Correlation Between the Use of Human Menopausal Gonadotropin (hMG) in In-Vitro Fertilization (IVF) and the Risk of Breast Cancer

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In-Vitro Fertilization has been the center of controversy since its genesis in 1999. Today some believe that hormones such as hMG used to stimulate the ovaries to produce mature follicles and induce ovulation may increase a woman’s risk of developing breast cancer.

Objectives

- To follow women undergoing In-Vitro Fertilization for cancer development for approximately 17 years.
- To analyze the effect of fertility drugs on the risk of breast cancer.
- To assess the role of factors such as BMI, smoking history, socioeconomic status, location, and infertility.

Methods

- The study included 1,509 women monitored for cancer development through June 22, 2011, of whom 87,403 women evaluated or treated for infertility on or after September 25, 1994.
- The records included all MHS adult female members who were diagnosed with infertility and any treatments administered.
- The study analyzed the correlation between the use of hMG and the risk of breast cancer.

Materials and Methods

The Maccabi Healthcare Services (MHS) published a study in Fertility and Sterility. MHS possesses historical records of patient and physician data, laboratory results, and prescription information linked to the patient’s ID number. The records include all MHS adult female members who were diagnosed with and/or treated for infertility in hospital or community clinics. It also keeps records of fertility medications purchased and any treatments administered.

Results and Interpretation

HMG found that there was no alteration in breast cancer risk among women who had received fertility treatment compared with those who had not. However, other studies found an increased incidence in women treated with hMG. By 2003, it was found that overall women who had used fertility drugs had the same risk of breast cancer as women who had not, but found some variation within subgroups of women who used specific fertility drugs.

Conclusion

Several studies suggest links between fertility drugs and breast cancer risk. Advances in in vitro fertilization have made treatment more efficient and cost effective while presenting fewer risks and side effects than ever before. Evidence as to whether or not hMG is in fact increasing women’s risk of developing breast cancer is inconclusive. Further research would be required to reach a definitive statement.

References


