AUCKLAND WOMEN'S HEALTH COUNCIL

NEWSLETTER

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IMPORTANT ISSUES IN CANCER SCREENING

"Don't believe in slogans about cancer screening," warns Peter Gotzsche, Professor of Clinical Research and Analysis and director of the Nordic Cochrane Centre. "They are all wrong, misleading or doubtful."

For some years Peter Gotzsche kept a folder labelled *Dishonesty in breast cancer screening* on top of his filing cabinet, storing articles and letters to the editor that contained statements that he knew were dishonest. Eventually he gave up on the idea of writing a paper about this collection, as the number of examples quickly exceeded what could be contained in a single article. He wrote a book instead.

In chapter two of his ground-breaking book Peter Gotzsche describes very clearly and succinctly what the important issues in cancer screening are, and outlines the major scientific disputes surrounding mammography screening. (1)

What it means "to have cancer"

While cancer is a malignant disease that consists of abnormal cells that spread uncontrollably throughout the body, it isn't always fatal. Yet the public image of cancer is that if left untreated it will kill you. However, recent data suggests that a substantial fraction of detected cancers and precursors of cancer will not prove fatal and will regress. They include cervical cancer, colon cancer, renal cell cancer, melanoma, breast cancer, and neuroblastoma.

Cancer is so common that it is likely that all middle-aged people have cancer somewhere in their body. It is a biological fact of life that we cannot avoid getting cancer as we get older because the telomeres in our DNA, which is like a repair kit that protect us from developing cancer, "runs out of supplies" and cancer cells are then able to develop.

We use the term "having cancer" to mean being ill with cancer, but it means something very different in the context of a screening programme. Because it is possible to detect cancer in virtually everybody over a certain age if we look hard enough, "having cancer" may mean simply having cell changes that will not result in any symptoms or harm us for the rest of our lives. We will die with the cancer but our death is not caused by the cancer we carry. Prostate cancer is one common example of this.

Overdiagnosis and overtreatment

The purpose of screening for a specific cancer is to reduce the mortality rate from that type of cancer. As cancer comprises a group of very different diseases, and many cancers grow very slowly or not at all, one of the important things to know about cancer screening is that it inevitably leads to harm in the form of overdiagnosis and subsequent over-treatment. Overdiagnosis is the detection of a cancer that would not otherwise have been identified clinically during the person's remaining lifetime.

The problem is that at the moment science cannot distinguish between the harmless cancers that have no symptoms and will not cause any harm and those that are dangerous. So the response to this dilemma is to treat them all. Overdiagnosed breast cancers that would not have caused

any problem are treated by surgery, many are treated with radiotherapy, and some with chemotherapy.

As cancer screening always causes harm, it is essential to ensure that the screening being performed does actually reduce mortality from the cancer and whether the reduction is large enough to justify the various harms inflicted on the healthy population that is being screened.

Erroneous diagnoses

Another important issue in cancer screening is the tendency to over-estimate how accurate the diagnostic tests are. While erroneous diagnoses cause much less harm than overdiagnosis, they are still one of the significant causes of harm that screening results in. Peter Gotzsche notes that this problem has received little attention in the scientific literature and virtually none in the debates about breast cancer screening.

For example, there are two uncertainties involved in deciding whether a woman has breast cancer. They are reading the mammogram and interpreting the biopsy. These result in some women being diagnosed with breast cancer at screening when they do not have breast cancer, yet there are no publications estimating how often women are wrongly diagnosed with breast cancer.

Carcinoma *in situ*

Carcinoma *in situ* is another problem. Peter Gotzsche calls it a misnomer. Cancer is an invasive disease whereas carcinoma *in situ* is Latin and means cancer at the site. It is not invasive: the cell changes remain where they originated.

Issues in cancer epidemiology

There are some essential issues that need to be understood when talking about cancer screening.

The incidence of a disease is the number of new cases occurring in a certain time period, often the calendar year.

The prevalence of a disease is the proportion of a population that has the disease at a given point in time. The prevalence includes all cases, including those that have existed for many years. Like incidence, it is usually expressed per 100,000 people and for a certain age group.

Cancer screening primarily detects slow-growing cancers. This is because the longer the cancer has existed, the greater the chance that it will be picked up at a screening session. In contrast, a cancer that grows very quickly is much more likely to be detected clinically, between two screening sessions. These are referred to as interval cancers and they are therefore more dangerous than cancers detected by screening.

Length bias

Screening increases the prevalence of cancers with an excellent prognosis due to overdiagnosis, and detects most of the slow-growing cancers. This is why cancers diagnosed in a region with screening will have a more favourable prognosis, on average, than cancers in a region without screening. The screened region has its numbers of breast cancer cases boosted by the many harmless cancers that weren't detected in the other region because the cancers have no symptoms. This problem is called "length bias." Overdiagnosis is therefore a special form of length bias.

Lead-time bias

Another common problem is the bias that occurs in comparing regions with and without screening if researchers use the number of years that patients have survived from their date of diagnosis as the outcome. This is known as "lead-time bias." The problem can be avoided by comparing the mortality rate of each region or country rather than the years of survival.

Peter Gotzsche states that cancer charities and cancer researchers publish misleading survival analyses so often that it appears like a deliberate strategy to deceive the public into believing that important progress is being made in the fight against cancer.

Breast cancer screening has now become one of the greatest controversies in healthcare today. The general public remains largely unaware of this as media coverage on breast cancer screening chooses to ignore the complex issues as well as the vested interests surrounding breast cancer screening and treatment.

Even more reprehensible is the lack of accurate information given to women by government agencies such as Ministry of Health and the National Screening Unit. It is long past time for the limitations and significant harms of breast cancer screening to be clearly acknowledged so that women are able to make adequately informed decisions before they agree to being screened.

Reference

Peter Gotzshe. "Mammography Screening: Truth, Lies and Controversy." 2012. Published by Radcliffe Publishing Ltd.

PARACETAMOL USE IN PREGNANCY LINKED TO ADHD IN CHILDREN

Paracetamol, also known as acetaminophen, is the most commonly used medication for pain and fever during pregnancy. But new research has revealed that it is associated with a higher risk for attention-deficit/hyperactivity disorder (ADHD) and hyperkinetic disorders (HKDs are a severe form of ADHD) in the children of mothers who used the drug during pregnancy when compared with children of mothers who did not use it.

JAMA Pediatrics

A study published recently in the *Journal of the American Medical Association Pediatrics* has suggested that paracetamol has effects on sex and other hormones which can in turn affect neurodevelopment and cause behavioural dysfunction. The study's investigators noted that previous research has linked the drug to hormone disruption – a process that could impact on foetal brain development. With this in mind, the research team decided to assess whether paracetamol use during pregnancy could increase a child's risk of HDHD and HKDs – syndromes that emerge during early childhood.

The researchers studied 64,322 children and mothers in the Danish National Birth Cohort (1996-2002). More than half said they took paracetamol at least once during pregnancy. Parents reported behavioural problems on a questionnaire, and HKD diagnoses and ADHD medication prescriptions were collected from Danish registries. The risk of a child having ADHD and HKD-like behavioural problems increased when mothers used the drug in more than one trimester during pregnancy.

According to the Centers for Disease Control and Prevention (CDC), the percentage of children diagnosed with ADHD is increasing. In 2003 7.8% of children had the disorder, and this figure increased to 11% in 2011. The researchers say their findings suggest that because foetal exposure to paracetamol is frequent during pregnancy, this could explain the increasing prevalence of ADHD and other childhood behavioural disorders.

Further investigations needed

Their conclusion was that maternal paracetamol use during pregnancy is associated with higher risk for HKDs and ADHD-like behaviours in children. "Because the exposure and outcomes are frequent, these results are of public health relevance but further investigations are needed."

The results of the study also underline the importance of being very cautious when taking any drugs during pregnancy, rather than just assuming they are safe.

The study was led by Zeyan Liew of the University of California, Los Angeles and was co-authored by Jorn Olsen of the University of Aarhus in Denmark.

Reference

http://archpedi.jamanetwork.com/article.aspx?articleid=1833486

BreastScreen Aotearoa now fully digital

The February issue of the National Screening Unit (NSU) newsletter, *Screening Matters*, contains an article announcing the fact that New Zealand's free national breast screening programme for women aged between 45 and 69 years of age is now fully digital.

The article states that "digital mammography uses digital receptors and computers instead of x-ray film to examine the breast for cancer. The images are recorded directly into a computer. They can then be viewed on a screen and specific areas enlarged or highlighted. The images can also be easily transmitted electronically from one location to another."

The benefits are many, one of them being that digital screening reduces the amount of radiation that women are exposed to, making it safer. This is good news. BSA Clinical Leader, Dr Marli Gregory, says it also provides better quality images for women aged between 45 – 49 years, but ignores the fact that these are women who shouldn't be being screened anyway as there is good evidence that screening women under 50 does more harm than good.

PACS - a secure picture archive

Dr Gregory says a secure, centralised picture archive and communications system (PACS) has also been established to complement the digital upgrade. Yes, that's right, she said a "*secure*" picture archive. But just how secure remains to be seen. There was also nothing about a back up for this new "secure, centralised" PACS.

"This new centralised system means images can be sent to radiologists across the country to be read, allowing the radiology workload to be better managed," Dr Gregory said.

However, there is nothing in the article about sending the images to women who want them. The AWHC would encourage women to ask for the images to be sent to them as well, especially in the wake of the news that more than 3,800 Southland Hospital mammograms were lost last year in what was referred to as "a Southern DHB IT failure." The IT loss affected both diagnostic and the screening programme mammograms.

Of course, the *Screening Matters* article doesn't mention anything about this either.

The Southern DHB maintains that the women's care was unaffected, because they still had the reports that were written from the mammograms. There are a couple of problems with this assertion.

Associate Professor Brian Cox, an authority on screening, said he believed that there would be a small increase in the number of biopsies performed, because sometimes the initial screens were referred to, rather than the clinical notes. This is a significant issue to the women concerned. And the lost mammograms would also affect the breast screening programme's ability to audit the service for quality control.

Finally, it is worth noting that *Screening Matters* gets sent out by Atlantis Healthcare, who their website says are "leaders in patient behaviour change and adherence solutions." Maybe they also write the NSU newsletter.

NZ ANTI-DEPRESSANT STUDY REVEALS SIDE EFFECTS CONCERNS

On on-line study of more than 1800 New Zealanders on anti-depressants has revealed that the emotional side effects of the widely-prescribed drugs are more common and more serious than previously thought. Even more concerning was that a third of those questioned said they had not been warned about possible adverse emotional or relationship effects.

The study is the first of its kind in New Zealand. Study co-author Dr Kerry Gibson, from the School of Psychology at the University of Auckland, said one in nine adults – and one in six women – in New Zealand were prescribed anti-depressants every year. Of those surveyed, 62% reported sexual dysfunction, 60% complained of feeling emotionally numb, 41% said they felt less positive, and 39% reported thoughts of suicide. In the 18-25 age group, 56% reported suicidal thoughts.

Lead researcher Professor John Read said that the psychological and interpersonal effects of anti-depressants had been largely ignored. "The medicalisation of sadness and distress has reached bizarre levels," he said.

Mental Health Foundation chief executive, Judi Clements said people should be given more options to manage their mental health, through nutrition, exercise and counselling.

www.radionz.co.nz/news/national/237971/anti-depressant-study-'disturbing'

AWHC GENERAL MEETING 19 February 2014

Detailed minutes of this meeting are available on request. Matters discussed included:

- Financial reports and audit
- Grant applications
- Bowel cancer screening pilot
- Cervical screening register
- Northern A ethics committee
- 2015 Cartwright conference

Further information on some of the topics listed above is contained in this issue of the AWHC newsletter.

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UP AND COMING EVENTS

DISTRICT HEALTH BOARD meetings for March/April 2014:

Waitemata DHB (Website address: www.waitematadhb.govt.nz)
Waitemata Hospital Advisory Committee meeting starts at 11am on Wednesday 9 April 2014 and will be followed by the DHB Full Board meeting which starts at 1.30pm. Both meetings will be held in the DHB Boardroom, Level 1, 15 Shea Terrace, Takapuna.

The **combined Waitemata DHB and Auckland DHB** Community & Public Health Advisory Committee meeting starts at 2pm on Wednesday 19 March 2014.

Auckland DHB (Website address: www.adhb.govt.nz)
The Hospital Advisory Committee meeting will be held at 9.30am on Wednesday 2 April 2014 followed by the Full Board meeting at 2pm. Both meetings will be held at the Marion Davis Library, Building 43, Auckland City Hospital.

Counties Manukau DHB (Website address: www.cmdhb.org.nz)
The Hospital Advisory Committee meeting will be held at 9am on Wednesday 9 April 2014 at Ko Awatea and will be followed by the Full Board meeting at 1.30pm.

The Community & Public Health Advisory Committee meeting will be held at 1.30pm on 26 March 2014 at 19 Lambie Drive, Manukau City.

ETHICS COMMITTEE meetings – dates for the four new ethics committees are at:
http://www.ethics.health.govt.nz/about-committees/meeting-dates-venues-minutes

Waitakere Health Link is holding an NGO Health Network Forum at 9am on Wednesday 28 May. The topic is "***The history and future development of Maternity Services in West Auckland***" at the Kelston Community Centre, West Auckland. This is a unique opportunity for NGOs and consumers to talk to the people from the Waitemata DHB, independent midwives and the Maternity Services Consumer Council, and will include a discussion panel of questions and answers.

For further information phone 839-0512, or email: office@waitakerehealthlink.org.nz