

THE MODE OF DELIVERY OF PATIENTS WITH GESTOSIS/PRE-ECLAMPSIA. **DOES GESTATION CHANGE THE CARE REQUIRED?**

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The clinical problem of gestosis/pre-eclampsia can occur denovo, or as a superadded problem in a woman with a hydatidiform mole, with chronic renal disease, with essential hypertension or with a multiple pregnancy. It complicates 5-8% of pregnancies in the USA and is the second most common cause of Maternal mortality in the USA (thrombo-embolic disease is the number one cause of maternal mortality).

Where the disease has occurred denovo, without the underlying causes listed above, the management depends on the severity of the process, the results of the tests performed on the mother, the gestation of the pregnancy, and the condition of the baby. The management proposed by the care givers can be

- I) Rest in bed at home or in hospital- there is no statistically proven evidence that this is effective, although if it is in hospital it does allow the repeated assessment of both the maternal and fetal condition if a conservative policy is being pursued. It has been used in many patients with generalized oedema or mild hypertension, hoping the process will decrease or resolve, but rest in hospital is now much less common because of the pressure on beds, with most patients with mild 'disease' being managed at home or in day assessment areas of Obstetric Hospitals.
- II) Use of hypotensive agents to reduce the potential risks to the mother. This care has already been considered in detail by Dr Bill Hague and I will not consider it further. It does pose potential problems to the fetus if the blood pressure is dropped to far and uterine artery blood flow is decreased substantially.
- III) Conservative care- prolonging the pregnancy. This is generally only appropriate where the 'disease' is mild, and the gestation is prior to term. Once term has been reached, there is little place for conservative care, even if the 'disease' is mild, as it can deteriorate or the fetal condition can decline, there is an increased risk of placenta! abruption, and the more appropriate option is to embark on delivery. This is the only treatment which will result in resolution of the problem.

Despite the above statement, however, the evidence is promising that short-term morbidity for the baby may be reduced by a policy of expectant care, and therefore this may be proposed even where the gestosis/pre-eclampsia is moderate or even severe, where an attempt is being made to gain extra gestation when the disease process has occurred very prematurely.

- IV) Induction of labour. This can be performed by artificial rupture of the membranes followed by stimulation of uterine contractions with a syntocinon infusion, or prostaglandin E2 can be used to ripen the cervix and/or stimulate uterine contractions. Where labour is induced, irrespective of the method used, and vaginal delivery is anticipated, continuous cardiotocographic fetal heart rate monitoring is mandatory because of the increased risk of fetal hypoxia which is present in such patients. Careful monitoring of the mother is also required, as the hypertension tends to get worse in labour requiring hypotensive drug therapy ±epidural analgesia, oliguria tends to increase, hyper-reflexia tends to worsen and the need for magnesium sulphate treatment to reduce the likelihood of eclampsia increases, labour tends to be long especially where the cervix is unfavourable at the time of

induction, and often assisted instrumental delivery is required to reduce the duration of the second stage of labour and the need for the patient to push, with its hypertensive effect then being evident. There is evidence that vaginal delivery of very premature babies, in the presence of severe gestosis/pre-eclampsia, is associated with a lower pH in the umbilical artery at delivery, and the use of planned elective Caesarean Section delivery rather than induction and vaginal delivery is proposed by some individuals.

V) Delivery by Caesarean Section. This results in a quick resolution of the problem for the baby, removes any risk of fetal hypoxia induced during labour, reduces the risk of worsening hypertension which commonly occurs in labour, reduces but does not abolish the risk of eclampsia, and generally results in the mother being less oliguric and physically in better condition than after a long labour. Caesarean section delivery is not without risk to the mother however, and in days gone by there were a significant number of maternal deaths in severely pre-eclamptic women delivered by Caesarean section. Where a decision is made to expedite delivery by elective Caesarean section, the role of corticosteroid therapy to reduce the likelihood of respiratory distress and intracranial haemorrhage in the baby needs to be considered if the gestation at delivery is less than 34 weeks, and special care of the maternal haemostatic system is clearly necessary if there is evidence of thrombocytopaenia or HELLP syndrome.

The final decision as to which of these 5 options is appropriate is not always clear, and if the condition deteriorates whilst a conservative policy is being followed, the policy may need to be revised. In the past induction was performed and vaginal delivery anticipated where labour needed to be induced before 32 weeks of gestation, however as the neonatal survival rates are now so high in developed countries, even at delivery gestations as low as 24 weeks, delivery by Caesarean section has become much more common because, if the baby is delivered in poor condition after a long and difficult labour, it is much more likely to have an increased morbidity and mortality in the neonatal period. If it is delivered by Caesarean section, in good condition, neonatal morbidity is less, and survival better at virtually all gestation over 23 weeks. Clearly very premature such babies need to be delivered in Tertiary Referral Obstetric Institutions, where intensive neonatal care is available from the time of delivery and where, under such circumstances, the chance of normal development is highest.

Where the gestosis/pre-eclampsia is complicating previous chronic renal disease or essential hypertension, conservative care is often able to be pursued, unless the maternal and/or fetal condition is clearly deteriorating. This should not be done except with extreme care, as progression of the gestosis/pre-eclampsia, worsening renal function and hypertension, fetal hypoxia and placental abruption are ever present risks of such a policy.

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