

A STUDY OF TRANSPLACENTAL HAEMORRHAGE IN ABORTION

by

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SUMMARY

This study of Transplacental Haemorrhage (TPH) in abortion of 6 to 20 weeks gestation was undertaken in the Department of Obstetrics and Gynaecology, Gauhati Medical College during March, 1981 to February, 1982. Venous Blood samples were examined before and after (5-10 minutes, 6 hours and 48 hours) evacuation. Pre evacuation incidence of TPH for spontaneous, M.T.P. and clinical abortions were 17.5% 3% and 20% respectively. Post-operatively the incidences rose to 33.3%, 26% and 40% respectively. In M.T.P. cases incidence of the T.P.H. increased after evacuation irrespective of the methods used for termination. Curettage raised the incidence of T.P.H. Incidence of T.P.H. also increased after injection of ergometrine. Amniocentesis had the risk of T.P.H. in 15% of cases.

The importance of determining T.P.H. lies in the fact that the degree of Rh. sensitisation depends upon the degree of foetal R.B.C. entering maternal circulation. And this Rh. sensitisation may be prevented by administering Rh anti D gamma globulin.

Introduction

Transplacental haemorrhage is a well known phenomenon in normal pregnancy, labour and abortions. Though the amount of T.P.H. in abortion may not be adequate to produce primary immune response in all cases it can evoke a boosting response in a previously sensitised woman.

Material and Methods

A study of T.P.H. in relation to abortion was undertaken in the department

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Cases were selected at random from those coming for M.T.P. and cases admitted for spontaneous or induced abortion. 2 ml. of venous blood was collected and the T.P.H. was detected by acid elution technique of Kheihauer, Barun and Betke (1957) modified by Nierhaus and Betke (1968).

Results and Observations

Two hundred cases were studied for T.P.H. This included 80 cases of spontaneous abortion, 100 cases of M.T.P. and 20 cases of criminal abortion.

TABLE I
Incidence

Type of abortion	No. of cases studied	No. of cases positive before evacuation	For foetal cell after evacuation
M.T.P.	100	3 (3%)	26 (26%)
Criminal	20	4 (20%)	3 (40%)
Total	120	7 (5.8%)	34 (28.3%)

In criminal abortion there was a two fold rise in T.P.H. after evacuation.

Amongst the spontaneous abortion though there is a rise of T.P.H. after evacuation in incomplete type no rise was noticed in complete and missed variety.

No significant difference in T.P.H. amongst different methods was observed.

Before 8 weeks of gestation T.P.H. was not observed, in any type of abortion before evacuation. After evacuation it was 14.20% in induced abortion but nil in spontaneous abortion. In spontaneous and criminal abortion the incidence gradually increased with increasing period of gestation both before and after evacuation. But in M.T.P. cases highest incidence was observed at 9-12 weeks.

The incidence of T.P.H. increased after injection of ergometrin.

In spontaneous abortion no T.P.H. was observed, at 6-8 weeks before or after evacuation. For 9-12 weeks cases, the

degree of T.P.H. remained at 1-3 cells before and after evacuation. In 13-20 weeks cases, degree of T.P.H. before evacuation was 1-3 cells and after evacuation 4-5 cells.

In M.T.P. cases at 6-8 weeks no T.P.H. was observed before termination of pregnancy and from 9 weeks onwards T.P.H. of the degree of 1-3 cells was observed. After termination of pregnancy, degree rose to 1-3 cells for 6-8 weeks cases, 4-5 cells for 9-12 weeks cases and 6-10 cells for 10-20 weeks cases.

In criminal abortion degree of T.P.H. remained at 1-3 cells before evacuation, but it rose to 4-5 cells for 9-12 weeks cases and 6-10 cells for 13-20 weeks cases.

Degree of T.P.H. remained at 1-3 cells before termination of pregnancy. It rose to 4-5 cells for S.E. and D & C and 6-10 cells for abdominal hysterotomy and intra-amniotic hypertonic saline.

There was an increase of T.P.H. in

TABLE II
Incidence of T.P.H. in M.T.P. Cases

Method of termination	No of cases studied	No. of cases preoperative	Positive for foetal cell post operative
S.E.	20	1 (5%)	4 (20%)
S.E. & C.	20	—	6 (30%)
D & C	20	—	6 (30%)
Abdominal hysterotomy	20	1 (5%)	5 (25%)
IANS	20	1 (5%)	6 (30%)
Total	100	3 (3%)	26 (26%)

both spontaneous and criminal abortion, after D & C from 1-3 to 4-5 cells and 6-10 cells respectively, but there was no rise after oxytocin drip.

Discussion

The incidence of T.P.H. in spontaneous abortion was 17.5% and 33.3% before and after evacuation. This is similar to the figures of Katz (1969), but the figures reported by Mathews and Mathews (1969) Lee *et al* (1969) and Bhatt *et al* (1980) were low.

In this series the incidence of T.P.H. in incomplete abortion is higher than in complete abortion. This was also found by Knox (1961) Ghose *et al* (1968) (1969) Katz (1969) Walsh *et al* (1970) Jadav *et al* (1979) and Ramanan *et al* (1980).

T.P.H. in Induced Abortion

As regards T.P.H. in different methods of termination of pregnancy no significant difference was observed. Murray *et al* (1970) and Ramanan *et al* (1980) were also of similar opinion.

Dilatation and Curettage carries an incidence of 30%. Similar results were observed by Mathews and Mathews (1969) and Walsh *et al* (1970). The incidence of T.P.H. in abdominal hysterotomy was 25% and in intra-amniotic hypertonic saline was 30% which were similar to the findings of Bakshi *et al* (1978) Walsh *et al* (1970), Murray *et al* (1970) observed lower incidence in hypertonic saline infusion. Incidence of T.P.H. was observed to be 15% after amniocentesis which was also observed by Kuble *et al* (1966) Woo *et al* (1967).

The incidence of T.P.H. also increased after injecting oxytocics. Bokshi *et al* (1978) found similar results while Lee *et al* (1969) found no such relation.

The increasing incidence of T.P.H. with

advancing period of gestation, as observed in the present series was also observed by Lee *et al* (1969) Mathews and Mathews (1969) Voigt *et al* (1969), Bakshi *et al* (1978) Ramanan *et al* (1980).

Conclusion

From the present study it can be concluded that there is a risk of T.P.H. in spontaneous abortion as well as in M.T.P. Routine Rh. grouping of patients having spontaneous abortion or seeking M.T.P. is a must. Rh. anti D protection is to be given to Rh. negative women undergoing spontaneous abortion or M.T.P.

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From the present study it can be concluded that there is a risk of T.P.H. in spontaneous abortion as well as in M.T.P. The incidence of T.P.H. in spontaneous abortion is 1.5% and in M.T.P. it is 1.5%.

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The incidence of T.P.H. in spontaneous abortion was 1.5% and in M.T.P. it was 1.5%. This is similar to the findings of Koss (1969), but the figures reported by Mathews and Mathews (1969), Lee et al (1970) and Hart et al (1969) were low.

In this study the incidence of T.P.H. in spontaneous abortion is higher than in complete abortion. This was also found by Knox (1961), Gross et al (1968) (1969), Koss (1969), Walsh et al (1970), Jalar et al (1973) and Ramanan et al (1980).

T.P.H. is defined as abortion. A variety of T.P.H. is different methods of termination of pregnancy by the different methods was observed. Murray et al (1970) and Jalar et al (1973) were also of similar opinion.

Mathews and Mathews (1969) reported an incidence of 30% T.P.H. in spontaneous abortion. This is a higher incidence than reported by Walsh et al (1970). The incidence of T.P.H. in spontaneous abortion was 1.5% and in M.T.P. it was 1.5%. This is similar to the findings of Bhatia et al (1976) which was 1.5% and 1.5% respectively. Murray et al (1970) also reported an incidence of T.P.H. in spontaneous abortion of 1.5% which was similar to the findings of Bhatia et al (1976) which was 1.5% and 1.5% respectively.

The incidence of T.P.H. also increased after induced abortion. Bhatia et al (1976) found similar results while Lee et al (1970) found no such relation. The increasing incidence of T.P.H. with