

# Frequency of Hyperprolactinemia in Female Infertility

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## ABSTRACT

**Aim:** To evaluate the frequency of hyperprolactinemia in female infertility.

**Duration:** The study was conducted during 2014 to 2015.

**Settings:** Department of Obstetrics & Gynaecology, Bahawal Victoria Hospital, Bahawalpur.

**Results:** In our study, the common age of the patients was recorded as  $29.32 \pm 6.26$ , 48% cases had 1-5 years duration of infertility, 27% had 5-10 years while 25% of the cases had >10 years duration of infertility. Primary infertility was recorded in 63% of the cases while secondary infertility was 37%. Hyperprolactinemia was recorded in 41% of the cases while 59% of the cases had no findings of this morbidity.

**Conclusion:** We concluded that the frequency of hyperprolactinemia is high among women with infertility. So, it is required that every women presenting with infertility, should be sort out for hyperprolactinemia.

**Keywords:** Infertility, primary, secondary, hyperprolactinemia

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## INTRODUCTION

Reproducing and upbringing of children is a part of life since the beginning of mankind, and considered to be more strengthened throughout the history by way of myths, traditions, religions, cultures, arts and literature etc. Children and parenthood are incontrovertibly among the maximum desired goals and life plans in adulthood commonly. Motherhood is an important and changed aspect of life for most of the mothers in different personal and social areas of their lives<sup>1</sup>.

Infertility is a disease of reproductive system which interferes with the ability to conceive. Female infertility is reported in 37% of all infertile couples while among them majority are due to ovulatory disorder, and often associated with dysregulation of hormonal network.<sup>1</sup> In Pakistan, the majority of females are responsible for unproductiveness up to 41.1%<sup>2</sup>.

There are number of problems correlated with hormonal disorders of female reproductive system. All these disorders result from aberrant dysfunction of hypothalamic-pituitary-ovarian axis. These common disorders often lead to infertility and constituting a major psychological burden<sup>3</sup>. Hyperprolactinemia is found to be the most prevalent endocrine disorder in hypothalamic-pituitary axis particularly among reproductive age women affecting around one-third of infertile females<sup>4</sup>.

The significant prolactin elevation after the orgasm is considered beneficial for decidualization

and implantation,<sup>5</sup> on the other hand, a transient elevation in serum prolactin may be produced by the venepuncture stress while mildly elevated hyperprolactinemia is commonly seen in PCOS females due to the raised circulating estrogen level<sup>6</sup>.

This study was planned considering the fact that recent studies are significantly different and reporting variant results regarding frequency of hyperprolactinemia in infertile women which create ambiguity for the obstetricians while managing infertile women. However, the results of this study in our population may clarify the ambiguity and helpful for obstetricians in the management of infertile women.

## METHODOLOGY

A total of 100 infertile females between 20-45 years of were enrolled in the study from OPD of Obstetrics & Gynaecology, Bahawal Victoria Hospital, Bahawalpur while male factor infertility, female factors-tubal factor, urogenital tract anomalies, obvious organic lesion in pelvis, history of thyroid disease/thyroid surgery/thyroid medication and those under treatment of hyperprolactinemia were excluded from the study. After obtaining an informed consent of the patients a detailed history was taken. Blood sample was obtained without excessive venipuncture stress and sent to the hospital laboratory for evaluation of prolactin levels. After obtaining these hospital reports, the frequency of hyperprolactinemia (i.e., serum prolactin level more than 25ng/ml) in women with infertility was recorded, all this information was recorded on a pre-designed proforma.

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## RESULTS

In our study, the common age of the patients was recorded as 29.32±6.26, 48% cases had 1-5 years duration of infertility, 27% had 5-10 years while 25% of the cases had >10 years duration of infertility. Primary infertility was recorded in 63% of the cases while secondary infertility was 37%. Hyperprolactinemia was recorded in 41% of the cases while 59% of the cases had no findings of this morbidity.

## DISCUSSION

In our study, 37% of the infertile women had findings of hyperprolactinemia. The prevalence of primary infertility in our study was higher as compare to secondary infertility. Previous studies demonstrate that hyperprolactinemia was higher in Iraq 60%<sup>7</sup> and lower in Hyderabad (India) 41%<sup>8</sup> this difference may be due to variant level of stress in infertility patients in different regions.

Prathibha D and others reported 41% of the cases having hyperprolactinemia in infertile women<sup>8</sup> while these figures are in contrast with Razzak AH<sup>7</sup> who recorded this magnitude as 60% which is much higher than our study.

Kredentser JV and others<sup>9</sup> revealed the incidence of hyperprolactinemia in a group of referred infertile patients and recorded 19.5% cases with elevated levels of serum prolactin, 4.4% cases with hyperprolactinemia had neither galactorrhea nor abnormal menstrual function. This study shows that hyperprolactinemia is a common morbidity in an infertile population, however, when galactorrhea and/or menstrual dysfunction is also found present, the observations regarding common findings of infertile cases i.e. hyperprolactinemia and galactorrhea in infertile women but also in contrast regarding frequency of hyperprolactinemia in infertile females, the reason behind this contrast might be due to demographical/racial differences because Kredentser JV and colleagues conducted this study in European population while Razzak AH<sup>7</sup> evaluated in subcontinental population.

However, with the routine practice of ordering serum levels of prolactin in infertile patients we may be able to establish the association between

hyperprolactinemia and infertility without wastage of time which could easily be treated with the course of dopamine agonists. This may greatly reduce the anxiety as well as social and financial stress on this very much distressed group of our community and helpful in improving this very important social problem.

## CONCLUSION

We concluded that outcome of anal Advancement flap is significantly better when compared with lateral sphincterotomy in treatment of chronic anal fissure in term of less infection and anal continence.

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