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Role of Carboprost in Post Partum Haemorrhage

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Abstract: *Prostaglandins are used regularly in the labor for priming of cervix and labor in control of Post Partum Hemorrhage. At times the parental prostaglandins are having fatal complications like Sub endocardial Ischemia and myocardial Infarction. We report 25yrs old female $G_2P_1L_1$ had normal vaginal delivery and developed P.P.H. Injection carboprost (PGE_2) was given, immediately we noticed diffuse sub endocardial ischemic changes & shock. They reverted that with the conservative treatment.*
Key Words: *Prostaglandins, post partum Hemorrhage, Carboprost.*

I. Introduction

Prostaglandins are a group of physiologically active lipid compounds .Prostaglandin have found in almost every tissue in humans .They are derived enzymatically from fatty acids. Prostaglandins are derivatives of **prostanoic acid** with the property of acting as **local hormones.** There are currently ten known prostaglandin receptors on various cell types. Prostaglandin causes constriction/dilation in vascular smooth muscles, induces labor, causes aggregation /disaggregation of platelets.

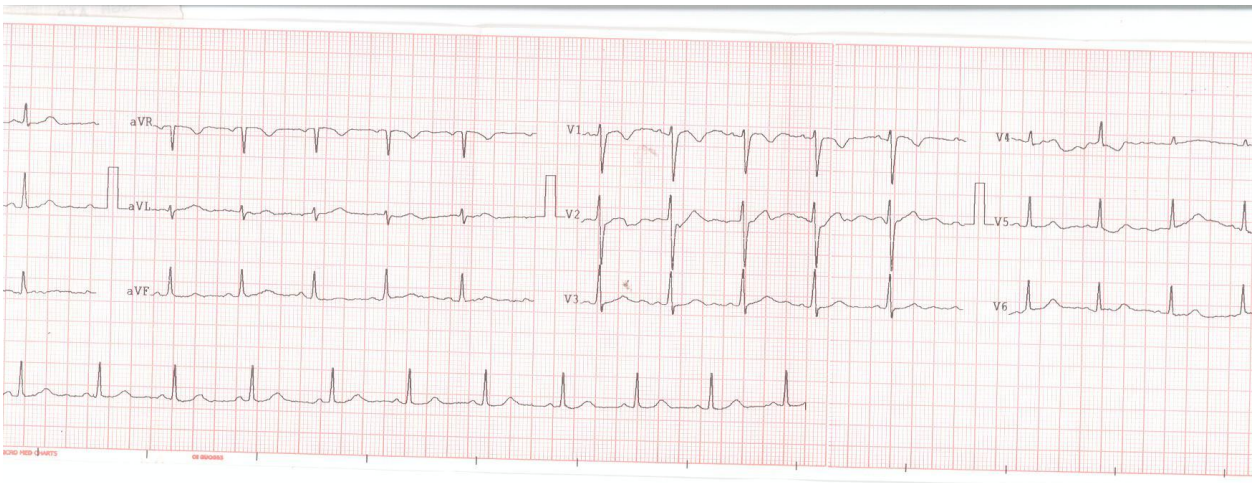
Type	Receptor	Receptor type	Function
PGI_2	IP	G_s	• vasodilation • inhibit platelet aggregation • bronchodilation
PGE_2	EP_1	G_q	• bronchoconstriction • GI tract smooth muscle contraction
	EP_2	G_s	• bronchodilation • GI tract smooth muscle relaxation • vasodilation
	EP_3	G_i	• ↓ gastric acid secretion • ↑ gastric mucus secretion • uterus contraction (when pregnant) • GI tract smooth muscle contraction • lipolysis inhibition • ↑ autonomic neurotransmitters • ↑ platelet response to their agonists and ↑ atherothrombosis in vivo
	Unspecified		• hyperalgesia • pyrogenic
$PGF_{2\alpha}$	FP	G_q	• uterus contraction • bronchoconstriction

II. Casereport

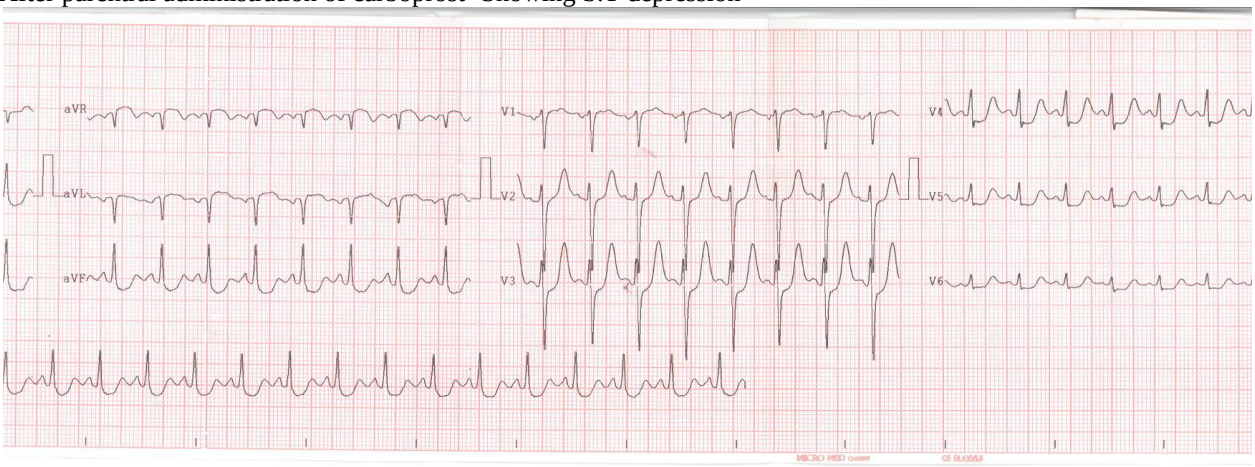
The patient name Mrs. Nagalakshmi aged about 25yrs .$G_2P_1L_1$ admitted with full term. She had no risk factors except anemia (8.4gms) antenatally, routine investigations, ECG and X-ray are in normal limits. She had normal vaginal delivery, and she developed immediate Post Partum Hemorrhage, tab.Zytotec 200mg was given per rectally but the bleeding was not controlled .Then injection carboprost was given IM. Immediately She developd tingling sensation all over the body. Pulse was feeble, B.P was not recordable. Then she was treated with Haemocele 1.5 simultaneously dopamine was started in incremental dose. Routine ECG was taken, it shown ST depression in inferior and chest leads .Treated conservatively, blood 1 ® was transfused .The patient was recovered, pulse, B.P became normal after 1-2 hours.

ECG reports

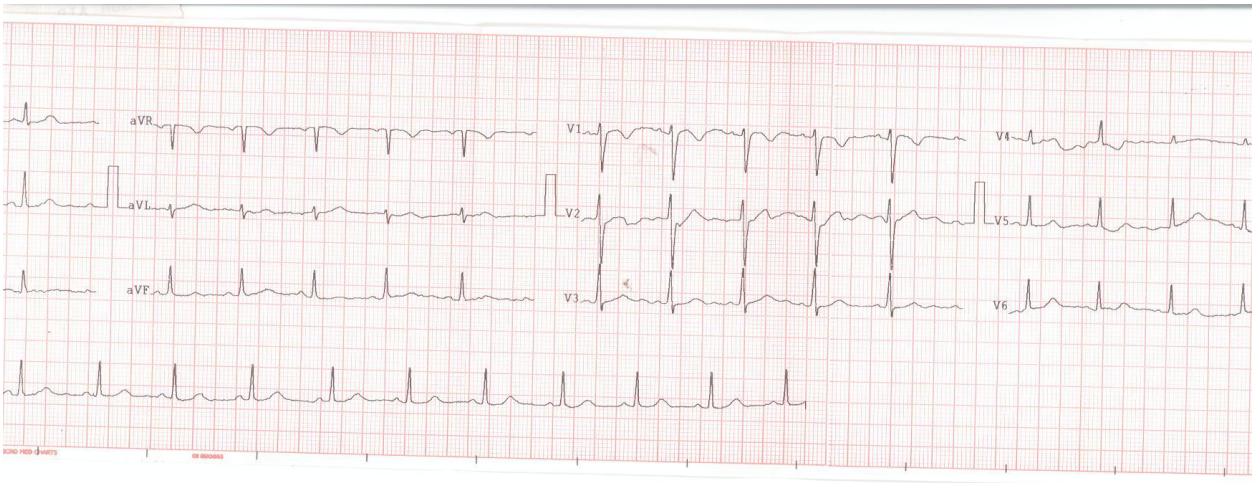
Antenatal ECG Report



After parentral administration of carboprost -Showing S.T depression



After the treatment



III. Discussion

Post Partum Haemorrhage is still one of the causes of maternal mortality. Postpartum hemorrhage (PPH) is an obstetrical emergency that can follow vaginal or cesarean delivery. Uterine atony is responsible for most cases and can be managed with uterine massage in conjunction with oxytocin, prostaglandins .Prostaglandins are mainly used for Post Partum Haemorrhage, when other measures failed to stop bleeding prevention preventively, as second time of treatment we can use the prostaglandins.

Injection carboprost (1ml) was used to treat the Post Partum Haemorrhage, caused by uterine atony, not controlled by others methods. Carboprost is a man-made oxytocic medication that mimics the action of a

naturally occurring chemical called prostaglandin F2 alpha.It is supplied with salt derivative tromethamine in one ml ampoule, containing a 250mg per 1ml solution of the active drug carboprost tromithomine also stimulates the myocardial contractions, the resultant myometrial contractions provide hemostasis at the site of placentation. At times carboprost produces severe side effects like endocardial ischemia at times myocardial infarction, postnatally 2D echo was done ,it reveals mild TR &MR with good RV,LV function normal valves , no RWMA .

IV. Conclusion:

In this case of severe post partum haemorrage, complicated by the shock and sub endocardial ischemia which is developed by the inj.Carboprost. It is suggested patient should have proper screening antenatally.

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