

Editorial

## Fertility and pregnancy: Forum introduction and some thoughts on the role of electronic journals in the scientific information evolution

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Published: 14 November 2003

*Reproductive Biology and Endocrinology* 2003, **1**:106

This article is available from: <http://www.rbej.com/content/1/1/106>

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Received: 28 July 2003

Accepted: 14 November 2003

When Prof. Antonin Bukovsky Editor-in-Chief of RB&E, invited me to act as forum editor of this new electronic journal I accepted enthusiastically. My task was to recruit eminent scholars to write mini-reviews on topics within the framework of "Fertility and Pregnancy".

I soon learned that this was not an easy task. Scientific output is a precious commodity and appropriate "placement" of a manuscript is a carefully considered endeavor. To publish good work in a new journal with no impact index is regarded by many as waste of effort with a negligible effect on one's CV. This was more or less the tenor of some of the responses which I received to my solicitation of contributions. This reaction caught me by surprise. Medicine in General and reproductive biology in particular has developed tremendously in the past two decades.

The information revolution has changed our way of learning and our access to knowledge substantially. Or has it really? We still seem to mainly retrieve clinical and basic information from classical textbooks and medical journals, often guided by Medline searches. Yet, classical textbooks contain usually outdated information, and we are flooded by an immense amount of medical publications. Currently, Medline alone boasts in excess of 12 million references. About 20,000 journals are being published in biomedical sciences with over 4000 journals of them on a monthly basis. The total number of annual publications in bio-medical sciences exceeds 500,000. It has been estimated that less than 10 % of those may have some lasting

scientific value. For authors, the review process is lengthy and non transparent and the direct contact with readers virtually non-existent. And yet, whenever we want to update our knowledge or whenever we need some kind of scientific evidence or to find a specific answer to a clinical or scientific question, we would want to access that piece of information rapidly and directly. This is particularly vital in a clinical setting.

It has been estimated that the daily need for valid information is 5 times per in-patient and twice for every 3 out-patients. It is obvious that traditional resources are inadequate for this purpose. Moreover, the information revolution has caused profound changes in our patients. As customers of the medical system, patients have free access to information, they are aware of their rights and shopping for services is not rare. Adding to that the medico-legal environment, it becomes evident that one can no longer rely on classical journal subscription or library visits to access information. The former is expensive and time is scarce for the latter. On the other hand, in the western world access to the internet is virtually ubiquitous.

Electronic journals have the great advantage of free accessibility from any point on the globe where there is internet access. More and more electronic journals, including RB&E allow free access to all articles, thus promoting the free distribution of information and experience. Exchange of ideas, comments and information between authors and reader can be immediate and on-line and authors can usu-

ally track the frequency of access to their article. This is a tremendous advantage over citation index services.

Does this mean the end of textbooks and printed journals? Certainly not. Textbook will remain important for students and residents for acquiring and maintaining basic knowledge and printed journals will change in quality and quantity. In March, 2001, the editor of BMJ, Dr. Richard Smith gave a fascinating lecture at Tel Aviv University, entitled Medical Journals: From a Requiem to a Renaissance? Dr. Smith predicted the disappearance of many journals, the emerging of many Web-Journals and the establishment of an open archive which would be based on common standards. These would be searchable while every author would remain owner of his or her scientific material. In a sense, a Napster of Science. The information revolution is changing rapidly what we publish, where we publish it, how we access information and how readers and authors interact.

Alertness services will replace many printed journals. The number of printed journals will decrease and those which will prevail will need to revolutionize their submission and referee system. Libraries will become electronic hubs and librarians will serve as search assistants. Centralized archives will be available through the net and reprints will be downloaded and not ordered through cumbersome systems. Publications will be on-line with a transparent review system and an opportunity for a direct dialogue between author and readers. RB&E, its editors and authors are part of this revolution.

The choice of appropriate topics for a forum entitled fertility and pregnancy was not easy. The spectrum is very large, covering a large part of a complete medical discipline. So, by choosing the topics, I was aware that injustice would be done to other, equally important issues.

The selected topics address the anatomic-functional basis of male infertility and clinical andrology, discuss one of the major problems of female infertility, namely PCO-based anovulation and include one topic dealing with prenatal diagnosis and another topic related to maternal disease in pregnancy. I was fortunate to be able to recruit for all these topics world leading authorities who agreed, on rather short notice and within a very tight time frame to contribute to the forum. In spite of their very busy time schedules they agreed to squeeze in this additional write up for probably two main reasons: The challenge of participating in the new age of electronic information exchange and my continuous nudging and pushing. For the former my great appreciation and for the latter my apologies.

The first topic, UNDERSTANDING SPERMATOGENESIS AS A PREREQUISITE FOR TREATMENT was written by Prof. AF Holstein, together with Prof. Schulze and Prof. Davidoff. The authors review the process of spermatogenesis and its various sub stages and clarify disturbances which occur very early and which cannot be assessed by standard semen analysis. The review describes the testicular system, its intricacies and interactions as seen from the aspect of sophisticated anatomic-functional studies. Prof. Adolf-Friedrich Holstein was until recently chairman of the Institute of Anatomy at the University Hospital Eppendorf in Hamburg. Anatomist by discipline, Prof. Holstein is probably still one of the leading andrological anatomists worldwide. Numerous textbooks written, co-authored and edited by him and a very large number of scientific publications are regarded by students and scholars as the basis for clinical and basic research.

In the second review, Prof. Schill and Prof. Henkel have concentrated on the bridge between classical andrology and assisted reproduction. In SPERM PREPARATION FOR TECHNIQUES OF ASSISTED REPRODUCTION the authors present a comprehensive update on the laboratory work and various in vitro treatment options of semen before ART. The resulting enhancement of success rates of ART emphasizes the importance of modern andrology. Prof. Wolf-Bernhard Schill is chairman of the department of dermatology and andrology at the Justus Liebig University in Giessen, Germany. He is one of the leading andrologists worldwide and has contributed tremendously to clinical and basic andrology. Among his many public offices, he is chairman of the German Andrological Society and editor-in-Chief of ANDROLOGIA, the oldest scientific journal of this discipline.

In his review on THE MANAGEMENT OF INFERTILITY ASSOCIATED WITH POLYCYSTIC OVARY SYNDROME, Prof. Homburg deals with the most common female infertility problem in the Western world, namely anovulation. He covers the standard treatment schemes, like clomiphene and FSH stimulation, discusses GnRH analogues and antagonists and insulin sensitizing agents, such as metformin. He critically discusses ovarian drilling and aromatase inhibitors. As end of the line he points to IVF/ET treatment and convinces the reader that the modern therapeutic armamentarium is capable for solving anovulatory problems in virtually every woman. Roy Homburg is chairman at the department of Reproductive Medicine at the Frije Universiteit in Amsterdam. Since many years, Dr. Homburg has concentrated his work on clinical and basic aspects of reproductive endocrinology. His extensive research on anovulation in general and the polycystic ovary in particular has made him a leading expert worldwide. There is hardly a symposium or scientific meeting

dealing with the polycystic ovary where his research is not cited or presented.

Dr. Malinger and his co-authors have chosen to focus their review on a rather specific part of prenatal assessment, namely on FETAL INTRACRANIAL PATHOLOGIES FIRST DEMONSTRATED LATE IN PREGNANCY. They specifically review cell proliferation disorders. The understanding that the diagnosis of many pathologies of the fetal central nervous system depend on timing of evaluation and expertise and collaboration of representatives of different disciplines is a very important contribution to current practice. In a scholarly way the authors discuss the differential diagnosis of common fetal brain disorders, offer a stepwise diagnostic plan and present their multi-disciplinary approach. Dr. Gustavo Malinger is director of the ultrasound unit at the department of Obstetrics and Gynecology at the Wolfson Medical Center in Israel. For many years, Dr. Malinger has been interested in fetal brain development and has gained worldwide acclamation as a leading authority in this field. Together with Dr. Lerman-Sagie, a highly regarded expert in fetal neurology and Dr. Lev, a leading geneticist, they have founded a prenatal diagnosis clinic, specializing in prenatal diagnosis. This clinic, one of its kind in Israel serves as a major referral center.

In the last chapter of this forum, Prof. Kupferminc reviews THROMBOPHILIA AND PREGNANCY. The fact that pregnancy is associated with hypercoagulability has been recognized for long. But only during recent years it has become clear that severe pregnancy complications, ranging from recurrent miscarriages through intrauterine growth retardation, placental abruption and stillbirth may be associated with thrombophilia. This understanding has caused considerable concern among clinicians and patients alike and has also led in many cases to superfluous diagnostic and therapeutic measures. Dr. Kupferminc presents a comprehensive review of this important topic and reviews the state of art in diagnosis and treatment of thrombophilia and pregnancy. Prof. Michael Kupferminc heads the most active feto-maternal unit in Israel at the Lis Maternity Hospital in Tel Aviv. His research in thrombophilia and pregnancy has set important milestones and he is acknowledged today as one of the most eminent experts in the field worldwide.

It has been a privilege and joy to be instrumental in compiling this forum and I am confident that the presented reviews will be helpful to many readers.

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