



3RD BERLIN SYMPOSIUM SEX AND GENDER IN MEDICINE

Berlin, October 19 and 20, 2006
at the German Heart Institute Berlin (DHZB)

For the third time, the **Center for Gender in Medicine (GiM)** at the Charité, Berlin`s medical faculty organised its annual symposium on gender medicine. Over 130 scientists of medical and health care sciences participated to listen, watch, and to discuss lectures and posters of the subject areas basic research, clinical research, prevention and health care research at the German Heart Institute in Berlin, Germany.



Speakers, chairs and organisers of the symposium

Prof. Dr. C. Noel Bairey Merz, Los Angeles (right) gave the key lecture. She reported on the Women`s Ischemia Syndrome Evaluation (WISE) study program, an on-going project of the National Heart, Lung, and Blood Institute in the United States aiming to improve pathophysiologic understanding, evaluation, diagnosis and treatment of ischemic heart disease in women. The program discovered unexpected and crucial findings which will significantly improve the management of coronary heart disease in women.



GiM Speaker Prof. Dr. Vera Regitz-Zagrosek welcomes the participants



Prof. Dr. C. Noel Bairey Merz giving the key lecture



Findings of Basic Research

The molecular basis of sex- and gender-specific differences is an area of research with increasing interest for cellular and molecular biologists. Although the molecular mechanisms are still poorly understood, estrogen and its receptors (ER α and ER β) represent key elements in the regulation of sex-specific differences in human disease.

The downregulation of immune responses during female-biased autoimmune disease (e.g. multiple sclerosis) may be a consequence of a bidirectional signalling network between hormones and the immune system, i.e. an interplay of activation and downregulation of T-cell activity (**Dr. R.M. Licón Luna**). A role for estrogen receptor beta in metabolic disorders was demonstrated by **Dr. A. Foryst-Ludwig**: the absence of ER β in mice was shown to promote weight gain under a high-fat diet and to improve insulin sensitivity. **Dr. C. Schubert** reported that ER β influences the cardiac response to pressure overload differently in female and male mice. Female mice develop less hypertrophy than male animals which is reversed by the deletion of ER β .

The regulation of estrogen-mediated signalling at genomic and protein level is being tackled by different approaches. **B. Lassowski** reported on the role of two new estrogen receptor protein interaction partners (reptin and pontin) in the modulation of the transcriptional activity of estrogen receptors and their potential crosstalk with the wnt-pathway. Furthermore, **Dr. U. Steckelings** concentrated her efforts in the identification and characterization of a 216 base pairs DNA-fragment within the human AT2 receptor and its role in AT2 receptor regulation by estrogen.

This session bundled research projects aiming towards a better understanding of the molecular basis of gender differences in human disease that will hopefully contribute to a better understanding of pathophysiological mechanisms in women and men.

Chair:

Prof. Dr. Patricia Ruiz Noppinger,

Prof. Dr. Ulrich Kintscher

Findings of Clinical Research

What do the following have in common: allergies, chronic inflammatory bowel disease, rheumatoid arthritis, Bechterew's disease, sclerodermia, diseases of the autonomic nervous system and complex genetic diseases?

In all of them, gender differences are frequent. Allergic asthma, rhinitis or atopic dermatitis are different in women and men and IgE plays a different role, as reported by **Prof. Dr. Margitta Worm**, dermatology. **Prof. Dr. Petra Reinke**, nephrology / rheumatology, discussed gender differences in rheumatoid arthritis, sclerodermia, lupus erithematosus and other autoimmune diseases that are regulated by X-chromosomal genes. Immunological defense is affected by pregnancies and this has consequences for intensive care medicine. The same is true for gender differences in autonomic regulation, as discussed by **Prof. Dr. Jens Jordan**, nephrology. Diseases that are based on excessive sympathetic activation of the heart such as tachycardia or stress induced Tako-Tsubo cardiomyopathy are more frequent in women than

in men; mutations in the noradrenalin transporter may contribute. Some autosomal localized genetic defects lead to different manifestations in women and men. **PD Dr. Andrea Kindler-Röhrborn** from Bonn discussed such diseases and identified some susceptibility loci for cancer which are different in women and men. Colorectal carcinomas exhibit such differences. **Prof. Dr. Vittoria Braun** talked about health care and gender differences in patients with colorectal carcinoma and pointed out the advantages brought about by computerized systems.

Altogether it was evident from a broad spectrum of diseases how different manifestations and symptoms in women and men can be and that gender sensitive evaluation contributes to their improvement.

Chair:

Prof. Dr. Vera Regitz-Zagrosek,

Prof. Dr. Duska Dragun



GiM Speaker Prof. Dr. Vera Regitz-Zagrosek and Vice-Speaker Prof. Dr. Patricia Ruiz Noppinger moderating



Opening by Prof. Dr. Karin Schenck-Gustafsson, member of the Scientific Consultative Committee of the GiM



Findings of Prevention Research

Gender differences in preventive behaviours are one major cause of differences in health, morbidity, and mortality.

Why are men „prevention sourpusses“? **Prof. Dr. Monika Sieverding** from Heidelberg answered this question by presenting studies on participation in stress management courses and cancer screenings. Her data, thus, suggest that the identification with a traditional maleness ideal – symbolised by the Marlboro-man from cinema advertising – was negatively associated with participation in stress management courses.

Pointing out increasing smoking rates in women, **Dr. Birte Dohnke** stated that „being-a-women“ is not automatically health protective. Many women, however, are not yet aware that if women smoke like men they are alike affected by smoking-related diseases such as lung cancer. Thus, her preliminary data indicate that many women smokers associate smoking-related risks with male gender and underestimate

their personal risk due to this stereotype. **Dr. Justus Welke** showed that women underestimate their personal risk for stroke and heart attack compared to objective risk scores more than men. Moreover, his findings suggest women to receive less frequently counselling on cardiovascular health and to report less specific knowledge than men.

In summary, the session emphasised that gender differences in prevention are due primarily to „gender“. The self-concept formed by the male gender role and stereotypes of assumedly „men diseases“ were revealed as important starting points for interventions. Targeting these gender-related beliefs, health promotion interventions may be better tailored to men and women and thereby more effective.

Chair:

Dr. Birte Dohnke,

Prof. Dr. Monika Sieverding

Findings of Health Care Research

How should health care be organised for women and men? Which health care needs do have women and men, which deficits exist? Including different points of view and concrete everyday experiences, these questions were discussed. At the beginning, **Dr. Birgit Babitsch** pointed out a conceptual framework for a gender-sensitive health care research. A realisation of this approach is at present due to the lack of data only possible for very few diseases. The results of a qualitative survey were reported by **PD Dr. Jacqueline Müller-Nordhorn**. Although the participating experts (cardiology, gynaecology, and neurology) classified the impact of gender medicine as rather small, they expect – while applying it – a better treatment and cost reductions. Possibilities of a gender-sensitive health care management within a statutory health insurance company (BARMER) was introduced and concretized with some examples (e.g. aconuresis) by **Petra Kellermann-Muehlhoff**.

Dr. Almut Tempka demonstrated concrete health care deficits of women in accident surgery. Women

have due to their house and family work duties a very high accident risk and at the same time a worse health care, since these activities are not covered in the accident insurance. **Prof. Dr. Heiner Berthold** focused on physicians and the quality of their treatment for diabetic patients. Patients reached, treated by female physicians, e. g. more often the goal in lipid lowering and antihypertensive therapies – also female and male physicians differed in their method of treatment.

The presentation showed impressively the scope of gender-sensitive health care (research) and crystalized important starting points for future scientific and practical activities as well as the necessary network structures.

Chair:

Dr. Birgit Babitsch,

Prof. Dr. Ulrike Maschewsky-Schneider



Prof. Dr. Roland Hetzer welcomes the participants



View into the audience



Workshop ‚Gender in Medical Education‘

As constituent of the symposium, an international workshop on ‚Gender in Medical Education‘ took place. Experts of medical faculties from Germany, the Netherlands, Austria, Poland, Switzerland, and Sweden discussed here about the possibilities of implementing gender issues into medical education.

The Poster Awards

The best poster of each subject area was awarded. We congratulate

- Friederike Kendel in the subject area *Clinical Research* for 'Is time spent on domestic tasks an indicator for physical well-being after surgery?,'
- Miriam Kip in the subject area *Prevention and Health Care Research* for 'Implementing of the diagnosis of alcoholism in operative clinics' and
- Dr. Tim Hucho in the subject area *Basic Research* for 'Estrogen controls PKC ϵ -dependent mechanical hyperalgesia through direct action on nociceptive neurons'.



M. Kip, Dr. T. Hucho, F. Kendel (from left to right)

Résumé

Gender differences play a major role in pathophysiology, clinical syndromes, prevention, and health care. Their analysis requires a broad interdisciplinary approach and is a first step to individualised therapy. We thank all participants for their great interest and hope next year's symposium will attract attention in the same way. For any question and further information, please do not hesitate to contact:

Zentrum fuer Geschlechterforschung in der Medizin
Charité – Universitaetsmedizin Berlin
Luisenstrasse 65
D-10117 Berlin, Germany
Phone: 049 30 450 539 109
Email: gim-office@charite.de
www.charite.de/gender