

Chemicals and Infertility at a Glance

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Never in the human history have so many changes happened in the life style and the environments. This was done due to the revolution in the science and technology.

During last decades, reproductive medicine as a whole and male infertility in particular has changed tremendously. This change happened in the field of proper evaluation, findings of numerous etiological factors such as anatomical, genetic environmental, underlying diseases and so on. This helped clinicians to have more relevant understandings regarding this social problem that has roots in the history of man kind as well as civilization. The knowledge about infertility paralleled with the progress made in the techniques of the treatment.

The advances in current reproductive technologies were made clear after cloning of a sheep, resulting in the birth of Dolly.¹ Although, human cloning is a concept that remains highly controversial, there have been steady advances in the assisted reproductive techniques such as blastocyst transfer and intra cytoplasmic sperm injection methods.²

Although these rather new techniques helped many infertile men to be a father, the old dream that they had, many other men who were fertile lost their potential fertility due to various reasons such as exposure to physical, chemical, biological and other environmental hazard agents.

Changes in life style, environmental pollutions, such as air, contamination of water and soil by different toxic materials, chemicals of industrial wastes, modernized in food processing, preserving and serving, possible contamination of environmental hazards agents by warfare used in local, regional and world wars might had affected human health and caused male infertility.³

There was no record of infertility published among soldiers who were exposed to chemical warfare during first or second world wars. As it was expected; infertility was a major proved problem in Iran-Iraq war among Iranian soldiers who exposed to chemical warfare.³

Advance treatment of malignancy by widespread use of chemotherapy was associated with improvement in cancer survival but its set back effect was testicular dysfunction and infertility.^{4,5} During chemotherapy, most patients demonstrate elevation of serum FSH levels that well correlates with the development of azoospermia.⁶ These findings were frequently requested for the utilization of sperm bank among cancer patients undergoing chemotherapy.⁷

Exposure to chemical warfare and chemotherapy are not the only factors which effecting fertility. Exposure of workers at chemical, petrochemical and many other relevant industries, farmers who use pesticides, people that regularly use home insecticides, and even ordinary people who live in polluted areas may be the victims of infertility.^{8,9} At the present time human being is faced with serious environmental crisis. Although, tackling these agonies are essential for preserving mankind, but certainly this catastrophic problem will never be solved unless international cooperation and collaboration regarding this matter happens.

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