

Amnioscopy in patients with bad obstetric history and high risk pregnancies

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AMNIOSCOPY WAS INTRODUCED as a technique for assessment of foetal prognosis by detecting meconium in the amniotic fluid (Saling, 1962). Meconium is often taken to be a warning sign of impending foetal death (Wood and Pinkerton, 1961; Barham, 1968). Scanty liquor may be associated with placental insufficiency (Gadd, 1966). Since its introduction, amnioscopy had been used mainly in connection with postmaturity and pre-eclampsia (Huntingford et al, 1968; Henry, 1969), but its use in the management of patients with bad obstetric history and high risk pregnancies has not been stressed.

Patients and Methods Technique

Amnioscopy is simple and quick to perform with little discomfort to the patient. With the patient in the lithotomy position and under sterile technique, a vaginal examination is performed. The cervical dilatation is assessed and an amnioscope of suitable size selected (figure 1). The amnioscope with obturator in place is gently inserted into the cervix with the examining finger as a guide. The obturator is removed, the light source attached to the amnioscope and the characteristics of amniotic fluid studied.

Amnioscopy is usually performed after 37 weeks'

gestation and repeated every two or three days until delivery. Serial amnioscopy provides an opportunity to study the natural history of meconium in the amniotic fluid (Barham, 1969).

The value of amnioscopy in patients with bad past obstetric history is well illustrated in the following case summaries:



Fig 1

The 3 amnioscopes of varying sizes with obturators, wool-carrying forceps, and the light source are shown.

Case 1: C.K.T. Gravida 3 with two abortions and no living child. Her expected date of delivery (E.D.D.) was 29.8.70. Pregnancy was complicated by hydramnios in the latter weeks. Serial amniocentesis from 23.7.70 to 18.8.70 revealed clear liquor. In view of the bad obstetric history and hydramnios, low A.R.M. (amniotomy) was done on 19.8.70 but because of poor progress Caesarean section was done on 20.8.70.

Case 2: T.S.E. Gravida 7 but only one child living. In the present pregnancy, she developed mild pre-eclampsia at term; E.D.D. was 13.9.70. Amniocentesis from 29.8.70 to 10.9.70 revealed clear liquor. Low A.R.M. was performed on 11.9.70, followed by vaginal delivery.

Case 3: L.T. All five previous pregnancies ended in disaster. Her E.D.D. was 8.9.70. Serial amniocentesis from 1.9.70 to 11.9.70 revealed clear liquor. Low A.R.M. performed on 12.9.70 was followed by vaginal delivery.

Case 4: L.K.K. Her previous pregnancy ended in intra-uterine death near term. Her present pregnancy was complicated by latent diabetes and mild pre-eclampsia. E.D.D. was 15.10.70. Amniocentesis from 1.10.70 to 5.10.70 showed clear liquor. Low A.R.M. on 6.10.70 was followed by normal delivery three hours later.

Case 5: K.S. All her three previous pregnancies were intra-uterine deaths. This pregnancy was complicated by latent diabetes and hypertension. E.D.D. was 4.11.70. Serial amniocentesis from 17.9.70 to 9.10.70 showed clear liquor. Emergency Caesarean section was performed on 11.10.70 for transverse lie in labour.

Case 6: G.D. She had six previous pregnancies: three were abortions and three were stillborn fetuses. The E.D.D. was estimated to be early November 1970. Amniocentesis from 12.10.70 to 19.10.70 revealed clear liquor but the membranes were accidentally ruptured during amniocentesis on 19.10.70. Caesarean section was performed as disproportion was demonstrated previously at X-ray pelvimetry.

Case 7: S.H.K. She had three previous abortions and only one child alive. E.D.D. was 30.10.70. Foetus was found to be small for dates. Amniocentesis on 16.10.70 and 19.10.70 revealed clear liquor. She had spontaneous vaginal delivery at term.

Case 8: A.M. There were nine previous pregnancies, the last five ending in stillborn fetuses. E.D.D. was estimated to be mid-November 1970. Serial amniocentesis from 28.9.70 to 2.11.70 revealed clear liquor. Labour was induced successfully on 3.11.70.

Case 9: H.B. She had one abortion and one neonatal death, and no live child. Her present pregnancy was complicated by systemic lupus erythematosus and pre-eclampsia. She was uncertain of her dates and E.D.D. was estimated to be around 25.1.71. Amniocentesis from 16.1.71 to 20.1.71 revealed clear liquor of good volume. She had a marked rise in blood pressure and A.R.M. was performed on 22.1.71. However, on account of foetal distress, Caesarean section was carried out.

Case 10: H.A.B. Gravida 4 with one living child and two stillbirths. The E.D.D. was 10.9.70. She was admitted with severe P.E.T. at 37 weeks. At amniocentesis, the cervix was favourable for induction and the liquor clear. Labour was induced and she had a vaginal delivery on 28.8.70.

Case 11: C.C.T. She had one abortion and one stillbirth and no live child. This pregnancy was complicated by diabetes mellitus and mild pre-eclampsia. The E.D.D. was 20.9.70. Amniocentesis on 11.9.70 showed a "ripe cervix" and clear liquor. Low A.R.M. was done followed by vaginal delivery on 13.9.70.

Case 12: P.A. She had two abortions and no live child. Pregnancy was complicated by iron deficiency anaemia. E.D.D. was 19.11.70. Amniocentesis on 16.11.70 revealed clear liquor. Induction of labour was followed by vaginal delivery on 18.11.70.

Case 13: S.G. She had one abortion and one stillborn infant. E.D.D. was 16.10.70. Pregnancy was complicated by latent diabetes. Amniocentesis on 8.9.70 and 10.9.70 revealed scanty liquor. Labour was induced successfully on 11.9.70.

Case 14: Y.M. She had two previous abortions. E.D.D. was 30.12.70. Pregnancy was complicated by mild pre-eclampsia. Amniocentesis on 4.12.70 and 8.12.70 showed clear liquor but on 9.12.70, meconium stained liquor was detected. Low A.R.M. on 9.12.70 was followed by vaginal delivery.

Case 15: A.K. She had two previous intra-uterine deaths; cause was not known. Her present pregnancy was complicated by pre-eclampsia. Serial amniocentesis from 2.12.70 to 7.12.70 showed clear liquor but on 9.12.70, liquor was meconium stained. Low A.R.M. was carried out on 9.12.70. At 7 cm. cervical dilatation, the foetal scalp blood pH was 7.24, and baby was delivered by the ventouse.

Discussion

All 15 patients studied had a bad obstetric history or were high risk cases. They had a total of 52 pregnancies but 44 ended in disaster.

AMNIOSCOPY IN HIGH RISK PREGNANCIES

Cases 4, 5, 11 and 13 had diabetes and pre-eclampsia while Case 9 had systemic lupus and pre-eclampsia. These complications are known to carry a very high foetal wastage. In the remaining cases, no cause was found for their poor past obstetric performance in spite of extensive investigations.

Amnioscopy was performed to monitor the foetal condition in these 15 high risk pregnancies. When meconium or scanty liquor was detected, pregnancy was terminated to avoid intra-uterine death as illustrated in Cases 13, 14 and 15. Another important advantage of amnioscopy was that when amnioscopic findings were normal, it avoided unnecessary or premature intervention but allowed pregnancy to go to term as in Cases 1 to 9. However, it was of no value in Cases 10, 11 and 12 because, in spite of normal amnioscopic findings, pregnancy was terminated for other obstetric indications.

All 15 patients monitored by amnioscopy in this series had a successful outcome with live-born infants.

Summary

The use of amnioscopy for monitoring the foetal condition in patients with bad obstetric history and high risk pregnancies is described. The procedure is simple, safe, quick, and easy to perform and provides a convenient method of assessment of the intra-uterine environment in high risk pregnancies.

Acknowledgement

I would like to thank Professor D. Chan for his encouragement and help in this study.

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