USE OF BROMOCRIPTINE IN THE SUPPRESSION OF LACTATION AND MASTISTIS

by

MOHINI A. GARUD, M.D., F.R.C.O.G., M.I.A.C.
VIMAL PARIKH, M.D., F.I.C.S.
and
KUMKUM AGGARWAL, M.B.,B.S.

Introduction

In our country where breast feeding is widely practised and encouraged because of socio-economic reasons, there exists a few groups of patients who require effective measures for suppression of lactation.

The last decade has led to the identification of Prolactin as the critical hormone required for successful lactation. Its basal serum levels range from 3.9 to 17.4 ng/milimetre. Elevated level appears first in pregnancy at 8 weeks of gestation, then increase steadily to term when they reach a mean value of 200 ng/ml. Why lactation does not occur in pregnancy despite much elevated levels of Prolactin is controversial. It is believed that increased ovarian and placental steroids inhibits the secretory activity of the breast by blocking the peripheral action of human prolactin and human placental lactogen on the breast.

Immediately following delivery, serum prolactin levels remain elevated above non-pregnant basal levels and are markedly increased by sucking and are responsible for lactation.

Material and Methods

We have worked on this clinical problem of suppression of lactation, in the last 12 months, in one of the teaching hospitals of South Bombay—Cama & Albless Hospitals—and are presenting our results.

An open trial was carried out, where we tried to suppress post partum lactation with Bromocriptine, known for its specific inhibitory action on prolactin secretion.

Thirty female patients, ages 16-32, with post partum galactorrhoea and congestion of the breasts, were studied. Twenty patients selected for suppression of lactation included 12 who had full term still births, 6 with premature still births and 2 who underwent mid trimester abortions.

Ten patients who were studied for relief of congestion included 4 with puerperal mastitis, 4 with chronic mastitis, which included patients in whom lactation had been incompletely suppressed following the last delivery, and 2 with acute mastitic.

Dosage Schedule

Bromocriptine was administered to patients for suppression of lactation in the dose of 5 mg/day in 2 divided doses. Only 2 patients required a higher dose. of 7.5 mg/day because lactation failed to be suppressed with the lower dosage. As compared with our Western counterparts, Bromocriptine required by Indian women is in lower doses. Since the dose is weight related, this is easily explainable.

Department of Obstetrics and Gynaecology, Cama and Albless Hospital, Mahapalika Marg, Bombay-1.

Accepted for publication on 12-5-83.

Duration of Treatment

The tablets were continued for 7 days in cases where suppression of lactation was required. Ocassionally we had to administer the drug for a longer period of 10-14 days.

Initiation of Treatment

Patients with full term still births included 9 primiparas in whom treatment was started 0-72 hours after delivery and continued for 7-14 days. Only in 1 case was treatment started on the 11th day following delivery. This was a case of Clinestrol failure. (See Table I).

TABLE II
Relief of Congestion in Cases of Mastitis

	—	No. of cases
Puerperal Mastitis	2-9 days	4
Chronic Mastitis	4-6 days	4
Acute Mastitis	Immediately till 14 days after delivery	2
		10

TABLE I
Dosage and Duration of Treatment for Suppression of Lactation

	No. of cases	Treatment initiated in	No. of days
Primipera:	8	0-72 hours	7-14
	1	On 11th day (Clinestrol failure)	5
Mid-Trimester Termination:	2	0-24 hours	5
Multipara:	9	0-24 hours	3-14

Nine multiparas were treated. Here treatment was started immediately after delivery to 24 hours after delivery and continued for 3-14 days. Patients who had premature still births or undergone mid-trimester abortions, included 9 primiparas in whom treatment was started 0-72 hours following delivery or abortion, and 2 multiparas in whom treatment was initiated immediately following delivery to 32 hours after delivery. Both these groups of patients were treated for 7 days.

Patients with Mastitis Treated with Bromocriptine

Patients treated for relief of congestion included 4 with puerperal mastitis, where treatment was initiated 2-9 days. Four patients with chronic mastitis were treated for 4 to 6 days and 2 patients with acute mastitis were treated for immediately after delivery till 14 days after delivery. It was noted that in this group of patients—for relief of congestion, Bromocriptine, when given in the dose of 5 mg/day—the same dose that was used for suppression of lactation, but, the duration of treatment required for a much shorter period of time, varying from 2-6 days. Occasionally even smaller doses of just 2.5 to 5 mg. of Bromocriptine were sufficient to relieve the pain of milk let down. These patients could resume lactation after a short period after the pain was relieved.

An exception were 2 patients with acute mastitis with a history of previous breast abscess which had been incided twice. She needed a higher dose of 7.5 mg/day for 14 days for relief of her secretion and congestion.

In puerperal mastitis, the drug, when given for short period of time, i.e. 2 days, helped significantly to relieve the exces-

sive congestion without hampering milk secretion. One tablet at bedtime is very helpful since the levels of Bromocriptine increases during sleep.

Serum Prolactin levels were not done since this work has already been done by other workers. It was presumed that prolactin levels were raised since there was obvious galactorrhoea.

Regular clinical examination of the breasts for congestion and galactorrhoea was however made and the findings recorded as shown in Table III.

The parameters studied included mammary secretion and mammary congestion. The daily findings of breast secretion were scored as 0, 1, 2, 3, 0 signifying absent secretion, (1) slight, (2) moderate and (3) profuse secretions.

The treatment was continued till the score for mammary secretion and for mammary congestion came to 0.

Of particular interest in this series were a couple of patients. The first, an 18 year old unmarried primipara who delivered twins which were given in adoption. Here Bromocriptine succeeded where routinely used clinestrol—an oestrogen preparation—had failed. Bromocriptine was started on the 11th day after delivery when breast secretion and congestion persisted despite the routine dose of Clinestrol. Her symptoms were relieved with 5 mg of Bromocriptine given per day for 10 days.

The second was a 21 year old II gravida who delivered a full term baby by caesarean section. She developed fever on the 9th post-operative day. On complete examination no other attributable cause was found except for marked breast congestion. She was put on Bromocriptine in the dose of 2.5 mg/day and was afebrile within 2 days of treatment.

Discussion

The results obtained in the trial were encouraging, the breast congestion being completely relieved and the mild secretion markedly reduced, though slight secretion persisted in occasional patients. This was acceptable to them.

Furthermore, except for a couple of patients who complained of nausea and vomiting, none of the patients had any side-effects. One patient had stuffiness of none and a feeling of suffocation 6-8 hours after taking the tablet.

With oestrogen preparations, although symptomatic relief is obtained, serum prolactin levels remain elevated.

Bromocriptine, on the other hand, succeeds is relieving the symptoms as well as in lowering serum prolactin levels to below 10 ng/ml. It further encourages the return of menstrual periods more rapidly than other drugs.

One field in which we are studying further the effect of Bromocriptine is its use in the suppression of lactation in patients who undergo midtrimester abortions. We have already tried it in 2 such patients. Here prolactin levels drop soon after abortion and have ranged between 37-80 ng/ml.

In our country, Bromocriptine may find a new indication for its use in the suppression of lactation following 2nd trimester abortions. Many of these patients come to us in great secrecy and would not like the embarrassing galactorrhoea following mid-trimester abortions.

Here Bromocriptine may be effective in doses smaller than thos used for postpartum suppression of lactation. This is an aspect we hope to study further in the near future.

Conclusion

Bromocriptine as used by us in the treatment of suppression of lactation and puerperal mastitis has been found to be safe and effective agent for lowering prolactin levels in a physiological manner as also in controlling the symptoms of puerperal breast engorgement due to the milk let-down. Its use in suppression of galactorrhoea following mid-trimester abortions is to be assessed.

Acknowledgement

Our thanks are due to the Superintendent, Cama & Albless Hospitals, for allowing us to carry out the trial, and to M/s. Sandoz (India) Limited for supplying the drug.