ACUTE HYDRAMNIOS

by

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Hydramnios is frequently defined as an excess of amniotic fluid great enough to cause abnormality in pregnancy and labour. Upper limit of normal amount of fluid is usually taken as 2000 c.c. Rivett defines it as presence of more than 3000 c.c. of fluid. Acute hydramnios is characterized by its sudden appearance and rapidity with which it progresses.

Incidence

Acute hydramnios is a rare condition to encounter in practice, which can be judged by the incidence given in the following table.

	Total No. of deliveries	No. of cases of acute hydramnios	Incidence one in
Mueller	49,793	4	12,448
Macafee	12,021	2	6,010
Present series ..	52,651	7	7,521

Thus it can be seen that incidence varies from 1 in 6010 to 12,448. O'driscoll has analysed literature till 1945 and found 90 cases of acute hydramnios, but has not analysed incidence of this condition from the review. Mueller reviewed literature and added 7 cases to O'driscoll's analysis. By 1952, further 14 cases were added. F. J. Browne mentions in his Antenatal and Postnatal Book that "It is such a rare condition that every case of it should be reported". In the present series there are 7 cases which were come across in 52,651 deliveries from 1957 to 1962 at N. Wadia Maternity Hospital, Bombay, giving an incidence of 1 in 7521 deliveries. Simultaneously there were 171 cases of chronic hydramnios; thus there was one case of acute hydramnios for every 28.5 of chronic cases.

Predisposing Factors

Acute hydramnios develops in any woman who would otherwise develop it slowly, due to additional factor of oversensitivity of muscle to undue stretching especially in presence of an extra-amniotic sac. It is commonly associated with uniovular twins and foetal malformations.

Clinical Features

Symptoms appear with great rapi-

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dity. Rapid increase in the size of the abdomen, sudden intense and increasing pain, respiratory distress, vomiting and restlessness are the chief symptoms.

On examination abdomen appears tense and tender. It is almost impossible to feel foetal parts; foetal heart sounds are not heard because acute hydramnios usually appears before the 24th week when foetal heart is normally also heard with difficulty. A fluid thrill is easily elicited. Within a few days the uterus increases rapidly in height and girth. On vaginal examination the cervix is soft and invariably one or two fingers dilated through which a tense bag of membranes is felt. This is an important sign which is not sufficiently stressed.

Differential Diagnosis

Diagnosis of acute hydramnios offers no difficulty with described symptoms and signs developing in a matter of hours or few days. However, at times, it can be easily mistaken for other conditions like concealed accidental haemorrhage (as in one of the cases in present series), twisted ovarian cyst and sudden haemorrhage in a vesicular mole.

Concealed accidental haemorrhage is differentiated by history of bleeding per vaginam in last trimester, presence of symptoms and signs of toxaemia of pregnancy and increasing shock.

Twisted ovarian cyst can give rise to same symptoms and signs and often definite diagnosis may not be possible. However, history of its presence, acute pain in lower abdomen, tenderness and the presence of a separate mass from uterus would help to a definite diagnosis. But if there is a mass formed by the pregnant uterus and the ovarian cyst lying side by side, it is difficult to arrive at a definite conclusion. If x-ray picture shows that the foetus is pushed to one side and a soft tissue shadow on the other side, diagnosis of an ovarian cyst is arrived at.

Haemorrhage in vesicular mole is another condition difficult to differentiate, unless a mole has been suspected prior to this accident. It is usually diagnosed at laparotomy.

Treatment

Following diagnosis, it requires immediate treatment, as maternal distress is always great and there is an ever-present danger of sudden rupture of the sac with its associated maternal risks. Barry feels that cases of acute hydramnios should not be allowed to run the risk of spontaneous rupture of membranes, and the best method is to do abdominal paracentesis and slowly remove as much fluid as possible.

Treatment still remains a controversial point. There are two alternatives, one is to rupture the membranes from below and allow labour to ensue. This invariably results in foetal loss. The other alternative is to do abdominal paracentesis to relieve patient's distress and allow pregnancy to continue.

Eastman strongly condemns paracentesis. Macafee, too, condemns it and advocates vaginal amniotomy. They emphasize very careful management of the third stage of labour as

post-partum haemorrhage and puerperal sepsis are common complications. Earlier in labour accidental haemorrhage and cord prolapse can complicate the issue. Baird, Barry and Mueller recommend abdominal paracentesis to relieve maternal distress and leave pregnancy least disturbed. Rivett showed highest foetal survival in acute cases by abdominal paracentesis. He advocates the removal of liquor in small quantities just enough to relieve maternal distress. de Snoo reported the use of intra-amniotic injection of saccharin and thus carried pregnancy to term.

In our view, abdominal paracentesis is not a desirable treatment, as in most of these cases of acute hydramnios the cervix is already open one or two fingers and therefore it is doubtful whether pregnancy could be continued with so much dilatation of cervix. Also many cases of acute hydramnios are associated with gross foetal malformation; therefore question of continuation of pregnancy does not arise. X-ray examination at 24 weeks is not likely to diagnose foetal abnormalities. Considering all these points, it is best to allow fluid to escape slowly by vaginal amniotomy. Technique that we employ is to rupture membranes by a probe after inserting two to three fingers in cone shaped manner. Fluid is allowed to pass *very slowly* by keeping the fingers well against the cervix. This precaution is extremely important otherwise there is danger of sudden collapse from rapid fall of intra-abdominal pressure. Sudden decrease of pressure is also likely to cause severe ante-partum and post-partum haemorrhage.

Case I. 14-8-57. Regd. No. 6100.

The patient, 28 weeks pregnant, aged 31, para 5, was admitted with complaints of acute pain in the abdomen and increasing abdominal distention of 3 days' duration. Physical examination revealed the uterus as 34 weeks' size of pregnancy, tense and tender. Foetal parts were felt with great difficulty, while foetal heart sounds were absent. Vaginal examination revealed that cervix was one finger dilated and membranes were tense and bulging. X-ray examination showed twin pregnancy. Diagnosis of acute hydramnios was made. Immediate paracentesis was done and 50 ounces of fluid removed in 5 hours. Two hours later, patient aborted twins, each weighing 600 gms. They did not show any malformations. Post-abortal course was interrupted by pyrexia on the 3rd day, which was controlled by antibiotics. Patient was discharged in good health.

Case II. 18-9-57. Regd. 7172.

The patient, 36 weeks pregnant, aged 25, para III, developed acute severe pain in the abdomen, difficulty in breathing and abdominal distention within a period of 11 hours before admission to this hospital. On examination the uterus reached the xiphisternum. It was markedly tense and tender. Foetal parts were felt with difficulty and foetal heart sounds were doubtful. Patient showed oedema of feet and legs on both the sides. Vaginal examination revealed that cervix was partly effaced and one finger dilated. Diagnosis of acute hydramnios was made. Since patient had respiratory distress, artificial rupture of membranes was done and plenty of liquor allowed to escape. Patient delivered 24 hours later, premature live baby weighing 1530 gms. No complications during or after labour. Mother and baby discharged in good health.

Case III. 5-10-58. Regd. 8325.

The patient, 28 weeks pregnant, aged 26, para IV, was admitted with complaints of severe abdominal pain and distention of 24 hours duration. On examination the uterus was 36 weeks in size and tense and tender on palpation. Foetal parts could not be felt and foetal heart sounds were absent.

Clinical diagnosis of concealed accidental haemorrhage was made and patient was given immediately ¼ gr. morphia intramuscularly. After transference to labour ward, vaginal examination revealed that the cervix was two fingers dilated. The membranes were tense and bulging. Patient aborted, 5 hours later, an anencephalic female baby weighing 1050 gms. There were no complications and mother was discharged in good health.

Case IV. 27-10-58. Regd. No. 9205.

The patient, 28 weeks pregnant, aged 31, para V, was admitted with a history of increasing abdominal distention of 48 hours' duration. On physical examination patient was slightly pale and breathless. Per abdomen she revealed the uterus of 36 weeks' size of pregnancy, tense and tender on palpation. Foetal parts were felt with great difficulty and foetal heart sounds were not heard. Vaginal examination showed cervix two fingers dilated. Diagnosis of acute hydramnios was made. Patient was treated with ¼ gr. morphia intramuscularly and back rest. Patient aborted 12 hours later a female baby weighing 720 gms. with plenty of liquor gushing out. This was followed by mild post-partum haemorrhage which was easily controlled. Mother was discharged in good condition.

Case V. 23-11-60. Regd. No. 8729.

The patient, 20 weeks pregnant, aged 32, para IV, was admitted with symptoms of sudden abdominal distention of 4 days' duration. On examination the uterus was of 24 weeks' size, tense and tender. Foetal heart sounds were absent. X-ray picture showed twin pregnancy. Treatment carried out was abdominal paracentesis and removal of 56 ounces of fluid in 4½ hours. This was followed by labour. First of twins presented by vertex with hand and required internal podalic version, followed by breech extraction. This still-born baby weighed 900 gms. For second of the twins artificial rupture of membranes was done and she aborted a monster weighing 480 gms. This was foetus acardiacus. Following this, patient had mild post-partum haemorrhage controlled by usual treatment. Placenta was of uniovular twin pregnancy. Mother was discharged in good health.

Case VI. 19-5-61. Regd. 3517.

The patient, 40 weeks pregnant, aged 28, para V, was admitted with complaints of breathlessness and abdominal distention of 3 days' duration. On examination the uterus reached the xiphisternum, there was difficulty in feeling the foetal parts and foetal heart sounds were absent. Vaginal examination showed cervix two fingers dilated; membranes were tense and bulging. X-ray showed twin pregnancy. Diagnosis of acute hydramnios was made. Artificial rupture of membranes done and liquor amnii was allowed to escape gradually. Liquor removed was 210 ounces. This was followed by delivery of twins weighing 600 gms. and 480 gms. respectively. They died within 4 hours of prematurity. Placenta was of uniovular twin pregnancy. Mother was discharged in good health.

Case VII. 14-11-62. Regd. No. 9573.

The patient, 20 weeks pregnant, aged 27, para 4, was admitted with complaints of severe abdominal pain and distention of 2 days duration. On examination the uterus was of 28 weeks' size; it was difficult to feel foetal parts and foetal heart sounds were absent. Vaginal examination showed cervix two fingers dilated. X-ray examination showed twin pregnancy. Patient was treated by artificial rupture of membranes with all precautions and liquor was allowed to escape very slowly. Patient aborted, twins weighed 420 gms. and 450 gms. respectively. This was followed by moderate post-partum haemorrhage which was controlled by blood transfusion and usual treatment. Patient was discharged on the fifth day in good condition.

Thus out of seven pregnancies with acute hydramnios, four were uniovular twin pregnancies. Only one baby survived and was discharged in good health. Out of 11 babies, two showed malformations, one was an anencephalic monster the other being foetus acardiacus. Three patients, out of 7 had post-partum haemorrhage and one had puerperal sepsis. There was no maternal mortality.

Summary

(1) Series of seven cases of acute hydramnios is presented with incidence of acute hydramnios 1 in 7521 deliveries or 1 for 28.5 cases of chronic hydramnios.

(2) Stress is laid on signs and symptoms and particularly on the cervix being dilated one or two fingers in this condition.

(3) There were four uniovular twin pregnancies and out of seven pregnancies with acute hydramnios only one baby survived.

(4) Complications like post-partum haemorrhage and puerperal sepsis are common in this condition.

(5) Views regarding line of treatment are given.

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