Session No. 3.—12th July, 1956.
From Paediatric Unit — Kandang Kerbau Hospital for Women.
Moderator: DOCTOR GWEN SMITH.

A Case of Erb's Palsy in a Large Baby of a Pre-Diabetic Mother

Case Report

Presented by Doctor E. K. Koh.

Regd. No. 13030/56, Aet 36, Para 16, Delivered 7th July 1956.

SIZE OF PREVIOUS INFANTS:

1st — 7 pounds
2nd — 8 pounds
3rd — 9 pounds
4th — 8½ pounds
5th — Aborted
6th — 8 pounds

All delivered in Kandang Kerbau Maternity Hospital

OBSTETRIC EXAMINATION OF MOTHER:
Large baby, Vertex—head engaged.
Liquor+Twin pregnancy suspected.

LABOUR:
Total hours in labour—12 hours 30 minutes.

2nd stage began 6.20 p.m. — 7th July 1956.

3rd stage began 6.50 p.m. — 7th July 1956.

Difficulty experienced in delivery of the shoulders.

Anterior shoulder delivered first (i.e. left arm) then posterior shoulder.

Baby: Weight at birth: 11 pounds 3 ounces
Length: 21 inches.
Circumference of Head: 14 inches.
Hb. 137%. T.R. 6.41 million.

There was weakness of the right arm. X'ray showed no fracture of clavicle or humerus.

Glucose Tolerence test done on 10th July 1956 on mother.

Time:	0	½	1	1½	2 hours
Blood Sugar mgm%:	94	137	181	185	140
Urine Sugar:	+	+	+	+	+
Acetone:	Nil in all specimens.				

Discussion

Doctor T. K. Chong commented on the obstetrical management of the pregnant diabetic.

Doctor Smith commented that the only evidence in this child that it was born of a prediabetic or diabetic mother, was its weight and obese appearance. Apart from the nerve injury it was a healthy child. The baby had a paralysis of the more common type — where the upper part of the brachial plexus had been damaged. It was treated with an abduction splint. Final recovery should be quite good. She asked if there had been any difficulty in delivery.

Doctor Loh said that a pupil midwife delivered the case and delivery of the head was delayed. The Sister-in-charge tried unsuccessfully to deliver the head and then the house obstetrician. He then did an episiotomy and delivered the head with some difficulty. Before delivery twin pregnancy was suggested, but Doctor Chong thought it was a single large baby with hydramnios.

Doctor Sinha commented that there was some difficulty in deciding whether the mother was a diabetic as the blood sugar curve was not diagnostic.

Doctor Smith replied that the curve was that of a prediabetic and showed a prolonged rise.

Doctor Sinha asked whether these pre-diabetics in the "transition group," should be treated as diabetics.

Professor Sheares emphasised that in babies weighing over 4.15 kg. the question of pre-diabetes must be considered. In a large series of cases, a high proportion of the mothers of babies weighing over 4.15 kg. later develop diabetes. From the obstetrical point of view the most important thing was to determine how long the woman had been a diabetic. This woman was a pre-diabetic and has had 6 children. She should have Caesarean Section two weeks before term in any further pregnancy.

Doctor Goon then commented on the diagnosis of the case and the obstetrical management quoting the work of Priscilla White.

A Case of Ullrich-Turner's Syndrome in a Newborn Infant

Regd. No. 833A

Date of birth: 9th June 1956.

Antenatal: E.D.D.—4th June 1956:
Gravida 2.
Well during pregnancy inculding first three months.

Deltvery: Normal.

1st day: Feet noticed to be swollen.

O.E. 3rd dav: The infant was small with an elfin face. There was a short neck with marked webbing. There were extra folds of skin at axillae and groins. There was non pitting oedema of the dorsum of both feet

C.V.S : The heart was not enlarged and there were no murmurs. Both femoral pulses were felt.

R.S.: Lungs were clear.
Genitalia were those of a normal female infant.

P.R.: No pelvic masses were felt Diagnosis of either Klippel-Feil syndrome or Turner's syndrome was made.

6th day: Inflammation of umbilicus was treated I/M. Penicillin and Streptomycin and breast feeding was discontinued as lactation was inadequate.

9th day: The baby was fed on Trufood at the mother's request, and developed loose stools. The feeds were regraded at 5% Dextrose 0.2% N-½ Saline but 12 ounces normal saline was given in error.

11th day: Generalised oedema developed—probably resulting from the saline given. (equivalent of 180 c.c. normal saline.)

18th day: Oedema still present but feeding well.
Discharged with Lactogen ¾ strength 2½ ounces 3 hourly x 7 feeds.

INVESTIGATIONS:

X'ray: Cervical spine—no abnormalities.
Chest—cardiac outline normal.
Hb. 118% T.W. 10.900 P. 80 L. 15 M. 2 E. 1.
Blood film sex chromatology — Male
Serum Urea 16 mg.%
Serum Protein 5.40 gr.%; Alb. 4.69%; G1 0.71 gr.%

Discussion

Doctor Smith commented that the symptom complex known as Turner's syndrome, Ullrich-Bonnervie syndrome or ovarian agenesis was now considered to be the result of interference with gonadal development in the 5-6 week embryo. Grumbach et al (1955) had demonstrated that the nuclear chromatin pattern was male in a large number of these cases.

The aplasia of the gonadal cells in these cases was so severe that the external genitalia developed under the influence of maternal female hormonal secretions and were female in character.

Doctor Lumsden pointed out that in the few cases recorded in the first year of life the birth weight was always low. Doctor Smith agreed that this was so and said that the small stature of these patients was not influenced by oestrogen therapy. She suggested that possibly non-virilizing androgens may be tried in view of the fact that these patients were now known to be basically male.

REFERENCES:

1. GRUMBACH et al.: J. Clin. Endocrinology and Metab. 15. (1955) 1161-1193.
2. JAMES. T. EDIN.: Med. J. Aust. 59 (1952) p. 344-54.
3. KRAY and LEWIS: Arch. Dis. in Child. 29. 147. 424 (1954).
4. SPENCE: Clinical Endocrinology.
5. STJELBRID, P.: Arch Dis. Child 28. 137. (1953).
6. TURNER E. K.: Med. J. Aust. 1. 39-42 (1954).

Session No. 6—11th October, 1956.

From Paediatric Unit — Kandang Kerbau Hospital for Women.

Moderator: DOCTOR GWEN SMITH

Two Cases of Abnormalities in Twins

Case Reports

Presented by Doctor Tay Kah Seng.

CASE No. 1 Hydrops foetalis in one of the twins.
Regd. No. 16746 Chinese Aet 40 Gravida 8, Para 7.
Rh + ve.

OBSTETRICAL HISTORY:

No family history of multiple pregnancy. Previous babies were normal, full-term and spontaneously delivered.

PRESENT PREGNANCY:

Maturity at birth—36 weeks.

On admission, the mother was found to have pre-eclamptic toxaemia and hydramnios.

(i) Blood Pressure 140/90: Urine — clear.

(ii) Oedema of legs and anterior abdominal wall.

Size of abdomen was bigger than usual.

X'ray report (No. 2405/56)—

(i) Vertex, R.O.A

(ii) Breech, L.S.A

DELIVERY:

1st Baby: Low forceps (Wrigley's) under general anaesthesia.
Indication: Pre-eclamptic toxaemia.

2nd Baby: Breech extraction. The placenta was manually removed and the membranes were incomplete and ragged. The placenta was uni-ovular.

CLINICAL FEATURES:

1st Baby: Sex: Male. Weight: 4 pounds 1 ounce. Length: 16 inches.
Blood Group: "A."
No physical abnormality. Haemoglobin — 91%.
Discharged well after 2 weeks, weighing 4 pounds 1½ ounces.
Feeds: ¾ strength Lactogen 2½ ounces x 7 feeds.

2nd Baby: Sex: Male. Weight: 5 pounds 8 ounces. Length: 17 inches.
Blood Group "A."
Skin—dusky colour.
Ascites present. Spleen and Liver not palpable.
Oedema of legs and scrotum
Chest & Heart—normal clinically.
Hb. 159%.

X'RAY ABDOMEN: (report No. 2703/56)—
Ascites present. Heart appears considerably enlarged.
After delivery baby had repeated cyanotic attacks and low grade fever.
He took feeds poorly and on 3rd day crepitations were heard over both lungs.

Treatment: (1) Oxygen.
(2) Penicillin 25,000 u. 6 hourly. Streptomycin 50 mgm. b.d.
(3) Tab. Digitalis Folia gr. ¼ stat. gr. 1/8—6 hourly.

Baby died on 5th day.

GROSS POST-MORTEM FINDINGS:

Heart, pericardium and blood vessels —normal.
Lungs—reddish in colour: floated in water.
Liver—normal size. cut surfaces congested.
Kidney and Spleen—congested.
Stomach and intestines—normal.
Peritoneal sac contained more than a pint of transudate.
C.S.F. blood stained.
Brain — haemorrhages beneath pia-arachnoid over both parietal lobes.

CAUSE OF DEATH: Intracranial Haemorrhage.

Discussion

Doctor Smith commented that in this case there was an abnormality in one of twins said to be identical. She emphasised the importance of examination of the membranes and placenta for the typing of twins. Additional methods of investigation available included examination of

blood groups and palm prints. In this case both babies were Group "A" Rh + ve, and the mother group "O" Rh + ve. The babies were of the same sex. In addition, examination of palm prints (Professor Penrose's technique) was of value. Prints from these babies were taken but were difficult to interpret. From circumstantial evidence the probability that these twins were identical was 6:1.

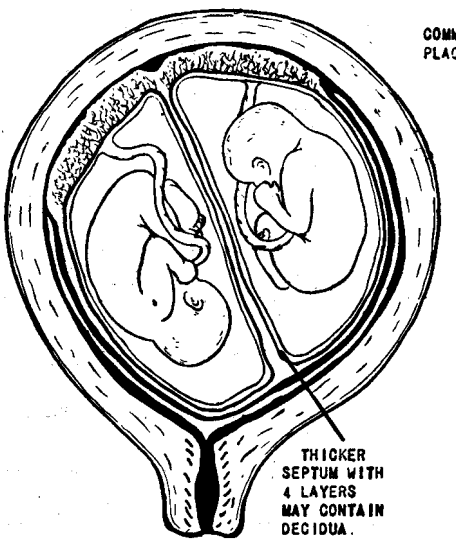
Doctor Smith quoted Dr. E. Potter who reported autopsies of 20 cases of hydrops foetalis in 14 of which erythroblastosis was not the aetiological factor. This condition had been reported in association with toxaemia, which this mother did have, and other chronic maternal diseases such as nephritis and heart disease. This case was of interest in that the second twin acted as a control. Any causative factor transmitted from mother to infant was unlikely. The aetiological factor must have been in the infant's placenta or a mechanical obstruction to the cord. If these twins could be proven to be identical any genetic anomalies would also be excluded.

Hydropic infants usually die soon after delivery. Clinically this baby died from cardiac failure probably with an expanded plasma volume. X'ray showed an enlarged heart with pulmonary oedema and ascites.

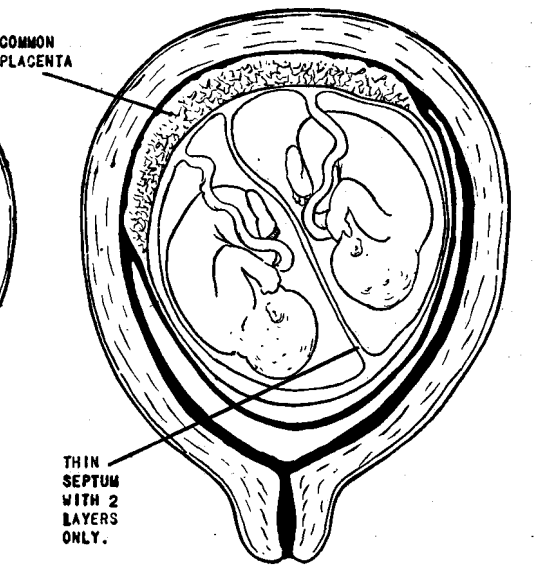
Doctor Field said that a macerated foetus can occur in one of identical twins. It was possible that a hydrops foetalis may be associated with a poor blood supply. A small cord with small vessels may be present.

Doctor Smith thought that it was difficult to explain generalised oedema as a result of obstruction to the cord as the umbilical vein which is the softer structure would be occluded first and not the umbilical arteries.

Doctor Tay described the method of examination of the membranes and placentae in twin pregnancies.



BINOVULAR



UNIOVULAR

BINOVULAR PLACENTAE

1. Two separate placentae.

2. Fusion of the two placentae. The blood vessels from each placenta were separate. The composite placenta had two chorionic sacs and two amniotic sacs, and therefore the septum consisted of 4 layers—2 layers of chorion and 2 layers of amnion. Decidua, derived from the decidua capsularis, may also be present between the layers of membranes.

UNIOVULAR PLACENTA

This was invariably a large single placenta. The blood vessels anastomosed on the surface of the placenta and in the villi. There were 2 amniotic and 1 chorionic sac and the septum consisted of 2 thin layers of amnion. Decidua was never present. Sometimes, due to excessive foetal movements, this septum was incomplete, so that the two cords become entangled subsequently affecting the cord circulation in one or both babies.

Doctor Goon said that our knowledge of placentae was very incomplete and that it was not always possible to differentiate one type of placenta from the other.

Doctor Field suggested that in doubtful cases the retrograde injection of a dye into the vessels would demonstrate the mixing of the vessels.

Doctor Goon agreed that this was an established technique.

Doctor Lumsden suggested that the dye injected into one circulation might come out through the other.

Doctor Smith said that foetal ascites was not a common condition. The one well known cause of hydrops foetalis was erythroblastosis. In this case A.B.O. incompatibility could not be completely excluded because the mother was Group "O" and the babies Group "A." It was difficult to envisage haemolytic disease affecting only one twin. Hydrops associated with erythroblastosis was always found in conjunction with a severe anaemia of 20% haemoglobin or less. In this case the haemoglobin was 159%.

Doctor Seah asked if blood smears were taken from the baby.

Doctor Smith replied that no smears were taken as the haemoglobin was so high.

Doctor Seah commented on a previous case presented as a hydrops foetalis where the haemoglobin was high — 120%, and there was no A.B.O. or rhesus incompatibility. The blood smears taken showed a very high predominence of immature cells.

Doctor Oon asked if the mother had been X'rayed before delivery.

Doctor Smith replied that the mother had been X'rayed but an antenatal diagnosis had not been made.

Professor Sheares said that it had been postulated that low grade hypoxia might result in such a condition.

CASE No. 2. Chinese, 36 years old, Gravida 2. Para 1.

OBSTETRICAL HISTORY:

No family history of twins. First baby delivered 10 years ago—a normal full-term spontaneous delivery.

PRESENT PREGNANCY:

Unbooked case: Maturity unknown. Both babies were delivered in a taxi. Placenta and membranes delivered complete in hospital by midwife but were not examined.

1st Baby: Sex: Female. Weight: 3 pounds 14 ounces, Length: 16 inches, Blood Group: "B."

CLINICAL FEATURES:

1. Generalised oedema and dusky coloured skin.

2. Congenital abnormalities:

   Eyes—Right microphthalmia.
   Left anophthalmia.

   Deformed pinnae both ears.

Conditioned remained poor and baby died on 4th day.

Autopsy Findings: Congenital Heart Disease.

2nd Baby: Sex Female, Weight: 2 pounds 7 ounces, Length: 14½ inches. Blood Group "B."

CLINICAL FEATURES:

Bilateral harelip and cleft palate.

Cyanotic attacks.

Baby died on 4th day.

Autopsy Findings: No additional congenital abnormality.

Cause of Death: Lobar Pneumonia.

Doctor Tay reviewed for the meeting the embryology of the 5th week of development with special reference to the development of the heart and face. Any interference of development at this stage resulted in malformations of the foetus.

Doctor Smith commented that this case demonstrated the results of interference in the 5th week when the face, eyes and heart were developing. In this case there was nothing to suggest the nature of the interference but known causes included virus infections particularly rubella occurring in the first three months of pregnancy. Dietetic deficiencies particularly Vitamin A and irradiation had

also been shown to increase the incidence of congenital anomalies. Many malformed embryos are aborted.

Professor Sheares said that in 40% cases of threatened abortion the foetus is already dead, and of the remaining 60% half could be saved by treatment and the other 30% were borderline with a 50:50 chance of survival.

Doctor Smith in closing the meeting appealed for accurate recording of congenital anomalies, and not merely using the term "multiple abnormalities."

REFERENCES

1. MASON, J. E.: Arch. Dis. Child. Chicago (1952), 24: 214, 1950'
2. POTTER, E.: Path. Fetus and Newborn—Year Book Publishers (1953).
3. WARKANY, J.: Advances in Paediatrics. Vol. II (1952).