

# Intractable severe peri-ovulatory sneezing abrogated by injection of human chorionic gonadotropin

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## Summary

**Purpose:** To report an unusual physiologic event associated with the peri-ovulatory time: intractable sneezing with an usual corrective treatment. **Materials and Methods:** A woman was treated with 10,000 IU human chorionic gonadotropin (hCG) when the follicle reached maximum maturity and prior to the luteinizing hormone (LH) surge. **Results:** Despite many years of one full day of intractable sneezing in 85% of natural cycles, there was no sneezing in any of the eight treatment cycles with hCG. **Conclusions:** The rare disorder of peri-ovulatory intractable sneezing may be obviated by an injection of hCG. It is hypothesized that the cause of the sneezing could be related to increased permeability that may occur after the serum estradiol (E2) drops after the LH surge. Unique to this patient was a defect in her nasal passages with an assumptive permeability defect barely able to inhibit absorption of unwanted chemicals that became inadequate with a further increase with the drop in serum E2. The hCG injection may work by limiting the large drop in serum E2.

**Key words:** Perioovulatory time; Intractable sneezing; Human chorionic gonadotropin; Estradiol; Progesterone.

## Introduction

There are anecdotes concerning unusual physiological conditions associated with the menstrual cycle. Frequently, these are idiosyncratic and not seen in a high percentage of other patients. One of the common circumstances is *Mittelschmerz*. We report a very unusual case of intractable sneezing fits at the peri-ovulatory time with an unusual method of precluding this problem.

## Case Report

A 32-year-old presented with unexplained infertility. She had regular menses. She reported for the last ten years one day of very severe sneezing at the peri-ovulatory time that would disappear on the day that her basal body temperature rose. The sneezing was so severe she was home ridden on this day. It would occur in 85% of her menstrual cycles.

For her infertility treatment, intrauterine insemination (IUI) was attempted eight times. For each IUI cycle she was given for the purpose of timing of the IUI 10,000 IU of human chorionic gonadotropin (hCG). Not once during these eight cycles did she have sneezing. She decided to undergo in vitro fertilization (IVF). There was a four-month gap before IVF was attempted. Each month her sneezing returned for that day. She is 14 weeks pregnant after IVF-embryo transfer and she is not sneezing.

## Discussion

The mechanism of why hCG injection abrogated the first day of sneezing fits is not exactly clear. The hCG was always given prior to the luteinizing hormone (LH) surge when the peak serum estradiol (E2) was reached. Since sneezing had not occurred yet it would seem likely that the triggering event would be the characteristic drop in serum E2 and/or the rise in serum progesterone (P). Since the hCG injection would generate a higher rise in P than the endogenous LH surge the day after the surge or the hCG injection, it would seem likely that it was the drop in E2 that somehow triggered the sneezing. If somehow the rise in LH was the triggering event, it would be likely that the sneezing would last two days rather than one since the duration of the LH surge is 48 hours.

After delivery we will try estrogen supplementation from day 10 to 17 to see if the sneezing can be prevented, assuming it returns when she starts ovulating. If not effective, the sneezing is so severe the patient requests hCG injections each month even if she is not trying to conceive.

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