

COAGULATION DEFECTS FOLLOWING TERMINATION OF
MIDTRIMESTER PREGNANCY BY INTRA-AMNIOTIC
PROSTAGLANDIN

(A Case Report)

by

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After implementation of 'Abortion Act', the Prostaglandins are now mostly preferred as a procedure of midtrimester abortion as a safer method as these have got few complications. Coagulation defect which is much more common following intra-amniotic saline infusion is rarely met with after prostaglandin administration.

The case which is being presented here, however, showed a significant variation of coagulation parameters after instillation of intra-amniotic PGF_{2α}.

CASE REPORT

Miss C. C., aged 19 years, unmarried woman 20 weeks pregnancy was admitted in S.S.K.M. Hospital, Calcutta on 12-7-76 for termination of pregnancy.

General Examination: Build and nutrition—average. Pallor +, Hb 10.5 gm%. B.P. 110/80 mm of Hg. Pulse — 80/min. Height of uterus — 20 wks. of pregnancy.

No other systemic diseases were noted that might predispose to any abnormality in the coagulation of blood.

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Intra-amniotic prostaglandin (15 methyl PGF_{2α}) 2.5 mgm was instilled on 15-7-76 at 1-20 P.M. The uterine contraction started within 6 hours of instillation. Time taken for expulsion of foetus and placenta was 23 hours.

There was profuse haemorrhage immediately after expulsion of products of conception. As the bleeding was not controlled by all resuscitative measures like Inj. Ergometrine, Inj. Morphine Sulph., I.V. Syntocinon drip, and blood transfusion etc., exploration was done under general anaesthesia. Nothing was found inside the uterus and as blood was coming from the uterine cavity, intrauterine packing was done. Clot observation test was performed but blood did not clot even after 20 minutes.

Blood was sent for study of coagulation parameters, the results of which were as follows:

Platelet count—40,000/cmm. Prothrombin time—40 seconds. K.C.C.T.—88 seconds. PRP—15 seconds. PPP—120 seconds. Fibrinogen—88 mgm%.

After intrauterine packing, bleeding was, however, controlled. The pack was removed after 48 hours. No active bleeding was found after removal of uterine pack. Six units of blood was transfused. One bottle of plasma and 16 bottles of fluid were also infused.

After 72 hours of abortion same coagulation parameters were studied and they were found to have reverted to normal. The patient was discharged on 9th day after abortion.

Discussion

It seems from the literature that as

opposed to saline induced abortion which initiates disseminated intravascular coagulation (Stander *et al*, 1971) prostaglandin exerts little effect on the factors responsible for coagulation. The alteration of coagulation parameters was not significantly noted by Brenner *et al* (1973) with prostaglandin. Phillips *et al* (1974), however, suggested that many coagulation factors e.g. platelets, fibrinogen, factor V and VIII all increased significantly after instillation of prostaglandin. The same observation was noted by Dillon *et al* (1974). On the other hand, Badraoui *et al* (1973 a e b), however, found that prostaglandin administration induced a transient intravascular coagulation when used to induce abortion.

The case reported, showed a significant variation of coagulation parameters during abortion after intra-amniotic instillation of PGF_{2α}. There was marked diminution of platelet count, prolonged prothrombin time, prolonged kaolincephalin clotting time, increased activity of platelet factor 3 and decrease of plasma fibrinogen level. The results strongly suggest that there was activation of blood coagulation system and mopping of platelets, fibrinogen, etc. from general circulation.

It seems likely that intractable haemorrhage in the case presented was due to the liberation of tissue thromboplastin from placental site and increased activity

of platelets leading to deficiency of coagulation factors.

Though prostaglandin is considered as an efficient abortifacient and much safer than hypertonic saline, its effect on coagulation millieu is to be evaluated carefully.

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References

1. Badraoui, M.H.H., Bonner, J., Hillier, K. and Embrey, M.P.: (a) Brit. Med. J. 1: 19, 1973. (b) Brit. Med. J. 4: 375, 1973.
2. Brenner, E. W., Fishburn, J. I., Mcmillan, C. W., Johnson, A. M. and Hendricks, C. H.: Am. J. Obst. & Gynec. 117: 1060, 1973.
3. Dillon, T. F., Phillips, L. L., Risk, A.: Horiguchi, T., Mohajer-Shojai, E. and Mootabar, H.: Am. J. Obst. & Gynec. 118: 689, 1974.
4. Phillips, L. L., Mohajer-Shojai, E. and Dillon, T. F.: Am. J. Obst. & Gynec. 119: 577, 1974.
5. Stander, R. W., Flessa, H. C., Glueck, H. I. and Kisker, C. T.: Obst. & Gynec. 37: 660, 1971.