

## OBSERVATIONS ON AUTOPSY FINDINGS IN 154 CASES OF STILL-BIRTHS

by

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At Nilratan Sircar Medical College Hospitals, during the period of 1½ years, namely 1-7-57 to 31-12-58, there were 8,912 confinements. Most of these cases were emergency admissions in labour with no antenatal supervision. Patients were of low economic group with malnutrition. The number of still-births was 332. So the incidence of still-birth was 37.25 per 1000 births. A planned systematic study of still-births was undertaken. Macerated babies were excluded from autopsy as disorganised tissues do not give any information. Consent for autopsy was denied in some cases. Thus altogether 154 cases were suitable for autopsy.

The present study is based only on these 154 cases, where autopsy was performed. Systematic naked-eye and histological examination of all the organs was done to find the cause of death in each case.

The findings were: (1) Anoxia in 65 cases, (2) pulmonary infection in 3 cases, (3) birth injury in 40 cases, (4) foetal malformations in 8 cases, (5) syphilis in 4 cases and (6) no

obvious abnormality was found in 34 cases.

In anoxia, congestion was found in all the viscera including liver, spleen, kidneys, heart and meninges. Petechial haemorrhages were found on lung surfaces, heart and along the coronary vessels in all the 65 cases. Thymus showed petechial spots in 13 cases. Haemorrhage was found in adrenal gland beneath the capsule in 2 cases. Liver showed fatty changes in 16 cases of toxæmia, anaemia and antepartum haemorrhage. In 12 cases of accidental haemorrhage, right heart showed engorgement. In the lungs there were perivascular and interstitial haemorrhages in 13 cases. The pulmonary alveoli were dilated with aspirated squames and foreign material in 33 cases. Potential air spaces were dilated with fluid in 11 cases. Kidneys showed tubular degeneration in 20 cases. Anoxia is a mode of death and it is not the cause of death. Anoxia in the foetus may be produced by a variety of causes in the intrauterine life either before or during labour. Placental insufficiency was caused by toxæmia in 28 cases, by anaemia in 8 cases, syphilis in 3 and placenta praevia and accidental haemorrhage in 11 cases. Prolonged labour due to inertia was found in 2 cases and cephalopelvic disproportion in 4 cases and there was one case

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of obstructed labour with ruptured uterus. Delivery was by forceps in 9, breech delivery in 15, version in 2 caesarean section in 7 and spontaneous delivery in 32 cases. Prematurity was found in 69.3% of these babies.

Intracranial haemorrhages were found in 40 cases. Such haemorrhage is due to either trauma or anoxia. Gross haemorrhage in subdural region and at base of the brain are traumatic in origin. Traumatic haemorrhage was found in 23 cases, i.e. 57.5% of intracranial haemorrhages. In this group there were 8 cases of toxæmia, 3 cases of c.p.d. and 2 cases of prolonged labour. The delivery was by forceps in 6, breech extraction in 12, version in 2 and spontaneous in 4.

Anoxia was responsible for subarachnoid haemorrhage in 10 cases and combined intraventricular and subarachnoid in 5 cases. Intense congestion of cerebral veins and oedema of the brain were present in 2 cases. In cases of anoxic haemorrhages, there were 5 cases of toxæmia, 4 antepartum haemorrhage, 1 cephalopelvic disproportion and 4 cases of prolonged labour. The delivery was spontaneous in 11 cases, breech extraction in 4 with one forceps application. In the traumatic group 14 babies were premature and 10 were mature, while in anoxic group only 3 were mature babies and 13 were premature.

Pulmonary infection was found in 3 cases. Polymorphonuclear and mononuclear cells were found near the bronchi, and the alveoli were filled with squames. In all these cases membranes had ruptured prematurely, labour was prolonged in 1 case, prolapse of the cord was found

in 1 case and accidental haemorrhage was found in 1 case.

Congenital malformations were found in 8 cases. There were 5 cases of hydrocephalus, 2 cases of anencephalus and 1 case with micrognathia and synotia. In cases of anencephaly, adrenal glands were extremely small, thymus was enlarged and lungs were hypoplastic. There were 7 cases of multiparae and 1 of primipara in this group. Most of the babies were premature with breech presentation. Until the aetiology of congenital malformations is known, prevention of still-births due to congenital causes is not possible. As still-births due to other causes are being reduced, there is a relative increase due to malformations on percentage basis.

Syphilitic changes were found in 4. The liver and spleen were enlarged. Histological examination showed increase in connective tissue with localised areas of mononuclear cells in the liver. The placenta in these cases was typically large and oedematous. The villi were avascular with diminished intervillous spaces. If these cases had come for antenatal care, anti-syphilitic treatment could have prevented these deaths. The incidence of syphilis as a cause of still-birth is going down.

No abnormality was detected either by naked eye or histological examination of the organs in 34 cases. Mild toxæmia was present in 8 and there was prolapse of the cord in 2, while no clinical abnormality was found in 24 cases. Autopsy can show only the organic changes in the viscera, while transient functional changes leave no evidence for detection. Vascular spasm and sudden deaths do not show any organic

findings. Scrutiny of clinical history to focus on any contributing factor during pregnancy and labour are the only means at our disposal to find any clue to the cause of still-birth.

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