

# A SINGLE BLIND RANDOMIZED TRIAL OF BROMOCRYPTINE IN INHIBITING PUERPERAL LACTATION

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## SUMMARY

The effectiveness of oral bromocryptine was compared to single intramuscular injection of Oestradiol/testosterone ester combination in a single blind randomized study in 48 cases for inhibiting lactation. Bromocryptine was more effective than oestradiol/testosterone combination in preventing milk flow. Neither group showed significant side effects. Postpartum prolactin suppression was more intense with bromocryptine.

## INTRODUCTION

Bromocryptine, a potent dopamine agonist has proved an effective suppressor of lactation. It offers an alternative to steroid compounds which have possible hepatotoxic and thrombogenic effects. The present study was undertaken to compare efficacy, safety and side effects of bromocryptine versus oestradiol/testosterone ester.

## MATERIAL AND METHOD

The present study conducted at Chittaranjan Seva Sadan Hospital, Calcutta and

S.S.K.M.Hospital and I.P.G.M.E.R. Calcutta comprised of 48 cases only. Patients delivering, fresh stillborn or extreme premature infants formed the study protocol.

A full history and physical examination was carried out. Patients with abnormal physical findings and or laboratory reports were not included in the trial.

The laboratory tests carried out were haemoglobin, bleeding time and coagulation time, blood sugar (post prandial), blood urea, liver function tests and serum prolactin before instituting the trial. The tests were repeated on 7th and 28th day. In the trial 28 cases received bromocryptine orally in the dose of 5

mg three times daily for 5 days and 20 patients received 3 ml single intramuscular injection of Oestradiol/testosterone ester.

During hospital stay, patients were asked about relief of symptoms like pain and heaviness in breasts, milk flow or any untoward symptoms. Blood pressure, condition of breasts and uterine involution were checked twice daily. The patients after being discharged were finally seen four weeks later for final assessment of efficacy.

### OBSERVATION

The mean age of the participants was 24 years with standard deviation (S.D.) 1.95, mean parity 2.4 (S.D.1.2) mean weight 52.3 kg (S.D. 1.13) and mean height 151.2 cms.(S.D.5.76).

days observation period.

**TABLE II**  
showing the mean serum prolactin profile in ng/ml.

	Bromocryptine Group	Oestradiol / testosterone Group
Before starting Therapy	78.2	77.96
On 7th day	23.4	31.6
On 28th day	17.6	22.8

### DISCUSSION

High circulating levels of prolactin (PRL) in the early puerperium and its subsequent spurts during suckling is mainly responsible for initiation and maintenance of

**TABLE I**  
showing the overall response on day 28

Response	Bromocryptine Group		Oestradiol / testosterone Group	
	To observer	To patient	To observer	To patient
Good	26	23	15	14
Moderate	1	3	2	3
Poor	1	1	2	2
Nil	-	1	1	1

Physical findings and blood biochemistry during the observation period did not show any significant deviations from values expected in postpartum period excepting that 15% of bromocryptine and 40% of steroids recipients showed a decrease in systolic blood pressure by 10-15 mm during the 28

lactation (Roll and et al 1975, Bonner et al 1975).

The control of PRL secretion is still not fully understood. It is primarily regulated by the hypothalamus which releases neurotransmitter identified as dopamine. It reaches

the anterior pituitary via the portal system of vessels to inhibit the release of PRL. Thus the hypothalamus through the prolactin inhibiting factor controls the secretion of PRL.

Bromocryptine, a potent dopamine agonist suppresses the basal and stimulated secretions of PRL from pituitary. This is presumably how lactation is suppressed. Indeed suppression of PRL secretion by bromocryptine was quite marked when compared with steroids and bromocryptine has been found to be distinctly superior to steroids in inhibiting lactation.

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