Clinical Chemistry

What's Different about Women's Health?

Article:
A.M. Gronowski, J.E. Manson, E.R. Mardis, S. Mora, and C.Y. Spong.
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Clin Chem 2014;60:1-3.
http://www.clinchem.org/content/60/1/1.extract

Guest:
Dr. Ann Gronowski is a professor in the Departments of Pathology and Immunology, and Obstetrics and Gynecology at Washington University School of Medicine.

Bob Barrett: This is the podcast from *Clinical Chemistry*. I am Bob Barrett.

Until recently, much of the research in medical literature used primarily male populations. Slowly we've come to appreciate the importance of studying female populations due to the differences in normal physiology as well as disease pathology between men and women.

The January 2014 issue of *Clinical Chemistry* is devoted to the area of women's health.

Joining us in this podcast is one of the guest editors for this special issue, Dr. Ann Gronowski, who is Professor in the Departments of Pathology and Immunology, and Obstetrics and Gynecology at Washington University School of Medicine.

Dr. Gronowski, tell us why *Clinical Chemistry* is publishing a special issue on women's health?

Dr. Ann Gronowski: Well as you said in your introduction, Bob, we now know that there are distinct differences between men and women even when we look at diseases that affect both sexes.

For instance, cardiovascular disease is the leading cause of death for both men and women in the United States; however, cardiovascular disease generally manifests later in life for women. And the belief was, that this is due to menopause and that hormone replacement therapy would help to prevent heart disease.

But the women's health initiative has shown that hormone replacement therapy actually increased the risk of heart disease, blood clots, and strokes.

The second leading cause of death in both men and women is cancer. Men have a slightly higher lifetime probability of being diagnosed with an invasive cancer than women.

However, because of the earlier age at diagnosis for breast cancer, women actually have a higher chance of developing cancer before age 60 than men do, which means that this disease has a huge effect on the quality of life for women, making it among the top chronic disease-related problems for women.

In addition to breast cancer, psychological problems such as depression, anxiety, and eating disorders, are among the top ten chronic diseases affecting women, and women are almost twice as likely to suffer from major depression as men.

And finally aside from differences between men and women in their risk for disease, women face different issues obtaining healthcare.

So in the United States, for instance, women utilize more healthcare services than men. And this is due in part to more complex reproductive healthcare needs, their longer life expectancies and increased rates of chronic diseases such a diabetes, depression, and heart disease, as well as osteoporosis. Yet women often have lower average income and greater difficult affording care.

So *Clinical Chemistry* recognizes these differences between men and women and wanted to spend some time focusing on the past, present, and future impact of biomarkers on women's health.

Bob Barrett: Okay Dr. Gronowski, so tell us what is different about this special edition?

Dr. Ann Gronowski: Well compared to previous special editions which have focused on specific topics such as diabetes, cardiovascular disease, cancer and molecular diagnostics, I don't think there has been a previous special edition that covers such a broad topic area.

We also have several articles that don't really deal with biomarkers, but instead deal with the social aspects of women's health, including an opinion piece on global women's health in reducing gender-based health disparities, and an article on the Affordable Care Act and its effect on women.

The nice thing about a broad topic area is that I think there is something for everyone in this issue.

Bob Barrett: As this issue began to develop were there any particular themes that you and the other editors saw developing?

Dr. Ann Gronowski: Definitely! As you might have guessed, based on what I just mentioned, biomarkers in the assessment of cardiovascular disease, cancer, and also pregnancy are the three topics that are covered most in this issue.

In particular this issue is rich in molecular based testing. There are a number of papers that feature molecular testing for the detection of cancer and non-invasive prenatal screening.

Bob Barrett: So what are the highlights, what should people not miss in this issue?

Dr. Ann Gronowski: Well, as I said earlier there is something for everyone, I think, in this issue. The citation classic looks back at a seminal paper that describes the tripe test for prenatal Down Syndrome screening.

The point/counterpoint debates the use of routine screening for trichomonas vaginalis infection.

There is a wonderful reflection piece on the development of the home pregnancy test.

The ethics of preimplantation genetic analysis is discussed in a Question & Answer piece.

We have also included a very interesting mini review on the pharmacogenomics of personalized treatment of depression.

There is a novel paper in the circulating proteolytic product of carboxypeptidase-N as a marker for the early detection of breast cancer, and finally there is an excellent editorial that comments on two papers that are in the special issue on troponin. And the data seem to suggest that different cut-offs are needed for men and women, but more data is required.

So these are just a few of my favorite articles that are in the issue.

Bob Barrett: Well finally doctor, what else, are there any closing comments you have for our listeners and our readers?

Dr. Ann Gronowski: Well it's clear that women have a unique physiology and a unique set of health condition, and they also may differ in their risk for developing diseases that are common to both men and women.

Preparing this special issue made me recognize how far we have come in certain areas such as prenatal screening for Down Syndrome.

However, it also made me realize how far we still have to go to understand the differences and risks for things like cardiovascular disease and cancer.

It's clear that more research is needed to optimize the screening, treatment, and monitoring of health outcomes in women.

Bob Barrett: Dr. Ann Gronowski is a professor in the Departments of Pathology and Immunology, and Obstetrics and Gynecology at Washington University School of Medicine.

She has been our guest in this podcast about the special January 2013 issue of *Clinical Chemistry* devoted to women's health.

I am Bob Barrett. Thanks!