have not been given as where they were not fully reliable, but five are recorded
the degree has been personally verified. The age of patients is approximate, as no count of years is kept, and one may have judged one woman too leniently and another too severely according to the wear and tear to which she was exposed. The order of narrating the cases is chosen according to the relation to pregnancy, labour and puerperium.

A. PATHOLOGICAL CONDITIONS DURING PREGNANCY.

Hyperemesis.

Very few cases of true hyperemesis were seen, several women come complaining of constant vomiting, who on regulating the bowels or giving some simple digestive mixture, rapidly ceased vomiting and remained well.

The following three cases, were those presenting the most persistent vomiting, who were under treatment.

Case 1.

Hindu female aged 30, mother of 5 children the last born prematurely two years before. Admitted when 4/12 pregnant, very emaciated, with a pulse of
120 and history of almost constant vomiting for some weeks. The bowels were constipated, the cervix was unhealthy and there was some leucorrhoea. The bowels were regulated by Enemata and Magnesium Sulphate mixture, Cerium oxalate was given and the patient put on strict milk diet. At the end of six days the vomiting was much better and ceased after ten days. The patient was discharged at the end of three weeks very well.

Case 2.

Eurasian girl age 16, 1st Pregnancy.

When seen was 2½ months pregnant, was having pain and slight red discharge, pulse 120, bowels very constipated, patient extremely thin and bad colour; as and there had been constant vomiting for several days no food or water could be kept down.

She was given an Enema and Bromide by the rectum and put on to albumen water by the mouth. She was gradually got on to milk and lime water, and later light diet, and very soon was much better. She kept well till the 7th month when the sickness again returned, and was confined at 7½ months in the Civil Hospital. It was ascertained that her bowels were extremely constipated and that she was very thin and
highly strung. She made a good recovery.

Case 3.

Hindu, aged 19. 2nd Pregnancy - 2 months pregnant when seen. Patient was troubled with excessive vomiting.

The uterus was retroverted easily replaced, the cervix was badly split and there was thick white discharge. She was dieted and advised to lie in the genupectoral position for a short time daily, and given a sedative digestive mixture; she aborted at the 3rd month. She was seen after this and was advised to have the cervix repaired and undergo treatment for the retroversion but refused, and last time she was examined she was again pregnant and suffering from severe vomiting. Further history not obtained.

The classification of the cases of hyperemesis has been the cause of great discussion in the Journal of Obstetrics of February 1908. G. Winter considers that hyperemesis invariably "begins as a simple reflex neurosis, but if it be not cured in that stage the liver and kidneys suffer; and poisons, the products of pregnancy may be consequently retained and lead to fatal intoxication."
In the August number of the same journal. Dr. Champneys in discussing Dr. Whitridge Williams' work on Toxaemias of Pregnancy, states "that vomiting of Pregnancy falls into two groups. 1. Those due to neurosis, and 2. those due to poisoning, those due to neurosis do not generally threaten life those due to poisoning do." He also affirms that "toxaemic vomiting of Pregnancy is of the greatest rarity."

In the British Medical Journal of February 22nd 1908, page 31. Dr. Freund draws attention to the predisposition to hyperemesis from abnormalities of stomach, chlorosis and anaemia, and nervousness.

In his book on Rotunda Practical Midwifery Dr. Tweedie, in describing the symptoms, says that other signs of toxaemia accompany it such as headache, constipation etc., and in the discussion of treatment lays especial stress on the regulation of the bowels.

In two of the cases noted above, there was obstinate constipation and it seems possible that, as in chlorosis there is constipation with consequent toxaemia which by some is considered the cause of the anaemia, so in hyperemesis there may be constipation with its poisoning, resulting in excessive vomiting. It may be that the poisons of constipation occurring
in a patient with "toxins of the chorionic villi" in her system, cause hyperemesis. Hysteria is often associated "with very obstinate constipation" (Quain's dictionary of Medicine p. 713) and hysterical or neurotic patients form a large proportion of the cases of hyperemesis.

The symptoms described by Boissard in the B.M.J. of March 23rd 1907 as being the earliest indications are not all marked in my cases, there were in all rapidity of pulse and loss of weight, while diminution of urine was not noted.

In one case, seen in consultation, which ended fatally despite induction of abortion, there was as noted by Boissard "extremely rapid pulse, parched tongue, diminished urine and repulsive odour of the breath". Nothing could be more distressing than such a case as no remedy seemed to avail in the least and the case was one of typical toxaemia.

Diarrhoea and Constipation.

Several patients were admitted for most obstinate constipation and a few for diarrhoea during pregnancy, the latter mostly due to previous constipation. Some cases were most difficult to treat, as the bowels had not moved for so many days that long enemata with
a rectal tube as well as aperients were necessary. In some instances painful uterine contractions were present and abortion threatened. Several cases of retention of urine were admitted; in all, constipation was the cause.

**Case 1.** Mahomedan age 30. Patient was 4/12 pregnant and had been unable to pass urine for 2 days when admitted. The catheter was passed and 60 ounces of urine withdrawn. The bowels did not move after a long enema and aperients and until they were got to act freely there was trouble with the urine, the anterior vaginal wall was much prolapsed. Urine had Sp. Gr. 1008 contained no abnormal constituents. The patient was sent home and told to continue the aperient mixture, but this she failed to do and had to return in a few days with retention once more. She finally went home well, and regulated the bowels with medicine. There was no previous history of bladder trouble.

**Case 2.** Hindu female, 35 years. 4th Pregnancy, 2 months' pregnant when admitted. Suffering from retention of urine for 4 days absolute. The bladder was enormously distended and the bowels very
constipated, the uterus being pressed forward against the bladder by large scybalous masses. The bowels were regulated and after the first few days patient had no more trouble.

The women seem quite as subject to constipation as in England. I have had little to do with that class of woman who works in the fields, and gets out of door exercise; and, although the poor native women do heavy work, it is, in towns, mostly some sedentary occupation. The richer classes squat on the floor or on low beds practically all day long, so that probably muscular inactivity is to blame. Coarse grain is eaten by all alike, whether of high or low caste in the chapatti or native bread of daily diet, and vegetables enter largely into the food along with the rice which might be an agent in causing constipation. Plain water forms the usual drink, milk is little used.

The richer people eat large quantities of sweets and ghee, but I have not found that class more subject to constipation than the poor.

In his Medical Gynaecology 1908 p. 192. Dr. Kelly refers to the best and most efficient method of defaecation among the primitive people in the squatting posture; but although this is the position adopted
by all natives, constipation is not averted. Also these people are not inconvenienced by occupation from attending to nature’s call, as they look upon defecation as a natural act and will perform it regardless of publicity.

Amongst the women who have borne children the abdominal muscles are very frequently lax and toneless and wide separation of the recti is common but irregularity of the bowels does not seem more marked in multiparae than in virgins.

**Dysentery.**

Only four patients have been treated in Hospital with dysentery during pregnancy, but quite a number were successfully treated as outpatients.

Of the 4 admitted one proved a fatal case, the patient coming in when almost moribund.

C.1. Mahomedan, age 30 - 5th Pregnancy, 7½ months. Admitted with pulse of 140, feeble and small, and respirations 60 a minute, tongue dry and patient collapsed. She was given brandy 4 hourly and first put on *Liq.Hydrarg. Perchlor.*, with digitalis, *Infus.Cinchonae* and *Pulv. Ipecac. Co.* powders. A living child was born in the night but died shortly after, the mother had no bearing pains, the child was born in the bed without
anyone knowing, the uterus contracted well and there was no bleeding. Everything was tried with no avail and the mother died 3 days after admission. The other 3 cases all did very well, they were 7, 6, and 2½ months pregnant respectively and were all admitted with acute dysentery.

Sir Patrick Manson in his Book on Tropical diseases, p. 448 says that "pregnancy and the Puerperal state are grave complications."

The case quoted which ended fatally was almost moribund when admitted, the absence of labour pains was noteworthy, as was the subsequent good contraction of the uterus as we expected haemorrhage instead of good tonicity of the uterine wall.

Intestinal Parasites.

In Nagpur one could almost dose every patient successfully with Santonin, round worms being practically omnipresent. It was made a routine practice to give "waiting cases" 4 grains of Santonin preceded and followed by a dose of castor oil; this was done on account of several temperatures for which no cause was found, in one case so severe that the patient nearly died and only after being well purged and dosed with Santonin did the nature of the condition
disclose itself. Worms were vomited, expelled through the nose or were passed by the rectum in enormous numbers in many cases. The cause was supposed to be sweetmeats made in the bazaar, but whatever the agent, the number infected was hardly credible.

C.1. Mahomedan, age 35 multiparous, 6 months pregnant had been under treatment for some weeks for fever with no success. When seen was very ill, pulse rapid, abdomen distended and patient feeling very ill. The bowels were well moved by enemata, the blood was examined for parasites but none found. Patient was then given Santonin and passed several large round worms and rapidly recovered and was confined at full time.

Case 2.

After confinement the patient gave great anxiety as her temperature ran up to 102° and 105° and her pulse to 100-110. Only after dosing with Santonin did the case clear up, as the girl passed several round worms.

It is interesting to add notes of 3 patients who although not pregnant shew complications which may arise due to parasites.

Ca. A child of 9 years was admitted with constant
vomiting; she was very emaciated, feeble and looked extremely ill, shortly after admission she vomited a large round worm, and during the course of 10 days' treatment with Santonin and Castor oil she passed between 60 and 70 round worms. The parasites could be felt in the intestines through the thin abdominal walls.

Cb. An operation case, after ovariotomy for large ovarian cyst, developed a temperature of 101°F on the second day after operation and next morning vomited a large round worm. She was given gs. 3 of Santonin and more worms passed after which the temperature remained normal.

Cc. An old woman of about 50 was admitted moribund with obstruction of the bowels, too ill for operation, shortly before death (a few hours after admission) a large worm was vomited. Probably a ball of worms caused the obstruction.

These cases are merely recorded to show the prevalency of this parasite and the difficulty of diagnosis in some cases.

Tape worms were comparatively rare, one case only was treated during pregnancy.

Cl. A Christian, age 26 in her 3rd pregnancy came complaining of passing worms for 3 months. She was
almost at full time. She was treated with extract of
Felix Mas and passed a very large tapeworm. She
came back later and was confined. She was slightly
jaundiced and her urine gave a marked darkening with
nitric acid, so she was given small doses of Ipecac.
powder with great benefit.

It was noticed that in many of the cases with
intestinal parasites a deep "indican ring" was given
with nitric acid in the urine.

Ischiorectal Abscess.

Cl. Hindu, aged 30. Admitted at 7/12 of pregnancy
with septic poisoning from an ischiorectal abscess.
This was opened and the patient was doing well, when
an ignorant nurse gave her 5 grains of quinine ac-
cidentally and caused premature labour. The patient
did very well, she gave a history of abscess in the
same position several times before but no cause was
found. That the quinine caused the miscarriage I
feel sure, as there were no uterine contractions before
it was taken, but they started soon after the dose was
swallowed.

Heart Disease.

No patients were confined who were suffering from
heart disease, but 3 were treated during their
pregnancies. One had mitral regurgitation, a second double mitral lesion, and the third aortic disease. All improved under treatment and I heard that all were safely confined.

The girl with aortic disease was a rich Hindu of 18 years, pregnant for the first time, she came to us at the dispensary suffering from giddiness and when seen was 8 months pregnant had loud aortic murmurs and Corrigan's pulse.

She improved under treatment and was urged to come into Hospital but refused, and was confined at home by dhais. I heard that she suffered with great breathlessness some days after and was ill, but could get no later news.

Tuberculosis.

Tubercle of every form is very common and many phthisical patients were treated as outpatients during pregnancy. One suffering from advanced phthisis was confined in Hospital and went home but died a few months later.

One patient had suppurating tuberculous glands removed during pregnancy, and was later confined at full time in Hospital.
Syphilis.

This disease is of common occurrence and must be a great factor in causing abortion and sterility, but histories (difficult to obtain at home) are more so to get out here. As the native doctor is not allowed to see his female patients, he can naturally do little in such cases as he may have been in attendance for years without suspecting the true nature of the disease.

Amongst "Hakims" mercury is a favourite drug and many patients come with marked mercurialism who have been undergoing treatment for months, but as far as I can ascertain Potassium iodide is never given along with the former drug.

Several patients were treated with vulvar sores during pregnancy but few would undergo full treatment.

Cl. Hindu, age 20 pregnant for 3rd time, 1st had a miscarriage, then a 7/12 child and when seen was 7 months pregnant.

She had been treated for years by her native doctor and he was attending her when seen.

She was having discharge and uterine pains and feared a premature labour.
After great persuasion, permission was given for an examination and a syphilitic sore of considerable size found on the labia. Mercurial douches were given, calomel dusted on the sore and antisyphilitic remedies by the mouth and an apparently healthy child was born 1½ months later.

The child when last seen was 5/12 old and was being given mercury by inunction and seemed strong.

This case is a striking proof of the hopelessness of the ordinary method of treating cases in India as the family doctor had no suspicion of syphilis, despite the history of miscarriage followed by premature labour.

**Leucorrhoea.**

Several cases were treated, with white discharge during pregnancy and did well with douching combined with some ordinary saline mixture by mouth.

Cl. Christian aged 30, married 2 years and had had 2 miscarriages. When seen was 2 months pregnant and feared an abortion as she had pure white discharge. There was some cervicitis so douches were given and the patient went home after three weeks treatment and was admitted at full time for her confinement. No history of syphilis was obtainable.
Pneumonia.

One case of pneumonia in the 9th month was treated in Hospital. The patient was a Mahomedan aged 25, had had 2 children and was admitted with beginning right basal pneumonia. The child was born 2 days after and the patient although extremely ill did well. The convalescence although a little slow was uninterrupted. The patient had evidently taken opium, as one day her breathing almost ceased and when seen she was collapsed and her pupils contracted. Coffee was given and stimulants and she gradually came round. All efforts to obtain confession were of no avail, but from the condition of the woman it is practically certain that opium was the cause of the collapse.

Influenza.

One case of influenza was treated during pregnancy, the medicines given were quinine and salicylates, the recovery was complete.

Plague.

Only one case was treated during pregnancy, and although there was an epidemic of plague very few patients consented to be treated.

Cl. Hindu, age 30, 5th pregnancy, was seen 2 hours before death. She was out in a village and took ill
and was sent back to the city by a bullock cart and during the journey a dead child was born, of 7/12. When seen, uterus was well contracted, pulse 140. temperature 104 and patient looked extremely ill. After much persuasion I was allowed to examine the chest and found enlarged tender glands in the right axilla. Plague was diagnosed and stimulants ordered but the patient died 2 hours later. 

She was kept propped up as is frequently done and would not lie flat.

In the small house the mother lay with plague in the verandah, 2 children with smallpox inside, and a third child in the same room had measles. A brother, uncle and cousin of the woman all died of plague within 10 days.

The true history was obtained later and is interesting as it shews the ideas of the natives of the relation of plague and pregnancy.

Plague was rampant in the "circle" in which the patient lived, so she was sent out to her mother's village to save the life of her child, the day after arriving there she became ill and was sent back with all haste.

In the paper by Dr. French on the Influence of Pregnancy on Certain Medical Diseases in the B.M.J.
of May 16th 1908, it is noted that "the prognosis of the mother is no worse than in non-pregnant patients, but the disease terminates the pregnancy in the great majority of cases."

Sir Patrick Manson states "that abortion almost invariably occurs in pregnant women."

As noted it is well known by natives that the child is practically certain to perish or be prematurely born if the mother contracts plague, and in cases where the other members of the family refuse to go into camp on the outbreak of plague, they will not hesitate to send out all their pregnant women.

**Malaria.**

As malaria is so prevalent it is considered as practically a necessity by natives, and they rarely come to Hospital except as outpatients for the disease. But the numbers of pregnant women treated for malaria throughout the year is large and the number of abortions attributable to it astonishingly small.

Most authors seem to agree that there is more danger in not giving quinine in Malaria during pregnancy than in giving it, provided it is cautiously given. (Sir Patrick Manson, Tropical diseases) H. French B.M.J. May 16 1908, and Edmonds B.M.J. 1899).
Such has been one's own experience, very many pregnant women having been treated successfully with quinine, and only in one case did abortion occur as a result of taking quinine. This patient was not suffering from malaria and the drug was given by mistake.

Hypodermics of 5 grains of quinine have been given with benefit, but in any case when the pregnancy was in its early months or when there was reason to be careful, small doses were given and gradually increased.

The fact that quinine can cause abortion is well known to most natives, and it is as well to give the number of the medicine only, and not write a full prescription, if there is a chance of its being read, as frequently relatives have refused to allow the medicine to be taken if it contained quinine.

In some cases patients have suppressed the fact of pregnancy in the hope that abortion might be induced, they do not however use it amongst themselves as it is too expensive for them to buy.

The notes of the following case will give some idea of the extreme anaemia which may follow prolonged malaria. The type of malaria in Delhi this season has been malignant, many fatal cases have occurred
and in others profound anaemia has resulted.

Cl. Patient, Eurasian aged 25. Family history good except that one sister died of spinal disease. Patient has 3 healthy children and when admitted was 7/12 pregnant. While nursing her first child she suffered from some anaemia. When one month pregnant had what was called "Peshawari ague", she had constant vomiting and bloody stools - , this attack only lasted a few days but since then patient has gradually become weaker.

When admitted there was extreme anaemia, pulse rate 120, heart slightly dilated, loud rough first sound and haemic pulmonary murmur, oedema of hands and feet. Patient was treated with hypodermics of iron and arsenic, and was given milk and lime water and gradually got on to fuller diet and improved greatly - at the end of ten days low fever with vomiting started and quinine was given hypodermically and patient had to be given nutrient enemata as she could keep nothing down by the mouth. She had a premature confinement and a small ill-developed child was born which died on the 4th day after birth. For a few days after confinement the mother improved but then fever again started and vomiting followed.
The patient is still under treatment but the condition is unaltered. There are a few tertian parasites in the blood film, the white cells number about 6,000, and the red cells barely 1,000,000. The blood is watery and very highly coloured, no apparatus for measuring the haemoglobin index is procurable.

Quinine has been given steadily by hypodermics and by the mouth and except that the fever is less, no improvement has been made.

Raw beef juice and beef essences of all sorts, also Sanatogen and Haematogen have been given, but all except raw beef juice cause vomiting.

It was thought anchylo-stomata might be present but no signs have been found and there is no eosinophilia. Several such cases have been reported during this autumn, and several have proved fatal.

Treatment is extremely difficult as medicines by mouth cause vomiting and patients refuse to be given hypodermics regularly. The prognosis is very grave, and one feels there is yet much to be learnt in the treatment of malaria. Fever in the case noted has never been of the ordinary type, there has never been shivering, and the patient was not aware of having a temperature. No sign of tubercle has
been detected, the only cause that has been ascertained
is malaria, proved by finding tertian parasites in the
blood.

**Herpes Gestationis.**

Case 1. Mahomedan aged 30. 2nd Pregnancy.

First Child six years old.

Admitted in 6th month of pregnancy with an
eruption over both arms and a history of its having
begun 9 days before with some itchy pimples.

On admission an eruption was present over the
right fore-arm and axilla and left wrist, areas of
red ring formation with blebs in the centre were
covering the areas noted. On the following day the
face and neck were much swollen and covered with cir-
cular raised red spots. The eruption spread rapidly
until almost the whole body was covered, it began as
erythematous patches and later blebs formed, some
containing pus.

The mucous membranes were unaffected, tempera-
ture was never over 100 and general health good,
the itching only causing discomfort.

An iron and arsenic mixture was given internal-
ly and weak mercury ointment applied to one limb and
lead and opium lotion to the other, the lesions
increased, so on the fourth day Condy's baths were started night and morning and ichthyol ointment 10% in vaseline applied. The improvement on changing the treatment was rapid, the blebs disappeared and left pigmented areas of skin which peeled rapidly. The patient went home at the end of a month very well.

I diagnosed the condition as one of Dermatitis herpetiformis and the Dr. who saw the case in consultation with me as one of pemphigus. Unlike Dermatitis H. the eruption was not chronic it was not symmetrical but resembled it, inasmuch as itching was a prominent symptom, and the vesicles appeared on skin that was erythematous, the general health was little affected.

The condition resembled pemphigus in that the greater number of bullae were large, but unlike it inasmuch as most of the spots first became red and raised and later formed bullae.

In the paper by Herbert French of May 2nd 1908 in the B.M.J. the condition was fully described and helped one as to diagnosis.

The most remarkable features of the case quoted were the rapidity of spread, the extensiveness of the eruption with little impairment of general health.
and the extreme itching present.

The rapidity with which the condition improved was I feel sure, greatly due to the prolonged baths with Potassium Permanganate night and morning, and to the Ichthyol which relieved the itching and reduced the inflammation. Arsenic may have been beneficial, but during the first few days while it was given and before the baths and ichthyol were started, there was no improvement but the condition spread. The further history was not obtained as the woman came from a village and returned whenever she was better. She had had no such skin eruption during her previous pregnancy.

In Textbook of Obstetrics by Norris & Dickinson the usual period of onset of herpes gestationis was given as the 3rd and 5th month, and the disease as also noted by French was said to show a strong tendency to recur in successive pregnancies.

Recovery is said to occur with the termination of gestation, according to French the majority of patients develop the trouble during pregnancy and lose it during the puerperium.

The patient quoted above was not typical as she became ill during the 6th month and went home well
after 4 weeks' treatment. The blood was unfortunately not tested for eosinophilia which is said to be present.

Giant Urticaria or Rheumatism.

Two cases were treated during pregnancy with almost identical lesions; in both swellings appeared in the region of joints and in both the same treatment was adopted. Notes of one case are given.

Cl. Mahomedan, age 26. 6/12 pregnant admitted with fever and pains. There were brawny red swellings in the region of both elbow joints and a similar swelling over the right great trochanter. The left hip was affected 2 days later. There was slight fever and rapid pulse. The swellings were hot, red and oedematous and tender.

Sodium Salicylate and Bicarbonate in large doses were of no avail, the case was then treated with Fowler's solution internally and lead and opium fomentations over the affected areas.

The patient insisted on going home after a week as she was "quite well". The second patient would not come into Hospital but had the same treatment as an outpatient and did very well.
The lesions in both cases were symmetrical, in the region of joints, tender and oedematous, both patients were pregnant.

The nature of the disease was puzzling, it may have been allied to Herpes Gestationis where no vesication took place, but where the inflammation and infiltration were deeper seated, itching was absent and instead pain was present, but this may have been due to the deeper site of infiltration. Why both patients should have had slight fever and lesions in the neighbourhood of joints in symmetrical positions is less easily explained. No rheumatic history was elicited and no record of previous lesions.

**Alcoholic Neuritis.**

Cl. Eurasian. age 21. 1st Pregnancy, 3½ months pregnant.

History of great weakness and vomiting for 1 month, when admitted had pulse of 140, was excitable and complained of numbness of hands and feet. The knee jerks were diminished, there was loss of power of hands and feet and tenderness of the calves. The heart sounds were rapid, foetal in type, the pupils were semi-dilated and equal, the tongue was very furred and bowels constipated. Offensive motions were
passed after Mag. Sulphate and an enema. Patient did not sleep despite large doses of Bromide and Chloral.

Next day patient was worse and the wrists were slightly dropped, and the knee jerks almost absent. Patient was put on milk, and chicken essence, a mixture of digitalis with Potassium Bromide, and a dose of Calomel followed by salts. She gradually got worse, marked drop-foot and drop-wrist appeared, speech became inarticulate at times and loss of control of bladder, and bowel supervened. Pulse and respiration increased; bowels were offensive and the tongue heavily coated. She gradually went down-hill and died after 5 weeks. The husband worked as a guard and was frequently drunk and abused his wife, and it is stated that she took to drink, and for 3 weeks before admission had taken no solid food but "sipped brandy day and night."

Several of the symptoms differed from ordinary cases of alcoholic neuritis. In his textbook on Nervous Diseases, Dana states that "the bladder is occasionally affected for a short time the other centres not at all" and that the freedom from involvement of the sphincters is an important characteristic
of the disease in distinguishing it from myelitis. In Quain's dictionary of Medicine in the article on Neuritis by T. Bastian it is said that power over the bladder and rectum is commonly retained, also that cerebral symptoms are varied, and notes that delirium often occurs. In the patient above quoted there were cerebral symptoms but of a different nature, insomnia was marked, speech was slow and almost inco-ordinate.

The characteristic drop foot and wrist, with loss of reflexes marked pains in calves and wasting of the calf muscles with the definite history of alcoholism leave in my opinion little doubt as to diagnosis. The involvement of the sphincters of bladder and rectum may have been due to extreme weakness, but the slow inco-ordinate speech, rapid pulse and respiration were more probably due to the extension of the toxaemia to the higher centres.

Abortion.

It is with great difficulty that cases of abortion can be persuaded to remain in Hospital and one has frequently had to curette and allow patients to go home as an alternative to leaving them untreated.

Criminal abortion is extremely common and I give a short account of the methods usually employed.
Four cases of threatened abortion and fourteen cases of actual abortion or miscarriage were treated in hospital, but there was nothing extraordinary in the cases to require especial notice.

The causes were as far as could be ascertained:

A. Threatened abortion.
   Criminal 2.
   Endometritis 1.
   Constipation 1.
   
B. Actual Abortion.
   Criminal 2.
   Endometritis 1.
   Malaria 2.
   Syphilis 2.
   Injury 2.
   Alcoholism 1.
   Constipation 2.
   No cause found 2.

In one case of threatened abortion and in two cases of actual, the cause has been noted as constipation, and in these cases definite history of very obstinate constipation was given.

In an article by Dr. James Oliver in B.M.J. Nov. 23rd 1907, the writer states that "fibroids which do not encroach on the Endometrium may provoke abortion, when instead of responding, they resist the influence of gestation and interfere with the necessary expansion of the uterus", also that "during utero gestation the evolutionary phenomena connected therewith involve not only the uterus and vagina but also the
broad ligaments, the pelvic fasciae and the pelvis generally, and anything which interferes unduly with the harmony of the reactionary changes in these structures may provoke abortion." If this is indeed the case may constipation by interfering with the harmony not cause abortion? It seems reasonable to suppose that severe constipation may be partly to blame in some of the cases of early abortion.

Kelly says that excessive cohabitation is a frequent cause of abortion and this may account for many cases in this country where it is of so common occurrence.

The criminal class is a large one, and the following notes will give some idea of the methods used in the Central Provinces, some of the practices are universal such as severe massage but some others are local.

In the B.M.J. of Jan 2nd 1909. Manx is quoted who states that in Germany "first abortifacients are used, next baths, massage and douches," it is interesting to note that the order is somewhat different here - massage is the first agent employed and if not successful others are resorted to.
The following notes were obtained from a native girl, who had become Roman Catholic but who had worked previously amongst native dhais and her information on other points was found to be reliable, they give the procedure adopted to cause abortion as carried out in the Central Provinces.

If the pregnancy is in the first three months the treatment to cause abortion is begun with massage - for six successive days the back and abdomen are massaged or rather pounded for about \( \frac{1}{2} \) to 1 hour. If this does not cause bleeding, medicine made out of Bamboo leaves infused as tea is given on an empty stomach with a sort of country treacle.

Should no result be obtained a paste is made from a bean used by the washermen to wash clothes, with treacle and given to eat. This mixture is thought to be infallible.

The last resort is dilatation. Plugs of various sorts are used aided by the fingers. Pledgets of the milk of the citron plant mixed with turmeric and powdered Rhutan are pressed into the external os and left in over night. The next day the os is slightly dilated and a well oiled finger is introduced and the cervical canal enlarged as much as
possible, or more plugs are used till the os dilates.

If bleeding occurs the leaves of the lime tree are made into a paste with turmeric and brick powder and given for 3 days, and all retained products are expelled with a free discharge.

If the pregnancy is over three months duration massage is less used and dilatation earlier resorted to, and a special medicine like mustard seeds made into a sort of sago with syrup is given daily for a week. So called hot-medicines are very popular. Quinqui in different forms is frequently used.

It is little wonder that cellulitis is so frequently met with when one considers the treatment undergone at the hands of the septic dhais.

**Blood Mole.**

In all, five cases of blood mole were seen, but it is possible that some of the abortion cases seen after abortion may have been of this nature. The notes of the cases are given, there was nothing specially unusual to call for further observations.

C.l. Parsee female. Age 20. Married 4 years, was treated with a course of douching and plugs for sterility and then became pregnant. At 3/12 I was called on account of haemorrhage and found the os
dilated so curetted and removed a blood mole.

The patient became pregnant and was confined of a healthy full time child a year later.

C. 2. Hindu female age 16. First pregnancy. Patient had no period for 3 months then had a period and passed large clots, as she had vague pains and fever she was brought to hospital at the end of 8 days. Patient had been treated for sterility by midwives and had been suffering from malaria.

The uterus was curetted and a blood mole removed, the finger seemed to pass up into a one horned uterus, the shape was quite abnormal.

C. 3. Hindu female age 35, had had 5 children and one miscarriage. Patient was three months pregnant and had had pain for a week and bleeding for four days before admission. A blood mole was removed by curetting. Patient did well.


Patient came to the outpatient department bringing a clot passed, she was a multiparae and had had no miscarriages. The mass seen was a typical blood mole, the uterus was curetted and some shreddy material removed. The woman refused to stay in.
C. 5. Hindu aged 28. Multipara. Miscarriage one year before said to have been a dead ovum.

The patient attended the outpatient department for some time and refused to be curetted, she had had amenorrhoea for three months followed by two profuse periods. There was reaction in the breasts and the uterus was enlarged. Suddenly called on account of severe bleeding a typical blood mole was expelled, the uterus was curetted and the patient did well.

A patient is at present under treatment who came seven months after marriage with a history of two very scanty periods, morning sickness and enlargement of the breasts. She was diagnosed as pregnant, the cervix was soft the uterus enlarged. Two months later she came saying she had had a profuse period, the uterus was smaller the os harder, colostrum was present in the breasts. She will not consent to curettng though all the symptoms point to a fleshy mole.

In only one case quoted was there a history of previous mole, till the moles were seen in all cases except C.5. the condition was thought to be one of ordinary abortion. That three of the cases occurred in primiparae is noteworthy, also that in two of these the patients had undergone treatment for sterility.
Haematocele and Haematoma.


Mother of 2 children, no miscarriages.

Patient said she was three months pregnant and had suffered from full red discharge for 1½ months and severe abdominal pain.

The abdomen was distended, there was a large mass extending behind uterus and sides of the pelvis and bulging into the posterior fornix, the mass was very tender and there was a soft spot in the centre posteriorly. She would not allow operation so fomentations and douches were given for the pain. After 2 days as the spot continued to soften, a knife was plunged in and a large haematocele opened up.

The patient had been treated as pregnant in another hospital and stated she was so herself, but nothing but blood clot in a—____—cyst was discovered. The woman did very well and before going home had a normal period.

C.2. Hindu. Age 20. No children, no history of pregnancy. Admitted with a bulging mass in the posterior vaginal fornix fluctuating. This was incised and a large haematocele evacuated. Recovery uninterrupted.

Admitted with great pain and a large swelling behind and to the left of the uterus, hard and tender.

She gave a history of having been 3/12 pregnant and employing a dhāi to procure abortion, she underwent severe abdominal massage and "aborted" at the end of a week and passed large clots but as severe pain continued she came to hospital four days after "abortion."

Haematocele was diagnosed and a knife inserted. Large quantities of old and recent blood came away but no sign of a foetus. The Bleeding was so severe that the cavity had to be tightly packed with gauze. Next day this was removed and a large rubber tube left in. After a few days the discharge became offensive so a glass tube was substituted and the patient made an interrupted recovery.

C. 4. Hindu widow. 20 years old.

History of a fall a month before admission, then bleeding from the uterus for seven days. Since then had suffered from pain becoming more severe. Bowels very constipated and micturition scanty and painful.
On admission there was a firm very tender mass bulging into the posterior fornix and to the right and behind the uterus, slight feeling of deep fluctuation. A knife was put in and first some serum then old blood clot removed. Drained and did well.

I feel pretty certain that this was a case of ectopic gestation, but the patient would give no further history and no products of conception were found in the cavity.

Haematocoles and haematomata are very common and I feel convinced that the cause of many must be the massage given to cause criminal abortion.

In case 3 the definite history was given. Had these been cases of ruptured ectopic gestation I feel sure some remains of the foetus must have been found, in none of the cases was this so. In the Journal of Obstetrics, Oct. 1908, Dr. Leicester reported a case which he considered as one of early ectopic gestation. The discharge became offensive and as in one of my cases this happened I exchanged the rubber drainage tube for a glass one with immediate benefit.

In his case no foetal remains were found, and as I have noted this was also the case in the patients treated by me.
Ectopic Gestation.

Only three cases were diagnosed as ectopic gestation but in only one was operation permitted, it is possible that some of the cases considered under the heading of Haematocele and haematoma were incorrectly diagnosed.

C.1. Mahomedan, aged 25.

Patient came complaining of vague pains in the right side and scanty menstruation. She was diagnosed as pregnant and on examining found to have the uterus a little enlarged to the front and to the left and an elastic swelling in the right side, tender and apparently in the right broad ligament. She refused treatment and no further history was obtained.

C.2. Mahomedan aged 40. Had had 4 children the youngest 14 years old, was treated for hysteria and had hysterical fits, was found to have pelvic inflammation with a retroverted uterus fixed to the left side. She underwent a course of douching and plugging and went home much relieved. She stated her husband had suffered from gonorrhoea.

After 4 months she returned complaining of scanty menstruation for 2 months, amenorrhoea for 1 month and vomiting for 1½ months.
The breasts were enlarged and contained colostrum, the cervix was softened, the uterus retroverted to the left, while to the right extending to the iliac fossa and 2 fingers breadth above the level of the symphysis was a soft ovoid swelling, elastic and tender. On moving this swelling the cervix did not move and to demonstrate that the enlargement was not in the uterus I cautiously passed a sound which took the direction the uterus was known to be in, namely to the back and left for a distance of 2\(\frac{3}{4}\) inches.

The patient was most irate when told she was pregnant and said that if I had left her previous inflammation alone such a contingency would have been impossible and she left early next morning in high ill humour. I got news of her 2 months later as being well and pregnancy progressing.

C. 3. Hindu, aged 20. Married 6 years previously; first pregnancy.

Menses were said to have been normal till she became pregnant 4\(\frac{1}{2}\) months before admission, since then she had seen nothing; vomiting had been present for nearly 4 months. Bowels were constipated and patient had suffered from vague pains in the right side and low in the abdomen, no sudden pain, no faintness. Two weeks before admission she had haemorrhage
followed by backache during the night, next day she was well but bleeding began three days later and until seen she had bleeding, pain and fever at irregular intervals. The spleen was slightly enlarged.

The night of admission the patient bled freely, next day the os was dilated to admit a finger tip, bright red blood was oozing from it, there was a swelling to the right side connected with the uterus about the size of four months' pregnancy. The patient refused chloroform and on account of tenderness little could be made out, the curette was introduced but only passed about 3 inches and thickened mucous membrane removed. Ectopic gestation was diagnosed and operation recommended.

After great persuasion the patient was allowed to take chloroform for examination and a large irregular swelling in the region of the right broad ligament but connected with the uterus was made out.

Operation was urged but for two weeks was steadily refused, the pulse was always over a 100, and the temperature generally a little over 99°, but on two occasions rose to 100°6 and 102. The swelling increased and it was only when the relations realised that the patient was growing worse that they consented to operative interference.
The operation was extremely difficult as the sac had ruptured into the peritoneal cavity and there were masses of adhesions to every organ and to the abdominal wall. The gestation sac situated in the right tube had ruptured close to the uterus, the roof of the swelling was formed by adherent masses of intestine and the abdominal wall, the placenta adhering to the back of the uterus, to the fundus and extending over to the left side. There was a little free fluid in the abdominal cavity also old blood clot and the organs were most difficult to distinguish. Clamps were put on between the sac and the uterus, a sound was passed from the vagina to it, as the swelling seemed to be continuous with the right horn of the uterus.

The whole was carefully dissected out, and removed between clamps, and later all rough surfaces as far as possible sutured over with Peritoneum. As there was some oozing and tags of tissue a gauze drain was left in, the abdominal wall closed except for the small opening for the gauze.

The patient was extremely collapsed as there had been considerable bleeding, and I was slow in operating, but with saline infusions and hypodermics
of strychnine and digitalis she was brought round
and made a splendid recovery. A small sinus persis-
ted for a few weeks at the side of the drain.

That a grave error in diagnosis was made cannot
be denied, but examination was difficult and the
patient refused chloroform, the gestation sac was so
close to the uterus, having occurred in the isthmus
of the tube that no sulcus was felt between. The
free history was misleading, and the haemorrhage from the
uterus far more resembling abortion than tubal
pregnancy.

The case was one similar to that reported by
Dr. Paterson in the Lancet of Dec. 26th 1908, except
that my case was operated on earlier in pregnancy.
Dr. Paterson used no sutures or ligatures but
plugged as from former experience he found that a
sinus persisted for many months.

In a case quoted by Rieck in the B.M.J. of July
18th 1908, perforation followed passing the sound and
in C.2 I passed a sound, in C.3. the curette but am
thankful to say no untoward accident occurred.
In Case 2 as noted I had formerly found the uterus
retroverted and to the left and merely passed the
sound as some discussion took place over my diagnosis
with a doctor in consultation.
In Case 3, the curette was passed through my error in diagnosis. Whether one would again attempt to remove the whole sac if one had to operate in such a case is doubtful, but the result was better than I deserved and the patient went home in good health with but little thickening in the region of the swelling.

It is noteworthy in connection with Case 2, that secretion in the breasts is not reliable as a sign of pregnancy, as it is customary for women to suckle their children for 3 years even, and I have seen grandchildren allowed to suck their grandmother's breasts to keep them quiet.

In one case a child of about three years was seen to suck the breasts of an old woman and on examining a watery secretion probably due to irritation exuded from the nipples on squeezing.

No pathological report was obtained, the sac removed from Case 3 was sent, but owing to some error no record kept; by the naked eye no trace of a foetus was found.

The frequency of ectopic gestation is difficult to determine and the results more so, it is in few instances that operation is allowed, and in several cases diagnosed definitely as ectopic gestations, and
unoperated upon, no untoward symptoms supervened.

The cause in Case No. 2 was probably some alteration in the direction of the tube due to inflammation, the uterus was retroverted and fixed to the left side.

In Case 3, the patient had been married for 6 years without issue but no history of inflammation was ascertained.

The symptoms were not markedly typical of tubal gestation, the first patient had reaction in the breasts, scanty menstruation, a swelling elastic and tender to the right of the uterus and vague pains in the right side.

Case 2 complained of nothing but amenorrhoea. She had milk in her breasts and an elastic swelling in the right lateral region.

In the last case, there had been vague pains, and uterine haemorrhage but no definite history pointing to rupture of the sac with intraperitoneal haemorrhage.

The three cases were all of right-sided ectopic gestation which is a curious coincidence and I have not seen it stated that one side is more liable than another to the abnormality.
CLASSIFICATION OF CONFINEMENT CASES.

In all 121 patients were confined.

81 Normal Vertex presentations.

(30 Primiparae
  51 Multiparae

4 Delayed Labour (Vertex presentations.)

8 Instrumental Labour (Vertex do.)

1 Induced Labour for Contracted Pelvis.

1 Vertex presentation with Cancer of Cervix.

6 Eclampsia Cases.

3 Placenta Praevia; one only central.

7 Breech Presentations.

2 Face Presentations.

3 Twin Births.

4 Transverse Presentations.

1 Compound Presentation.

121

Post-partum haemorrhage. - 3 cases.

Retained Placenta. 3 cases.
Natural Labours.

Notes of 81 cases of normal labours were kept of patients treated in Hospital during the two years' work, of these 30 were primiparae and 51 multiparae. Very few native women will consent to come into hospital for confinement, prejudice against doctors and in favour of the "indigenous dhai" is still high. The greater number of those treated was among native Christians.

A most unsatisfactory system of bribing patients had been initiated, and unless a rupee were given and the patient tempted in some way they refused to come to Hospital, or if there, to remain for more than a few days. The length of labour seemed shorter than the average at home, but statistics are useless as no history is reliable, and one could only judge of the rapidity of dilatation after one's first examination.

In the primiparous cases, of 21 noted 16 were 1st vertex positions and 5, 2nd vertex positions; in 5 patients the Perineum had to be stitched. The average weight of the children $6\frac{3}{4}$ - 7 lbs., the greatest 9 lbs.; of 27 cases noted 15 were male and 12 female children.

Amongst the multiparae of 42 cases noted, 32 were in the first head position and 10 in the second. The
average weight of children 7\(\frac{1}{2}\) to 7\(\frac{3}{2}\) lbs the largest weighing 9 lbs; of 46 noted, 24 were males one of whom was born dead, and 22 were female children.

3. PATHOLOGICAL CONDITIONS DURING LABOUR.

Breech Presentation.

Admitted a week before delivery with child in the transverse position, when labour started the breech presented, a living female child was born, legs extended.

First child born by vertex. Second child born by breach, feet were along with the breech.

C.3. Eurasian. 1st Pregnancy a living female child was born by breech, both arms and legs were extended, the perineum was ruptured.

C.4. 6th Pregnancy. Admitted with membranes ruptured and breech presenting—a dead male child was born.

C.5. Mahomedan. 3rd Pregnancy, admitted after membranes had been ruptured some time, the foetal heart sounds were 100, feeble and irregular, the child was born by footling presentation, but still born.


In the 7 cases the chin was posterior in all, and in all the cases that came in early, living children were born. No special cause was found to account for the abnormal presentations.

Frequency is given by Tweedie as 1 in 39 in his cases, and by Norris & Dickinson as 1 in 60 and by Pinard 1 in 62, in 121 cases I had 7 or a frequency of 1 in 17.3. This gives no idea of real frequency but only shows that patients rarely come except for some abnormality to Hospital.

Face Presentation.

Two cases of face presentation were treated, one was born naturally, and in the other forceps were used, in both cases living children were born.

C.1. Hindu 6th Pregnancy. In all previous labours head presented, and in one only forceps was used.
Patient was seen in her own home and right occipito posterior position diagnosed, pains were feeble and patient was restless and excited, so ordered a dose of Tinct. opium, and left. The mixture was not taken and pains continued weak all night, so a dhai ruptured the membranes and when seen early in the morning the face was presenting. Progress was very slow and in the end forceps was applied and a living female child born. Perineum torn. Patient did very well.

C.2. Hindu. First Pregnancy. Left mento-posterior, but chin rotated and was aided by pulling down the chin. A living male child was born, very cyanosed but both did well. Perineum was torn and needed stitching. In the first case the face presentation was the result of rupturing the membranes before the os was dilated, the patient was nervous and the dhai ruptured the membranes as is their custom to accelerate labour.

Frequency according to Tweedie is one in 704 and to Dickenson 1 in 250 to 1 in 497; in my cases one in 60.5.

Transverse Presentations.

Four cases of transverse presentation were admitted,
it is customary to wait till the dhais have given up every hope of delivering the patient before allowing her to go to Hospital, consequently the state on admission is frequently very deplorable.

Admitted after being in labour for over a day and said the membranes had ruptured early. The left hand was hanging out of the vagina blue and swollen, the vulva was congested and there were blisters over the Perineum. Version was performed under chloroform and a still born female child extracted, the Perineum was torn.

Patient had rigors and high temperature, the uterus was twice curetted and touched up with Iodized Phenol and an iodoform drain left in. The temperature kept rising up with rigors until the case cleared up by the patient passing round worms, and after dosing with Santonin, recovered rapidly.

C.2. Mahomedan. 6th Pregnancy, all other labours natural. Patient admitted after being in labour over a day with the hand hanging out of the vagina, the child was wedged down and the anterior lip oedematous and the version was performed with great difficulty, the child's mouth was gaping as if
it had been pulled on, and the child's shoulder low. The placenta was detached and felt near the face. Patient had temperature of 101.4 when admitted and had slight fever for three days but went home well.

C.3. Hindu. Fifth Pregnancy, labours natural previously. Admitted after being in labour 2½ days with T of 101 and pulse 120. Hand down. Version was done but craniotomy had to be done to extract the after coming head as it was large. Next day temperature was 100 and did not rise again — did very well.

C.4. Mahomedan. Had 6 children born naturally; was large flabby woman. Admitted after being in labour a day with the os 1 finger dilated, the membranes ruptured and a loop of cord with a hand presenting. Version was very difficult as the head could not be pushed up, eventually the left leg was got down and left to dilate the os. The child was born with ease as far as the head, but although the os was well dilated the vertex could not be got through. Craniotomy was done and it was found that the head was very broad and the sutures gave little. The patient said she had gone 2 weeks beyond full time. There was no rise of temperature — recovery was rapid.
In all four cases the membranes were ruptured before admission and the patients had been in labour from one to several days.

The difficulty of performing version with the uterus tightly contracted round the child was fully realised and one felt that women could stand much more than one had believed possible without rupturing of the uterus.

That force had been used there is no doubt as it is customary for the dhais to pull out any part which is available.

All the children were dead born but all the mothers did well.

Frequency according to Tweedie is given as one in 331 to Norris and Dickenson as 1 in 15 to 1 in 300; in my Hospital cases the number was as high as 1 in 30.5

**Twins.**

Twins occurred but three times out of the 121 cases quoted.


History of a fall about a month before admission and of having had her abdomen bruised.

Admitted for confinement. 2 female children were born with vertex presentation, one was macerated
and had probably died at the time of injury, the second was born alive one hour after the first, was 4 lbs in weight and died after four days. Mother had an uninterrupted recovery.

There was one large placenta, one chorion and 2 amniotic sacs.

C.2. Hindu, 4th Pregnancy. 1st child full time; 2nd born at 7/12, the 3rd full time but died after birth, last pregnancy 6 years ago.

Admitted during the night having given birth to a dead female child 6 hours before, the legs were swollen the abdomen very oedematous. Temperature 100.6 Pulse 130 and patient very exhausted. A second child was presenting by vertex but there were no pains, douches were given also quinine and the membranes ruptured and a living male child weighing 5 lbs 3 oz., was born naturally but died shortly after.

There were two placentae joined together, two chorionic and amniotic sacs.

The mother was septic and died suddenly of embolism.


Two macerated female children were born, the first by vertex the second in transverse presentation, so version was performed. The placenta was large and
unhealthy, the membranes were all ragged and decomposed. Mother had no fever and recovered well.

Dr. Tweedie gives the frequency as 1 in 79 and Norris and Dickenson as 1 in 88 according to Veit, in France 1 in 100, in Bohemia 1 in 60 and in America as 1 in 120. My cases worked out as 1 in 40.5 a much smaller relative frequency than in the other pathological conditions noted.

**COMPOUND PRESENTATION.**

C.1. Mahomedan female. Age 22. 3rd Pregnancy; former two natural. Patient was admitted with Temp: 100, pulse 120 having been in labour over 3 days. She was much exhausted. A hand and a loop of cord were hanging out of the vagina and the head was at the outlet.

The vaginal tissues were dusky and oedematous. A catheter could not be passed so chloroform was given and forceps applied and a large dead female child extracted with little effort. The catheter went in easily and deeply blood stained urine was withdrawn.

The patient had slight temperature for 3 or 4 days of 100 and 101 and a ring of slough formed on the cervix, also an ulcer from pressure in the vagina,
but these were touched up with iodized phenol and iodform dusted over and the patient went home well at the end of fourteen days. The catheter was passed every 6 hours for three or four days as there was inability to empty the bladder completely.

In this case one feared fistula, as the pressure had been so prolonged but the ulcer did not form a deep slough and the bladder escaped. The cervix was quite black and much swollen but merely a small ring sloughed, and after removal with scissors and application of carbolic the tissues healed. There was no extension of sepsis to the uterus.

**Delayed Labour.**

Four cases in which there had been early rupture of the membranes and consequent dilatation of the os requiring douching were treated. It is the custom of dhais to rupture the membranes with the fingers or some sharp substance such as a piece of a glass bangle and in this way delayed labour is frequently induced.

C.I. Mahomedan. 1st Pregnancy. Patient had history of vulvar sores when 2 months pregnant. She had been married nine years without issue. She was admitted in labour at 7½ months with membranes
ruptured, douches were given and a macerated foetus born. The membranes were all torn so the hand was introduced and pieces removed and thereafter a douche given, and the uterus curetted. Patient made a good recovery.

C.2. Hindu Female. 7th Pregnancy.

Admitted with the os dilated and membranes ruptured. Temperature 100° and Pulse 123, patient was intoxicated. There was no attempt at uterine contraction, quinine was given and long hot douches and a living male child was born in 1½ hours. Patient had some temperature for several days and the uterus was curetted, it was large and flabby, patient insisted on going home after 2 weeks, she was then well but the uterus rather large.


Patient had a history of irregular menstruation and white discharge before pregnancy. Was admitted with T. 102, in labour some time but the os was only dilated to size of one shilling and the membranes were ruptured. The child was in the first position and a large caput could be felt. Hourly hot douches were given and quinine, and the os dilated well and a living 7½ lbs child was born. She developed convulsions next day and died.

Admitted after being in labour 2 days, os slightly dilated and membranes ruptured, dilated well with douches and quinine and a living male child of 6½ lbs. was born.

It is customary to use plugs if the os dilates slowly but in almost all cases the country midwives ruptured the membranes. The instrument most commonly used is the sharp end of a broken glass bangle. This is easily obtained as they all wear such ornaments, whereas knives and scissors are less easily procured. In all the cases noted the same treatment was adopted, the abdomen was firmly bound by a tight binder. Long hot lysol douches were given and quinine in grs. x doses administered by the mouth.

In one case a plug of sterilised cotton with castor oil was applied as it is a drug used by the dhais and the edges of the os certainly seemed to soften quickly under its application.

Labour Complicated by Cancer of the Cervix.

C.1. Hindu aged 30. Had had 2 children and 2 miscarriages the last 1 year ago. Had never been well since the last miscarriage, had passed large clots and had offensive discharge.
Patient was in labour and there was slight bleeding, and on examination a cauliflower growth of the posterior lip of the cervix was discovered and some extension at the posterior wall. The head was presenting.

Hot vaginal douches were given and the os dilated well, a small child of 6 lbs was born alive; the cervix was touched up with Perchloride of Iron. The patient insisted on going home and would consent to no further treatment.

According to Norris and Dickinson, "in a large proportion of cases cancer of the cervix will interrupt gestation, but if the disease is confined to one lip of the cervix and that the anterior - the labour may be terminated spontaneously".

Tweedie states that "labour, if allowed to result at full time, is likely to be fatal from sepsis or to be followed by increased malignancy of the growth."

What the ultimate course of the above case was is not known as the patient returned to her village, but although the disease was spreading in the vaginal wall, there was exceptionally little haemorrhage and labour was easy. The child was small, but dilatation of the os assisted by douches, was uninterrupted.
INSTRUMENTAL DELIVERIES.

The following cases will show the type of case in which dhais can do most harm, as where some abnormal presentation occurs, if diagnosed, they may send the patient for treatment, but if the child presents by the head they will urge patience till the mother is moribund.

C.1. Parsee female, 1st Confinement. Age 20. Had a blood mole 1 year previously and was curetted.

Head presentation, in right occipito posterior position, forceps applied did not rotate, living female child of 8 lbs extracted. Perineum required 4 stitches. Convalescence uninterrupted.

C.2. Hindu female, 1st pregnancy. Membranes ruptured at onset of labour and forceps was applied when the head was at the outlet as the foetal sounds had become very slow. A living male child of 7½ lbs was extracted, the perineum was torn but the puerperium was uneventful.

C.3. Hindu Female. Multipara. Was called after patient had been in labour for 2 days with the head in the outlet. A dead-born child was easily delivered. The patient was douchened, and next day when I saw her, dhais had inserted cowdung plugs into the vagina and I left.
I enquired later and heard that the woman had fever for some time but recovered.


Admitted with temperature 100, pulse 112, the child's head low in the pelvis, the membranes ruptured. The mother's bladder was enormously distended and catheter could not be passed. Forceps were easily applied and a dead male child extracted. Very foul liquor followed and the membranes were discoloured and decomposing. The hand was introduced and the uterus cleaned, douche given, patient did well.


Patient admitted with Temperature 100, Pulse 120 having been in labour 2 days and with the membranes ruptured. A living male child was extracted but he died next day. Perineum was ruptured and stitched. Recovery uneventful.


When admitted had been in labour 2 days, and had been douched by dhais, there was a large caput, the skull bones of the child were much overlapped. The vagina and vulva were oedematous. Bandl's ring was felt. Chloroform was given and craniotomy
performed and the child extracted, the shoulders giving some trouble.

The vagina was almost black, and sloughed very badly, urine and faeces were passed in bed and the patient was so low that the relations took her home where she died.


Admitted with Temperature 103° Pulse 142, the bladder distended and reached the umbilicus, the head at the vulva and the vulva and neighbouring tissues very swollen and oedematous. The head was almost in the transverse diameter not having rotated, and was extracted with great difficulty, the Perineum ruptured.

The catheter was passed 6 hourly, the patient given brandy, digitalis, strychnine and quinine and the vagina well touched up with iodized phenol. She was taken home on the third day dying.

Later it was ascertained that she had been four days in labour, and that no urine had been passed for 2 days, and the child's head had been "out" for that time.


Admitted with fever and pulse of 130, the child's head at the outlet in the 2nd position, bladder enormously distended. Cathether could not be passed.
Forceps were applied and a large dead male child extracted. The vaginal tissues were dusky and oedematous.

Uterus was curetted and touched with iodized phenol next day and an iodoform gauze drain left in, on the third day patient had a rigor and temperature of 104 and the vagina despite treatment was one greenish looking sloughing mass.

On the 6th day after delivery the patient had difficulty in opening her jaws and could not swallow a little later. No antitetanic serum was available so cerebro spinal fluid was withdrawn by lumbar puncture and Magnesium Sulphate solution injected slowly. The jaws did not relax and in the evening patient had convulsions and died.

The three cases which proved fatal were all ones of extreme neglect, and all the patients were healthy strong primiparae who had been treated by native midwives and not sent to Hospital till in labour from 2 to 4 days. The tissues had become so oedematous and friable when admitted that even on introducing a finger they were apt to give way and as will be understood the application of forceps were rendered difficult and dangerous.
In two of the cases the bladder was distended nearly to bursting and the catheter could not be passed before forceps were applied.

In only two of the eight cases were forceps used early, in one for right occipito posterior position, and the second for the sake of the child as the membranes had been ruptured early and the foetal heart sounds were feeble and slow.

TETANUS.

In the last case quoted on the 6th day of the puerperium tetanus developed but the patient succumbed; no antitetanic serum being available.

In the Lancet of August 15th 1908, in the Paris letter the treatment of tetanus was reported by intraspinal injection of 25% Magnesium Sulphate solution, and in nine cases so treated only three deaths occurred.

The technique was followed as described, namely spinal fluid being first withdrawn and thereafter Magnesium Sulphate solution of a strength of 25% injected in the proportion of 1 cc. per 25 lbs. of body weight.

Before injection there were no convulsions, merely stiffness of the jaw, and after the treatment this showed no improvement.
In the Lancet of January 25th 1909, an article was quoted from one of Dr. Millar's on the same subject. In this case first Magnesium Sulphate solution was injected and later anti-tetanic serum given, and recovery ensued. It may be that giving the Magnesium sulphate prevented the onset of convulsions in my case and had serum been obtainable perhaps by its injection the woman might have recovered. But the patient was weakened by sepsis and had not the same chance of improving as the boy whose case Dr. Miller quoted who was in good general health and had merely a lacerated wound of the hand through which the tetanus bacillus had entered.

The result of the treatment as carried out by me was disappointing, but it is but fair to state that the case was an unfavourable one in which to try the injection treatment, and it was only done in the hopes that it might meet with success.

PLACENTA PRAEVIA.

Three cases were noted as placenta praevia but in one only was the situation central.

C.1. Hindu. 2nd Pregnancy. Admitted in labour with slight bleeding as the os dilated the edge of the placenta was felt beside the head.
After the placenta was expelled a clot was seen situated at one edge. Patient had no further bleeding.

C.2. Hindu. 2nd Pregnancy. As os began to dilate there was some bleeding, the child was born naturally. A clot was situated at one side of the placenta. The first child was born by face presentation and forceps were used.

C.3. Hindu. 8th Pregnancy.

Admitted after bleeding profusely for "8 hours", Pulse rapid and extremely feeble, temperature 100.4, patient giddy and faint. The uterus was obliquely placed the child's head felt in the right iliac fossa. The os was semi-dilated, torn placenta presenting with a hand, and most of the liquor had escaped. The fingers were pushed through the rent in the placenta and a foot pulled down and a second thereafter to plug the os. Chloroform was given for a few minutes to prevent straining. The child was easily born by breech and practically no bleeding occurred after admission. Hypodermics of ether and strychnine were given and a uterine douche, and the uterus curetted.

The bed was tilted, hot cloths were placed on the heart but just as saline solution had been got ready
to infuse the patient died. Possibly if there had been someone to assist and give the saline infusion while the child was being turned, the patient might have been saved.

Norris and Dickinson quote from Maygrier who reported 4 cases of fatal syncope in patients with placenta praevia showing "that severe haemorrhage from this anomaly can cause such grave anaemia that death may come suddenly after the arrest of all bleeding."

In the case noted, if eight hours were said to have been the length of time the patient bled, one might double this period without fear of exaggeration.

It is remarkable that where one had so many abnormal cases one should have seen only one case of Central placenta praevia giving a frequency of 1 in 121.

ECLAMPSIA.

Eclampsia is in some districts common, in others rarely met with, but in those places where it occurs there seems to be a tendency to be of seasonal incidence, practically all my cases were met with in the "cold" season; and one was inclined to infer that it had some relation to the cold weather following on
the extreme heat. But as it seems comparatively rare in this part of India (Punjab) where there is much greater variance of temperature, the cause must be sought elsewhere.

I saw in all six cases of eclampsia and one threatened case; and all except one occurred in strong primiparae.

My results have been most deplorable despite all efforts, and I feel it is necessary to explain in self justification that one was never called until the patients were comatose and had had several fits.

C.1. Threatened Eclampsia.

1st Pregnancy Hindu. Had had excessive morning sickness and diarrhoea. Swelling of feet and hands for two months and scanty urine.

Admitted at 7/12 in labour and a premature infant born in 10 minutes. The patient was exceedingly oedematous, vulvae very swollen, and urine was loaded with albumen. She made an uneventful recovery and was given Pot. acetate & Citrate mixture and light diet. She left well and with no albumen in the urine.


When admitted to the labour room, swelling of the feet and ankles was noticed and as the child's head
came to the outlet an eclamptic fit occurred. Chloroform was given and the child rapidly extracted with forceps. The placenta seemed healthy. The patient was given Pot. Bromide and Chloral but two more fits occurred so a grain of morphia was injected and the convulsions ceased.

The urine was acid, Sp.Gr.1018 and was almost solid with albumen. The patient recovered rapidly with careful dietary, purging and Pot. acetate mixture.

C.3. 1st Pregnancy, Hindu. Age 18. Pregnant 7 months. Patient was a young, strong girl well nourished. No history of swelling or any premonitory signs. When seen she had had several fits and was comatose. Croton oil was given on the tongue, a long enema, and chloral and bromide by the rectum. Labour was induced by dilatation with a Barne's bag and a still-born child delivered. Cardiac stimulants were given by injection but the patient never regained consciousness and died next day.

C.4. Mahomedan. 1st Pregnancy. Age. 20. Swelling had been noticed for two months and scanty urine for 5 days. Patient was 7 months pregnant when called and was quite unconscious, she had her first fit early in the morning and since then had
had several and was deeply comatose with stertorous breathing. She was removed to Hospital, a long enema given and Croton oil m.ii on the tongue. Bromide and Chloral in large doses were given by rectum. The catheter removed a small quantity of highly albuminous urine. Loose motions were passed after the croton oil but patient had a long severe fit, she was given morphia gr. ½ hypodermically and as she did not improve labour was induced the os easily dilated under chloroform with a Barneys bag and a small still-born child removed. No improvement occurred and as the patient was getting worse I determined to try a hypodermic of pilocarpin and injected gr.1/5. She perspired very freely, digitalis and brandy were given to prevent collapse, but I feel sure the pilocarpin merely hastened the end by increasing the secretion of the bronchi. Consciousness never returned.

Patient was 8/12 pregnant and had been attended throughout by a native medical practitioner, she had had swelling of her legs for 1 month but no treatment was given.

The husband had been twice married, he was semi-
imbecile, and had spastic paralysis of the legs.

When first seen the patient had been having fits for a whole night and half a day and was unconscious. An enema was given and the catheter passed and the few drops of urine obtained were solid with albumen. Magnesium Sulphate was given, also croton oil. Hot packs were given for 24 hours, labour was induced and a dead child extracted with forceps. Morphia was given hypodermically. The skin acted freely after about 20 hours and loose motions were passed and the patient became conscious 30 hours after first seen. Shortly after had once more convulsions and the Temp. rose, hot packs were given and morphia hypodermically along with digitalis, but the pulse gradually got weaker and patient died comatose, 5 days after the onset of the first convulsion.


Multipara; had had 8 children one alive of 6 years, had had several born at 7/12. During one pregnancy was treated for "kidney disease, had had swelling for some time."

Patient was 8/12 pregnant, had suddenly had a fit, in the early morning; a hospital assistant was called in and I was wired for, but as the woman lived
in a small outstation I did not see her till mid-day, she had had a "great many fits", and a dead child had been born four hours before my arrival.

When seen the woman was unconscious, breathing stertorously and bleeding profusely from a large cut on the under surface of the tongue the result of a bite during a convulsion. The mouth was full of blood clot and there was a large haematoma on the under surface of the left side of the tongue. The pulse was almost imperceptible.

The haematoma was cleared of blood clot, the tongue stitched and bleeding arrested, and a long saline infusion was given under the breasts. An enema was given and croton oil by mouth, and a hypodermia of \( \frac{1}{6} \) gr. of morphia with Sulphate of Atropine and gr. 1/100, \( \frac{1}{6} \) gr. 1/100 of digitalin was also given.

The pulse rallied with the saline infusion; for an hour no fit occurred, after that a severe one occurred and gr. \( \frac{1}{4} \) of morphia was injected with atropine, a second saline infusion was given.

The catheter withdrew no urine and none was passed since morning. An hour later 2 more fits severer than the preceding ones occurred and gr. \( \frac{1}{4} \) of morphia with atropine was again injected; in a short
time the patient died. She was first seen about 1.30 and died about 6 p.m.

That the results I obtained were very deplorable I cannot deny, and I had made up my mind not to induce labour should I have another case to treat, but in Case No. 6 the child was born before my arrival, and despite all efforts the woman died.

It was because of one's former teaching and the literature at one's disposal that labour was induced, and many writers seem still to adopt the practice, although the splendid results reported by Dr. Tweedie and Dr. Ballantyne where it was not resorted to are strong arguments in favour of its discontinuance. In Norris and Dickinson, page 637 it is stated that "the majority agree that eclamptic attacks that do not yield to appropriate treatment furnish an indication for ending the pregnancy."

Dr. Tweedy in his Rotunda Practical Midwifery, page 151, prefers "less drastic measures."

In the Journal of Obstetrics of August 1908, Mayne and Schönbeck report cases in which the fits ceased after the induction of labour.

In the same Journal, p. 137 the experiments of Albeck and Lohse on liquor amnii to prove that a
toxin is found in eclamptic cases would indicate that induction of labour should be carried out. In the November No. p.362, Rayser "advocates accouchement force in every case of eclampsia" - and Baum in Jan. No. 1908 considers that to cure the condition pregnancy must be brought to an end. The means by which it is to be effected do not seem to matter.

The Rotunda treatment as described by Dr. Tweedy, page 152, consists of morphia and atropine hypodermically, purgatives, saline infusions, and washing out of the stomach, combined with cardiac stimulants as required, - and labour is not induced.

Dr. Ballantyne in his paper in the B.M.J. of Jan. 11th 1908 reported three cases treated by hot packs, morphia and chloral hypodermically and purgatives, labour was not induced, all the mothers survived and in one case the child. The same author in the February Journal of Obstetrics quotes five cases of eclampsia during pregnancy, treated by hot packs, purgatives, diuretics, morphia in three cases, thyroid in two, venesection in one case and saline infusion. In this series of cases once labour had to be induced, in all the mother survived, and in one the child also.
It is interesting to note that in the case of the multiparae previous renal mischief was noted, and in the last case I quoted also a multipara, there had been kidney trouble in a former pregnancy.

The results of these eight cases make one feel that in future it will be better not to induce labour as a general rule and to resort more to hot packs, if necessary to bleeding. In the case in which bleeding had occurred per se, probably too much blood had been lost as despite saline infusions the pulse remained weak. The patient was stout and well built, and probably had had a full pulse previously.

Decapsulation of the kidneys has not been tried, the results, as published in the Journal of Obstetrics of Feb. 1908, by Franck and in the June number, cases quoted by Baumy, Asch, Wiener and Essen-Müller, were in many instances remarkably successful.

Operative treatment, unless proved to be the only successful method would practically never be employed, and beyond being interested in the paper one could not consider it during one's work in India.

In the August number of the Journal of Obstetrics for 1908, Antomo attaches much importance to the giving of Veratrum viride, Justin McCarthy to
nitro-glycerine, and Härle reported good results with
Hydrate of Amyl, in all cases pilocarpin hypodermically
as well.

In my experience the pilocarpin undoubtedly did
harm, bronchial secretion being increased, as is
generally held to be the case.

One felt the greatest need to be that of some
purgative and diuretic that could be administered
hypodermically as one's patients were generally coma-
tose when seen; croton oil was uncertain in action,
and hot packs could not always be employed to cause
sweating.

If dhais would realise the danger of eclampsia
and send their patients to Hospital at the onset, or
call in a doctor early, one might be able to look more
hopefully on eclampsia in the East.

PELVIS MINOR.

One case of generally contracted pelvis was met with,
and labour was induced as the patient refused to submit
to operation, the further notes are given to complete
the case by kind permission of Dr. Eleanor Soltan,
Muir Memorial Hospital Nagpur.
Case 1.

Mahomedan, aged 28. 10th Pregnancy.

Patient was short, height 4ft. 3 in. broad and rather squat, leg and arm bones well formed, slight lordosis.

C.1. Confinement in 1898. 8/12 child born vertex presentation, with great difficulty, lived 1 day.

C.2. Full time Breech presentation difficult labour still-born child.

C.3. 5/12 child, breech presentation, labour long.


C.7. Labour induced at 8½ months difficult labour, child still-born.

C.8. Labour induced at 8½ months Podalic version, craniotomy on after-coming head.

C.9. Labour induced at 8/12 version and craniotomy on after-coming head.

C.10. Patient came in during 8th month and refused operation, labour was induced by long douches followed by Barne's Bag. Pains were very feeble and of slow rate, when os dilated I attempted to apply forceps and
failed, the head bobbed about and only one blade would fit on beside the head in the brim. Version was then done and a dead child extracted with great difficulty.

The patient made an uninterrupted recovery.

When again pregnant the patient went to the Mission hospital and Dr. Soltan with whom I saw the case allowed me to give the further history. We carefully measured the pelvis and found the following diameter:

- Interspinous 20 cms.
- Intercristal 22 cms.
- External Conjugate 16½ cms.
- Indirect Conjugate about 9½ cms.

We decided to do pubiotomy with induction of labour as the patient refused Caesarian section.

Accordingly Dr. Soltan induced labour at 8½ months as the patient only came in at that date, and performed pubiotomy and kindly allowed me to assist. A living male child was born weighing 4½ lbs by natural efforts after the operation and the child lived and mother had a rapid convalescence.

In the B.M.J. of March 1908, Olshausen's views on contracted pelvis are given, and one feels comforted to note that so great an authority found generally
contracted pelves difficult of diagnosis, also that
"it is extremely seldom that one can make out the exact
shape of the foetal head." In the two years work in
India it has been my misfortune to treat only one case
of pelvic deformity during labour, but one felt hope-
lessly ignorant as regards relative size of head and
pelvis. In the case quoted the former history clearly
indicated operative interference, but the patient re-
fused to undergo Caesarian section, and pubiotomy in-
struments were not available and were only procured in
time for her next confinement.

In the Journal of Obstetrics of March 1908, a
case of pubiotomy is reported by Dr. Jardine in which
the separation of the bones is given as 1 inch and not
as \(\frac{1}{2}\) inch as stated by Tweedie in his Rotunda Practical
Midwifery. In the case above noted the separation of
bones was also 1 inch.

In Dr. Jardine's case the child was large and
sloughing of the vagina occurred and I feel sure if
labour had not been induced in the case quoted the
child might not have been born naturally.

It was difficult to determine whether to leave
the rest of the case to nature or to apply forceps,
but the result justified the technique adopted.
In the B.M.J. of July 1908, Reveuner states that after the bone has been cut through and the chain saw removed, the patient should be left to complete her labour by natural means, and then when pains are good, this usually offers no difficulty. He has convinced himself that when injuries to the bladder do occur, they are nearly always produced by the forcible extraction of the head. He therefore insists that the artificial termination of the birth constitutes the chief danger.

Whereas in the B.M.J. of October 1908, 13 pubiotomies by Whitridge-Williams were noted, in all of which forceps or version were also employed. He says that pubiotomy is inferior to Caesarian section in Multiparae with a history of repeated difficult labours.

The common pelvic deformity met with in India is osteomalacia so I fear there will be but few opportunities for performing pubiotomy, but I should not hesitate to advocate it were suitable cases to occur, as a method with so little sign of operation will be popular with the natives, and is easier to do with few assistants than Caesarian section provided the pelvis is not too contracted.
POST PARTIM HAEEMORRHAGE.

No severe case of haemorrhage was seen, three cases with slight bleeding occurred, in all of which the placenta had been expressed.


Child born naturally but as the placenta did not follow in 15 minutes it was extracted by the midwife and "slight bleeding" occurred.

When seen the pulse was 120, the uterus large and flabby.

Hand introduced and pieces of placenta and membrane removed and with long intrauterine douche no further bleeding occurred.


Normal confinement but placenta expressed and the membranes torn. The hand was introduced and remains removed after which a douche was given.


After the birth of the child the placenta was expressed and bleeding occurred. Pulse was 140 when seen and patient was bleeding rather freely. Membranes were removed by the hand and a long douche given followed by a saline by rectum.

Patient did very well.
These cases all occurred during my first months, and after desisting from expression of the placenta "bleeding cases" ceased.

As it is the custom of the dhais to pull on the cord it is certain that many cases of post partum haemorrhage must occur but none have come to my notice.

**RETAINED PLACENTA.**

As has been noted the custom of dhais is to make the placenta follow the child, if it does not do so at once the cord is pulled on, or some device followed to cause its immediate expulsion. Whether part or the whole comes away is a matter of no moment to the midwife.

C.1. Hindu.

Patient admitted with Temperature of 100 and pulse of 120, eight hours after delivery with a history of no placenta having come. The placenta was removed by hand and a long douche given, the cervix was torn and unhealthy looking and the appearance was as if it had been pulled on mistaking it for the after-birth. It was well touched with iodized phenol.
and curetted and the patient did well.

C.2. Mahomedan. Admitted many hours after delivery with the placenta unbroken. It was normally removed a long douche given and the woman did well.

C.3. Hindu. Admitted a week after confinement, very septic, pale, pulse irregular, feeble and the uterus large and soft, and lochia very offensive.

The hand was introduced and practically the whole placenta removed, the uterus felt sodden and one dared not curette hard. The surface was touched up with iodized phenol but the patient did badly and was removed after three days and died at home.

Probably in this case hysterectomy would have been the scientific treatment but apart from the refusal of the patient, one feels that her condition was hopeless when seen, as she was saturated with the products of sapraemia.

C. PUEPERAL PATHOLOGICAL CONDITIONS.

PUEPERAL SEPTICAEMIA.

Septicaemia is extremely common and considering the method of dhais who are the country midwives it is not to be wondered at. Several cases have already been noted under the headings of transverse presentation
forceps cases and retained placenta.

The following cases were admitted during the puerperium.

C.1. Mahomedan. Age, 20 admitted five days after confinement. She had fever, shivering, and a rapid feeble pulse and foul discharge. The uterus was curetted and placental remains removed, the uterus was large and soft, - it was touched up with pure carbolic and a gauze drain left in. The woman did not improve - was taken home after a few days to die.

C.2. Mahomedan. age 20. Admitted 25 days after confinement with a history of having been treated by dhais and having fever and shivering on the third day after the child was born. She was extremely ill, a temperature of 102°, pulse 120, heart dilated. She was taken home as she did not improve.

C.3. Mahomedan. 6th confinement, admitted seven days after, with large soft uterus, foul discharge, rapid pulse and fever. The cervix was sloughing, so curetted, then the uterus curetted, - placental remains removed, a sharp curette was used, after which the surface was touched with pure carbolic and an iodoform drain left in. The patient recovered rapidly and went home after 10 days.
These cases will suffice to show the type of sepsis so commonly met with but it will in no way give an idea of the frequency of its occurrence. The number of cases of cellulitis, and fixed appendages the result of puerperal fever is enormous, not one day passes without such cases being examined in the outpatient room.

In the Journal of Obstetrics of October 1908, an article by Dr. Knyvett Gordon on Puerperal septic diseases states that uterine douching is more deleterious than vaginal irrigation. The author first curettes with a sharp curette and then touches up with undiluted izal on swabs.

Saline injections with or without bactericidal sera have been most effectual.

I have not had cases on which to try the saline injection but intend to do so when they occur, but the serum treatment will remain out of one's reach until such time as laboratories shall be plentiful and not at such distances as they are at present.

POST PARTUM MELANCHOLIA.

As far as I can ascertain this condition is rare and I have but one case to report.

C.L. Hindu age 25. Admitted after 5th confinement.
C.1. Died at 7/12 of diarrhoea and vomiting.
C.2. Died at 3 years of fever.
C.3. Died at 4 years of fever.
C.4. Died when 1½ days old.
C.5. 1½ months old alive.

All previous labours and puerperia normal, but patient had fretted over the death of all her children, and expected the last one to die also.

She was said to keep good health for one month after confinement, then a severe storm occurred one night and she was frightened and nervous. Since then she has been "strange" and refused food, and has not slept and wept at the mention of the dead children.

On admission she was pale and distressed looking and had a feeble pulse of 100, and would eat nothing and cried if left by herself.

She remained in hospital four days and was fed regularly and made to sleep with large doses of bromide. Her husband came at the end of that time and insisted on taking her home.

She returned well and fat after 6 months to show herself, her friends said she had taken some weeks to recover.

Hysteria is extremely common amongst certain classes of natives, and severe degrees of the disease
are seen mostly amongst the rich Mahomedan women. But the patient described in no way resembled hysteria, she had all the symptoms of melancholia and it was much regretted that she was not allowed to remain longer under observation.

D. PATHOLOGICAL CONDITIONS CONSEQUENT ON PREGNANCY.

MAMMARY ABSCESS.

The numbers of mammary abscess are enormous, no hospital outpatient department is free of such cases in the surgical dressing room. All degrees are seen and it is with difficulty that incisions can be freely made, the women will suffer for days rather than allow a knife to be used.

That the cause is often uncleanliness must be admitted, but the practice of keeping the infant from sucking the breast till the fourth day must be a frequent source of suppuration, as by the time the child is allowed to take the nipple the breasts may be engorged and painful - with the onset of pain the mother refuses to nurse the child and abscess formation rapidly sets in.
Irritation and injury from the teeth of the child at times cause the condition, as it is customary for the children to be suckled till 2 or 3 years old.

Notes of cases have not been given as there was nothing of especial interest beyond the frequency and causation of mammary abscess.

**FISTULAE.**

It is not to be wondered at, when one considers the young age at which child-bearing begins, and the treatment that the mothers are subjected to, that fistulae are of extremely common occurrence.

They vary much in type, but are frequently inoperable being large irregular holes surrounded by scar tissue.

In some patients vesical and rectal fistulae being co-existent.

C.1. Hindu.

C.1. Born with great difficulty, and after birth passed urine by the vagina.

C.2. born easily at 7/12.

C.3. born 20 days before seen; was four days in labour and the child was still born.

Patient had fever and foul lochia.

There was a large vesical fistula, the catheter
passed about $\frac{1}{2}$ inch from the meatus and then was blocked by scar tissue.

The fistulous opening admitted 2 fingers and was surrounded by dense scar tissue, no operation was undertaken.

C.2. Hindu, aged 16. Had a child when 15 years old and since then urine has dribbled away. Patient was very small and ill developed. There was a large vesico-vaginal fistula; it was twice repaired but did not unite.

C.3. Hindu, aged 16. Was confined 2 months before seen, and had difficult labour lasting over 2 days.

There was a large vesical fistula, it was repaired and almost all united, a small hole remained and patient refused a second operation.

C.4. Hindu. 20 years old. Was confined a year before admitted and since then urine was passed by the vagina. The vagina admitted a speculum with great difficulty, there was no urethral orifice, a large opening from the bladder into the vagina.

No operation was undertaken as the urethra was obliterated.
C.5. Hindu aged 30. Admitted with a large fistula into the bladder the edge of the opening being the anterior lip of the cervix. Waited 3 years from last confinement. The fistula was repaired and the patient made a good recovery.

C.6. Hindu aged 45. multipara. protruding

Admitted with a mass of 25 years duration, at last confinement patient had long labour and ever since had passed urine by the vagina. Examined under chloroform, a large transverse opening into the bladder was found, the uterus was completely prolapsed and adherent in that position; the cervix was not patent, there was no anus the bowel being continuous with the vagina. Nothing could be done.

C.7. Hindu aged 30. 1st Confinement a year before admitted, difficult and long and followed by a rectal fistula.

The vagina was narrow and contracted and the cervix represented by a small depression. Just above the anus there was a tear about 2 inches long into the rectum.

The rent was sewn up but did not unite and a second operation was done and the patient did very
well till she got up and walked about at the end of a week and a small part of the wound broke down. She went home after a few days but I expect the opening healed as it was extremely small.

The nursing of such patients is extremely difficult as they will not keep still and refuse to remain long in bed, and if the condition is not completely cured they rarely submit to a second operation. Most of the cases are so extensive that it is rarely possible to keep the parts from contamination with urine, in the last case I tilted the bed so as to keep the head low and passed the catheter four-hourly and the result was most satisfactory. The patient was kept constipated and for a few days given only albumen water as recommended by Kelly.

DEIFICENT PERINAELUM AND PROLAPSE.

The cases of prolapse of the vaginal walls and of the uterus associated with deficient perinaeum consequent on unrepaired perinaeum at the time of confinement are very numerous.

Very few women will submit to operation and my results have been disappointing, partly owing to the difficulty in keeping the patients still, but partly owing to faulty mechanism on my part.
OSTEOMALACIA.

It has been my misfortune to have no cases of confinement complicated by osteomalacia, all the cases I have seen occurring in women who were not pregnant. The disease is much more prevalent in some districts than in others, being rare in Nagpur and common in the North.

During the two years from which the cases noted have been drawn, only one case occurred in Nagpur and Caesarian section was done at the Mission Hospital for the condition.

In all, I saw about 1 dozen cases of the disease and with one exception all were women of the same class, the most strictly "purdd" of the district. Diet could not be blamed nor could water as other caste women ate the same food and drank the same water with impunity. Rickets in children was common but amongst a different caste.

The first symptom complained of was invariably pain in the ribs, followed by pain in the back and thighs.

Lordosis was marked in all advanced cases and the gait was characteristic, a sort of rolling gait one leg being slowly rotated in front of the other,
often the hands being placed on the thighs just above the knees.

Beaking of the pubes was more or less marked, but the deformity which made itself most manifest was the narrowing between the tuberosities of the Ischia, the narrowing of the transverse diameter of the outlet becoming extreme.

In several cases the promontory was felt high, and the diagonal conjugate diameter comparatively long although the symphysis was much beaked.

In some cases I tried treatment according to Bossi with injections of adrenalin, but in only one did the patient stay more than a few days and the disease showed little improvement under the injections.

In the cases recorded by Bossi the results were almost miraculous and one feels one would like to be able to give the adrenalin treatment a fair chance. (Obstetric Journal, Feb. 1908.)

Manner of Conducting Cases by indigenous Dhais.

The following notes may show how some of the conditions described have been predisposed to or caused. That there are many other practices not revealed is certain but those that I have given are in common use in the Central Provinces.
With the onset of pains a "hot bath" is given, by pouring hot water over the mother's waist and down her legs. A sort of pepper tea is then given made of black pepper-corns ground and infused in hot water and mixed with ghee and sugar, a drink of this is given several times to induce strong pains.

If good pains are present the patient is made to walk, and from the roof or rafter a long rope is attached and the woman made to hold on to this and bear down from the onset of labour.

Examinations are frequently made during the dilatation, with unwashed well oiled fingers.

When the os dilates if the membranes do not rupture they are torn with both hands, then a bundle is made of dirty rags with wood ash inside, about ½ foot high and the woman made to sit with the anus resting on the bundle and neighbours hold her firmly while she bears down, holding on to the rope meanwhile. If she should be feeble she is allowed to lie on a bed.

When the head comes lower the midwife squats in front of the patient, one woman sits behind and presses her knees into the small of the back, a se- the crests cond stands and presses, of the ilia. well down. If
no such assistance is available the woman is propped against a wall. The midwife presses her feet between the thighs and when the head is on the perineum she puts 2 or 3 fingers into the mother's anus and presses the child's head up, while the fingers of the other hand pull the head up towards the symphysis. No care is taken of the perineum.

When the head is born the child is at once pulled out, and if in the jungle the cord is cut through with a stone, if semi-civilised with scissors or a piece of glass bangle - and tied with thread on the child's side.

The mother is then made to stand against the wall, sweet oil is poured over the midwife's head and she massages her patient's abdomen with her head.

The placenta is generally rapidly expelled, but if not, the woman is then made to cough and if this does not succeed her hair is put into her mouth and forced down her throat till she vomits. If the afterbirth does not appear after these methods have been tried the midwife pulls on the cord or inserts her hand and removes it.

After the placenta has been expelled if the woman be a Brahmin, she is douched over the head and
body with hot water, then made to sit in a vessel with medicine made out of astringent leaves and lime and her vulva and vagina well washed by midwives. A strip of cloth is then tightly tied round her waist.

If not of Brahim caste, 1 lb. of country rum is taken with powdered lime, and with pieces of cloth the parts are well bathed till the uterus contracts well.

For napkins old rags are used - nothing clean is ever given.

The placenta is buried in a hole made in the floor just beside the mother's bed.

From the onset of labour all doors and windows are shut and one to four charcoal fires are burnt near the bed, to this custom must be attributed the deaths of many of the infants as they are practically smothered by the fumes. The patient is kept in this atmosphere from 11 to 13 days. The puerperium routine is as follows:-

The woman is made to sit in the same astringent lotion night and morning for five days. She gets up and bathes herself - and always sits up to nurse the infant. From the 3rd to the 6th day a lotion made of lime leaves, pepper and salt is used to rub
over the body and in the vagina, and it causes great burning and itching, after this she is made to sit on a hot stone, and water is thrown from a distance over the abdomen and vulva.

The diet consists of wheat flour, ghee and sugar, dry for the first 3 days then a sort of soup till the sixth day and after that normal diet.

If the case is not natural and there is delay, an egg is whisked up and with it the vagina is lubricated by the hand; if this is not enough the hands are introduced and if the head presents it is rocked from side to side till loosened. If any small part descends it is pulled on and occasionally pulled off.

The midwife will wait for 3 or 4 days before sending her patient to hospital.

If haemorrhage occurs the vagina is plugged with rags filled with wood ash, or alum in rags and these plugs are not removed for three days.

If leucorrhoea occurs alum plugs are given.

**Care of the Child.**

If the child does not cry when born:

1. Cold water is thrown over the abdomen.

2. A finger is put in the mouth and all "phlegm" removed.
3. A brass vessel is beaten at the child's ear and if it is "clever" it will cry.

4. If the child looks as if dead when born, the cord is not cut, the placenta is at once extracted and laid on the ground, the cord is straightened, the placenta covered with dry grass and set fire to and the child sometimes cries with the heat.

5. A needle is put into the lamp and when red the wrists both back and front, the back of the neck and lastly the abdomen are seared with the hot wire.

Nothing more is done if the child does not respond to these methods.

After birth for three days the mother's milk is not given, but the infant is fed on $\frac{1}{8}$ teaspoonful of honey with $\frac{1}{2}$ teaspoonful of castor oil three times a day. If feeble it is fed by making a small cone of cotton wool and dipping it in the fluid and letting it drip into the child's mouth.

On the fourth day all the mother's milk is withdrawn by massage and bathing and the child is put to the breast. It is fed at any hour and as often as it cries, and is allowed to suck the mother's nipples till 2 or 3 years old.

The cord is covered with a rag soaked in sweet
oil and a cloth tied over it. (umbilical hernia is extremely common).

If born in a caul the membranes are preserved to bring luck and keep off evil spirits.

For sterility many cures are given:
1. Severe massage is given during the "period."
2. All sorts of medicines are given to drink.
3. As it is believed that a child is conceived by a piece of cord, the cord of a first born child especially if it be a male is sacred, a piece of this is put inside a small plantain and the unsuspecting patient given the mass to swallow on the day of cessation of menses and conception is said to be inevitable.

The customs round Delhi are slightly different but very few could be ascertained.

On going to a house for confinement the midwife first examines vaginally with fingers well oiled with mustard oil, then the abdomen is massaged and plugs of cotton with oil are placed inside the vagina.

The patient is made to walk about till the head is low.

The membranes are ruptured early generally by means of a piece of the patient's glass bangle.
Most patients are confined in the squatting position, only if they are weak are they allowed to lie down. They either sit on bricks or piles of cow dung or on the midwives feet and press against the bed or hold round the dhais neck or bear down.

If the head does not descend the hands well oiled are put in the vagina and the head rocked about - the uterus is forcibly moved from side to side and the woman's great toes are well shaken.

The back is rubbed with oil.

Sometimes aniseed is given for the bowels, but as a rule nothing, and nothing is done for the withdrawal of urine.

The midwife either places her hands or feet on either side of the vagina when the head descends and it is caught in both hands and the child quickly pulled out - a second woman presses the chest of the mother while the child is being extracted.

The cord is pulled on till the placenta comes, when it is at once cut with a penknife and tied on the child's side with coloured cotton.

If the child does not cry some strong medicine such as ginger is burnt near it, so that the fumes may irritate it.
If the cord is round the neck it is not unloosed. After the child is born a tight cord is tied round the mother's waist and a foot pressed against the vulva to push it into position again.

If haemorrhage occurs the patient is put on a bed and women sit on the abdomen and buttocks alternately. This is done for three days and the abdomen is well massaged with oil.

For six days the woman is kept in a dark room lit with a small lamp and several charcoal stoves and is given ghee, sugar and seeds boiled. If feeling cold she is given ginger drinks.

The mother gets up to pass urine, faeces and to feed the child, she bathes on the 3rd or 5th day by having water poured over her.

If the Perineum is torn, burnt leather is kept applied to it.

The child is fed on sugar and water for three days.

After realising what barbarous treatment the women are subjected to, one feels it is marvellous that so many survive, but one regrets that so few will consent to come to hospital for their confinements.
It will take many years to abolish the prejudice against new methods and convince the people of the danger of the present practices. They cannot realise that after great delay the mother's life must be endangered and consider that our methods are as bad as their own, if after delivery the mother should die.

One's success depends on one's first cases being treated before they had become hopeless, and if one has deaths in one's practice it takes months or even years to re-establish confidence.