

# MANGEMENT OF THIRD STAGE COMPLICATIONS IN LABOUR WITH CARBOPROST AND METHERGIN

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## SUMMARY

This study was undertaken to compare the use of Prostaglandins and Methergin in the Prophylaxis of Postpartum haemorrhage. A total of hundred normal delivery cases were studied, after including high risk factors. 50 patients were given Injection Methergin (Methyl Ergometrine) and 50 were given Injection Carboprost (15-S-15-Me PGF<sub>2α</sub>) after the delivery of placenta. The total blood loss was compared. No significant difference was found in the amount of blood loss in both cases. 10 cases of actual atonic PPH were given prostaglandins with good result. It was concluded that Injection Prostaglandin has no advantage, being so costly, over injection Methergin which is cheap and easily available for routine use in preventing PPH. However Prostaglandins have a definite role to play in active management of atonic PPH.

## Introduction

Postpartum haemorrhage (PPH) is potentially a life threatening complication of the third stage of labour, and is still one of the important causes of maternal mortality inspite of all the advances made in recent years. The incidence of PPH is from 3% to 8% of all deliveries. Methergin and Syntocinon (Oxytocin) have been the backbone of the treatment of PPH, but in the last few years, prostaglandins have gained in popularity in effectively controlling haemorrhage.

Prostaglandins are unique in their property of stimulating the myometrium at all stages of pregnancy. The Synthetic analogue 15-S-15 Me PGF<sub>2α</sub> is not inactivated by the enzyme 15-dehydrogenase, hence it has a more prolonged, and potent action, than the original compound. There have been no studies on the prophylactic use of prostaglandins in preventing atonic PPH, with this in mind it was decided to conduct a comparative study showing the relative efficacy of Carboprost and Methergin.

## Material and Methods

A total of 100 cases admitted in Safdarjung Hospital, New Delhi were

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studied. All these were healthy gravidae in which all high risk factors were ruled out. 50 cases were managed by giving 0.5 mg Methergin intramuscularly after the delivery of the placenta, while 50 cases were given 0.25 mg Carboprost intramuscularly after the delivery of the placenta. Another 10 cases of actual atonic PPH (in which local traumatic causes of PPH were ruled out) were managed by giving 0.25 mg Carboprost intramuscularly as second line of treatment.

In these 10 cases injection Methergin and Syntocinon drip were given for initial management of PPH. When the patient did not respond to these, then carboprost was given. The total blood loss was measured.

**Observations and Results**

In the 100 cases (50 each treated with Methergin and Carboprost) no appreciable difference was found in the amount of blood loss. The average blood loss was 300cc with Carboprost and 350cc with Methergin. There was no episode of PPH in this series. In the 10 cases of primary atonic PPH managed with Carboprost, the average blood loss was 300cc. None of these patients required blood transfusion and none of them went into shock. In all these cases, the uterus responded dramatically by contracting, thus effectively controlling the haemorrhage. No side effects like vomiting or diarrhoea were observed by this small dose.

**Conclusion**

This study shows that prostaglandins which are very expensive, have an advantage over methergin which is cheap and easily available, in routine prevention of PPH. However when a patient is actually having PPH, it is recommended that prostaglandins be used as the first line of treatment in controlling PPH to prevent blood loss and prevent shock. Valdegh and Cowburn (1976) found best results by direct injection into the cervix of 1 mg PG F<sub>2α</sub> in treating atonic PPH. Thompson and associates (1981) Hayashi and Cowburn (1981) used intramuscular injection of 0.25 mg 15-S-15-MePG F<sub>2α</sub> in treating atonic PPH. Ingh (1984) presents the generally favourable experience of several obstetricians who have used prostaglandins in an attempt to control PPH.

There are only a few series reported at present. However with proper informed consent, the use of these compounds as a last resort prior to hypogastric artery ligation, hysterectomy, or both, seems justified.

**References**

1. Ingh, H.M. *Brit. Obstet. Gynaec. J.* 1984, 91, 123-125.
2. Ingh, H.M. *Obstet. & Gynaec. J.* 1984, 91, 126-127.
3. Valdegh, H., Yoshida, T., Toga, N., Takahashi, T. *Obstet. Gynaec. J.* 1976, 83, 123-125.
4. Thompson, M. et al. *Obstet. & Gynaec. J.* 1981, 88, 123-125.