ECLAMPSIA—A RADICAL APPROACH BY QUICK CAESAREAN SECTION

(Report of 4 Cases)

by

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Eclampsia, a dreaded complication in pregnancy is still associated with a great deal of maternal and fetal loss. Any method of treatment promising better prospect deserves critical consideration. The conventional treatment of eclampsia entails a conservative approach with the use of sedatives, tranquilizers, anticonvulsives and antihypertensives to be followed by induction or stimulation of labour after the fits are controlled. Compared to the huge maternal and fetal loss a couple of decades ago, this regime was followed by a welcome drop of maternal and fetal mortality up to a certain level beyond which a further improvement was not possible. Caesarean section is considered to be an extremely risky procedure and reserved for highly selected cases. Described hereunder are four consecutive cases of eclampsia, inclusive of two moribund cases with pulmonary oedema, treated by caesarean section with extremely reassuring outcome which once again raises the vital question whether such a deviation from the conservative approach is worth while.

CASE 1

Mrs. H. K. aged 22 years, primigravida, was admitted to the Chittaranjan Hospital (Calcutta National Medical College) on February 16, 1970 at 12-15 P.M. as an emergency with amenorrhea 36 weeks, headache for two days and fits (8 to 10) since 2 A.M. Her family physician gave her 15 mg. of morphine sulphate intramuscular 6 hours before admission. She was of average build, comatose, looked pale and cyanosed. She had moderate oedema of her extremities, pulse rate was 130 per minute. temperature 100'8°F and blood pressure 160/110 mm of Hg. There were few moist sounds in the base of her lungs and there was copious albuminuria.

Abdominal examination revealed uterus conforming to the dates, the fetus presenting by vertex, R.O.A. and lying free above the pelvic brim. The feel of the uterus was normal, the fetal heart sounds were 170 per minute, regular.

Pelvic examination revealed an average pelvis and a closed cervix.

A conservative regime with pethidine 50 mg and Sparine 50 mg four hourly was started. Inj. Ampicillin (broad spectrum penicillin) 1 Gm was given intra-mascularly. A dose of Lasix 2 mls (Frusemide group of diuretics) was given intravenously. Oxygen therapy was started. Within the next four hours her fits recurred twice, pulse rate increased to 140 per minute, temperature elevated by 2°F. and the blood pressure came down to 150/110 mm of Hg. The moist sounds were found all over the lungs. Inj. Aminophyllin 0.25 Gm was given intravenously. By next five hours her condition got worse. The fits recurred thrice. She became restless and dyspnoic with stertorous breathing. Pulse rate was 160 per minute, blood pressure 130/110 mm of Hg. and pulmonary oedema worsened. The fetal heart sounds were 182 per minute. Evidently it was considered to be a lost

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case. A desperate chance was taken and a quick lower segment caesarean section was performed under general anaesthesia (sleep dose of Thiopentone Sodium, scoline and gas Oxygen). A male baby weighing 2182 Gms was delivered in asphyxiated state and resuscitated with difficulty. After the operation a great deal of improvement of the patient's condition was noticed. The sedation was maintained with a combination 50 mg of Pethidine and Sparine intramuscularly for 48 hours. The postoperative course was febrile and the temperature was controlled with tetracycline. The diuretic was continued in the postoperative period and the patient made an uneventful recovery. Within 24 hours the lung fields were clear, urinary flow increased and the pulse, temperature and blood pressure were stabilised in 72 hours.

However, the premature baby died on the 3rd day due to respiratory distress syndrome. The patient was discharged from the hospital in good condition after 3 weeks.

Case 2.

Mrs. U.H. aged 18 years. primigravida, was admitted on July 4, 1971 as an emergency with pregnancy at term and six fits at home prior to hospitalisation. The patient was thinly built and stuporose. She had mild pallor with moderate degree of oedema of the legs. Her pulse rate was 100 per minute, the temperature 99°F. and blood pressure 170/115 mm of Hg. The heart sounds were normal but there was some evidence of pulmonary oedema from some scattered moist sounds in the base of the lungs. The urine was loaded with albumin.

Abdominal examination revealed a term size uterus with normal feel and the fetus was presenting by vertex, L.O.A. with the head deeply engaged. The pelvis seemed adequate and the patient was not in labour. She had a conservative therapy with a combination of intramuscular Pethidine 50 mg. Phenargan, 25 mg and Largactil. 25 mg. She also received 2 mls of intravenous Lasix. Within 10 hours she had five more fits in the hospital and her general condition deteriorated The pulse rate varied between 130 to 150 per minute, the blood pressure was 150/100 mm of Hg and pulmonary oedema progressed further. Inj. Deriphylline 2 ml was given intramascularly and oxygen therapy was continued. At 8-30 P.M. (11 hours 30 minutes after admission) her breathing was extremely laboured. She was deeply comatosed and virtually there was no hope for her. The fetal heart sounds were 180 per minute. regular.

It was decided to do a caesarean section and take a desperate chance because in any case the continued conservative therapy could not promise any hope. Under general anaesthesia in the same way as in case 1. a quick lower segment caesarean section was performed at 9-31 P.M. (12 hours 31 minutes after admission). A living male baby weighing 2607 Gms was delivered. After the operation the condition of the patient improved, the pulmonary oedema persisted during the next 12 hours and then gradually subsided. She had repeated sedatives as and when necessary during the next 48 hours after operation. Inj. Lasix 2 ml. intramuscularly was continued for the next 48 hours. There were no fits after the operation. She made an uneventful recovery and was discharged from the hospital in good condition 20 days after the operation. The baby progressed well.

Case 3

Mrs. S.M., aged 20 years, primigravida, was admitted as an emergency on September 7, 1971 with term pregnancy and eclamptic fits. Prior to admission she had four fits since 5 A.M. On admission she had another fit. She was of average build, comatosed and markedly oedematous. Her pulse rate was 140 per minute, temperature 100°F. and blood pressure 190/130 mm of Hg. There was no abnormality in her heart or lungs. She had copious albuminuria.

Abdominal examination revealed a term sized uterus with fetus presenting by vertex, R.O.L., and the head was engaged. Fetal heart sounds were 160 per minute, regular. The uterine contractions were sluggish. The pelvis was adequate, the patient was in labour and the cervix was 2 fingers dilated with intact membranes.

Inj. Pethidine Hydrochlor 100 mg Phenargan 25 mg and Largactil 25 mg was given intramuscularly and a quick lower

uterine segment caesarean section was done at 10-42 A.M. (3 hours 27 minutes after admission). A living male baby weighing 3571 Gms was delivered. In course of five hours pulse rate fell to 120 and the blood pressure was 120/90 mm of Hg and within 48 hours her urinary flow increased considerably. Postoperative sedation was maintained by a combination of Pethidine 50 mg and Sparine 50 mg intramuscularly. She was discharged from the hospital in good condition 2 weeks after the operation. The baby progressed well.

Case 4

Aged 18 years, primigravida, with amenorrhoea of 38 weeks was brought to the hospital from a distance of 20 kilometers on June 13, 1972 at 8-45 A.M. with the history of eclamptic fits during the last 3 hours. She had 15 fits and her physician sent her to the hospital after giving 8 mls of paraldehyde intramuscularly. On the way to the hospital she had another fit. The patient was of average build and deeply comatosed. She had moderate oedema, her pulse rate was 130 per minute, the temperature 99°F. and blood pressure 150/100 mm of Hg. Her heart was normal and there were few rales in the base of her lungs. Urine contained plenty of albumin.

Abdominal examination revealed term sized uterus, fetus presenting by vertex, L.O.A. and the head was not engaged. The fetal heart sounds were 160 per minute, regular.

Inj. Pethidine 50 mg and Sparine 50 mg was given intramuscularly on admission and a quick caesarean section was done within half an hour after admission. A living male baby weighing 2663 Gms was delivered. Immediately after the operation the pulse rate was 132 per minute, the blood pressure 150/100 mm of Hg. The moist sounds were still persisting in the lungs. After two hours the patient was conscious and within the next two hours she had four mild fits. A dose of Pethidine 100 mg, Largactil 25 mg was given intramuscularly and there were no further fits. Inj. Lasix 2 mls was also given. On 3rd day, the patient developed some puerperal psychosis and was treated with antipsychotic drugs. The patient was discharged from the hospital 3 weeks after the operation and at time of discharge her blood pressure was 150/90 mm of Hg and urine was free from albumin. Her mental state was normal and the baby was in good condition.

Comment

The idea of caesarean section in eclampsia is nothing new. In severe pre-eclamptic state one wouldn't hesitate to perform a caesarean section to stave off the onset of convulsions and yet surprisingly once eclampsia supervenes, the operation stands condemned. The reason for this is not difficult to find. Dickmann's (1952) excellent historical resumé of the treatment of eclampsia tells us how MacPherson in 1901 stated in New York Lying-in-Hospital, "when a convulsion occurs let us empty the uterus without delay", and why in 1908 he had reversed his treatment completely due to high maternal mortality (44 per cent) and adopted Stroganoff's conservative method. Stroganoff in 1928 added to his conservative therapy the termination of pregnancy by artificial rupture of the membranes when the fits persisted and could not be controlled by sedation in the antepartum eclamptics. In Great Britain, Eden (1922) showed that caesarean section and accouchment force led to four-fold increase in mortality even in cases labelled as mild. Dickmann advocated caesarean section for cases of cephalopelvic disproportion, severe eclampsia with closed uneffaced cervix. Dewar and Morris (1947) recommended caesarean section after conservative therapy in cases where prompt uterine response to artificial rupture of the membranes was unlikely. Menon (1958) studied large number of cases of eclampsia in south India in 1955 and found maximum mortality—17.5 per cent in antepartum eclamptics. Between 1955-57 he followed a conservative therapy for 8 to 10 hours and in uncon-

trolled cases ruptured the membranes if the cervix was effaced and performed caesarean section under local anaesthesia for uneffaced cervix and thus the maternal mortality was reduced to less than 3 per cent and the fetal mortality was brought down to approximately 25 per cent.

The report of four consecutive cases of eclampsia treated by caesarean section in the present paper with no maternal mortality and only one perinatal fetal loss due to prematurity and respiratory distress syndrome indicates that the operation is not as serious as used to be in the early part of this century. In particular the dramatic recovery of the two moribund cases of eclampsia with progressive pulmonary oedema (Cases 1 & 2) following caesarean section has prompted the author to revive the method of immediate delivery by caesarean section in the light of modern anaesthesia, antibiotics, surgical ancillaries and better understanding of the post-operative physiopathology. Subsequently two more cases (cases 3 & 4) were terminated by quick caesarean section soon after hospitalisation and the outcome was extremely satisfactory. All the four cases were young primigravidae (18-22 years), unbooked and had emergency admissions. In preference to local anaesthesia general anaesthesia was used. General anaesthesia seems advantageous with a sleep dose (double the eye lid drooping dose) of ultrashort acting barbiturate, Thiopentone Sodium, depolarising relaxant, endotracheal intubation, other muscle relaxants or the same depolarising agent and gas oxygen in proper dose remembering the problem of awareness. It cuts down all sensory stimuli, controls fits quickly and helps proper feto-maternal oxygenation under positive pressure and suction. It is a common knowledge that longer the time interval between the onset of convulsions and delivery, the worse the prognosis. Evidently, the prompt emptying of the uterus interrupts the toxaemic influence deleterious in some unknown way to both the mother and the fetus. Greater safety of the caesarean section in recent times is a blessing and early operation when the patient is in good condition seems much safer than delayed operation after unpredictable or failed conservative regime. Early delivery will also benefit the new born.

Having been impressed with the efficacy of early and quick caesarean section in eclampsia, it has been our policy to perform the operation immediately after admission in our unit. A larger series would certainly be more informative. Meanwhile, it would be interesting to see any publication from any centre with this changed attitude to the problem of eclampsia.

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