HYPERTENSION IN PREGNANCY DUE TO AORTOARTERITIS AND MANAGEMENT OF LABOUR WITH PROSTAGLANDIN A_1 INFUSION

(A Case Report)

by

N. B. RAO
P. N. MHATRE
and
M. S. BHATTACHARYYA

Introduction

A case of pregnancy with chronic hypertension due to aortoarteritis is presented. The failure of medical line of treatment and the successful premature termination of pregnancy with prostaglandin A_1 infusion is highlighted.

Case Report

Mrs. R.A., 24 year old gravida 3 para zero was admitted on 27th November 1984 for 8 months amenorrhoea with severe hypertension. She did not know the date of her last menstrual period. She had 2 previous spontaneous abortions at 2½ months and 5 months gestation, three and two years prior, respectively.

She was detected to be a hypertensive during her first pregnancy. Investigations carried out to find out the etiology revealed a nonfunctioning left kidney with severe arteritis and narrowing of the abdominal aorta and common iliac arteries. In January 1984, after her second spontaneous abortion, the patient underwent surgery during which a left nephrectomy was done and a saphenous vein graft was inserted betwen the right renal artery and right external iliac arteries to bypass the narrowed vessels. She was put on tablets Alphamethyldopa 1.5 gm per day and Hydrochlorthiazide 50 mg per day and was apparently normotensive when she came for follow-up in April 1984.

She first presented in the antenatal O.P.D. with 8 months amenorrhoea and severe hypertension and no specific complaints. On examination, blood pressure was 190/130 mm of mercury. There was no edema feet and urine albumin was absent. The uterus was corresponding to 30 weeks gestation. She had continued to take Alphamethyldopa and Hydrochlorthiazide as prescribed. The patient was admitted and routine investigations carried out were within normal limits. The dose of anti-hypertensives was gradually increased till on 20th December 1984, she was on tablets Alphamethyldopa 2 gms, Dihydrallazine 100 mg, Propranolol 60 mg, Frusemide 80 mg and Clonidine 200 microgram per day. Blood pressure was 160/120 mm of mercury. Non-stress test done on 28th November was reactive but that in 20th December was nonreactive with low variability pattern. Ultrasonography showed a biparietal diameter corresponding to 33 to 34 weeks gestation.

On account of the nonreactive nonstress test and uncontrolled hypertension, a decision was taken to induce labour with prostaglandin A_1 infusion. All oral antihypertensive therapy was stopped and the infusion was given at the rate of 0.5 microgram per kg body weight per minute. There was a fall of blood pressure from 160/120 to 120/90 mm of mercury in four hours. The drip rate was adjusted to maintain the blood pressure at that level. Uterine contractions occurred at the rate of one per ten minutes lasting for about 30 seconds and the foetal heart rate was within normal limits.

Twelve hours after starting the infusion,

From: Dept. of Obstetrics & Gynaecology, K.E.M. Hospital and Seth G.S. Medical College, Parel, Bombay 400 012.

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since the labour was still tardy, it was augmented with 2.5 units of oxytocin in 50 ml of 5% glucose. Five hours after oxytocin, the patient had a normal delivery of a female child weighing 1700 grams and gestational age about 35 to 36 weeks. The baby had an Apgar score of 8 at one minute and was well at the time of discharge 15 days later. The prostaglandin A^1 infusion was gradually tapered off after delivery over a period of 24 hours and simultaneously the oral anti-hypertensive therapy was restarted. The mother and child were well during follow-up one month after delivery.

Discussion

This patient had failed to respond to all forms of oral antihypertensive therapy. A decision to induce labour was taken when there was evidence of fetal jeopardy and it was reasonably mature. Prostaglandin A_1 was chosen for induction because of its dual role of inducing labour as well as a hypotensive agent. The drug has been used in Egypt by Toppozada *et al* (1976) with good results.

Prostaglandins of the A series are synthesised in the kidney and hence are also known as renal prostaglandins. Their hypotensive effect is due to their peripheral vasodilatory property. They are weak uterine stimulants which was evident in this patient as she required augmentation with oxytocin.

Neither the patient nor her baby had any major problem after the use of this drug, but it needs to be used on a large scale before it can be established as a good alternative to the conventional methods of labour induction which have stood the test of time.

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Reference

1. Toppozada, M., El-Damarawy, H. and Kamel, M.: Prostaglandins, 12: 581, 1976.