



Cancer Genetics Gazette



A newsletter for specialist clinicians from the Familial Cancer Unit

May 2008

Issue 5

Welcome to the 1st edition of the Cancer Genetics Gazette for 2008. The feature articles in this edition include **'Detection of occult fallopian tube carcinoma is enhanced by uniform rigorous pathological examination'** by Dr Tom Dodd and **'Risk-reducing oophorectomy: What's the right operation?'** by Associate Professor Margaret Davy. We hope you find this issue useful and informative.

In focus

Detection of occult fallopian tube carcinoma is enhanced by uniform rigorous pathological examination

Women carrying a mutation in the BRCA1 or BRCA2 gene are at high relative risk of developing cancers of the breast, ovary, and fallopian tube. (The risks vary with age, and further information is available from the Familial Cancer Unit). Prophylactic (or "risk-reducing") surgery is one strategy for reducing the risk of these cancers. There is clear evidence that apparently normal breast or ovarian tissue taken from an unaffected carrier can have small invasive cancers that had not been detected during pre-operative assessment.

For this reason, serial sectioning of macroscopically normal ovarian tissue for histopathological assessment from patients undergoing prophylactic salpingo-oophorectomy has become standard practice. But the protocol for evaluating fallopian tubes is still evolving.

Primary carcinoma of the fallopian tube is uncommon and comprises only 0.2 to 0.5% female genital tract malignancies (1,2). However, studies examining fallopian tubes from apparently unaffected carriers of BRCA mutations have reported carcinoma in up to 10% of cases (3).

Powell et al (3) evaluated the effectiveness of a standardised surgical and pathological protocol for salpingo-oophorectomy specimens from BRCA carriers, and identified four tubal carcinomas in 41 patients assessed by this protocol. However, no tumours were identified in a further 26 non-protocol patients. The protocol in this study comprised serial sectioning of the entire fallopian tubes and ovaries at 2 mm intervals and microscopic examination of all sections. Three of the four tumours were microscopic and were not detected at gross examination.

Medeiros et al (4) identified five fallopian tube carcinomas in specimens from 13 BRCA carriers undergoing salpingectomy. In this series three tumours were identified in the fimbria, one in both the fimbria and proximal tube, and one involved the ampulla. These authors emphasised the importance of evaluating the fimbrial segment of the fallopian tube, and have developed a standard protocol for Sectioning and Extensively Examining the FIMbria (SEE-FIM). Briefly, the protocol (5) comprises evaluating the distal 2 cm of the fallopian tube by dissecting the specimen sagittally into 4 sections. The remaining proximal segment of fallopian tube is sectioned transversely at 2 to 3 mm intervals. The authors estimate that this approach increases the longitudinal surface area of the fimbria available for examination by 60% compared with conventional cross sectioning.

The detection of occult tumours in fallopian tubes is important as follow-up studies (6) indicate that there is a potential for local recurrence and metastasis. Consequently clinical management may be influenced by the detection of these small neoplasms.

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Risk-reducing oophorectomy: What's the right operation?

When surgery was first proposed for reducing the risk of gynaecological cancer in carriers of BRCA mutations, gynaecologists regarded the ovary as the main target and performed bilateral salpingo-oophorectomies (BSO). But we now know that the fallopian tube is often the primary source of cancer in these women, and we recommend removal of the entire tube, including the portion embedded in the uterine wall i.e. BSO with hysterectomy. But, as emphasised by Dr Tom Dodd in the accompanying article, these operations are not necessarily "prophylactic". Some women have microscopic tubal or ovarian cancer identified by the pathologist, particularly if the procedures outlined by Tom have been followed.

An unexpected diagnosis of ovarian or tubal cancer raises an important issue for the gynaecological oncologist. The surgery that had been planned as a risk-reducing procedure has now become a therapeutic procedure, but the surgery in these two settings is not the same. These women now require a second laparotomy for staging. The need for staging was not known at the time of the initial procedure and only becomes evident in hindsight with the pathologist's report.

I recommend that women having risk-reducing BSO and hysterectomy be staged at the time of their initial procedure. This means that the surgeon examines the abdominal cavity thoroughly, including palpation of the pelvic and para-aortic nodes and taking a generous biopsy of the omentum. The additional information and samples obtained will then be available if the woman subsequently turns out to have microscopic evidence of cancer. These women can be spared a second laparotomy for staging.

As yet, this is not an evidence-based approach. It represents my practice, based on first principles and my recent experience with a woman who had positive para-aortic nodes from a microscopic tubal cancer. We need more data to define the natural history and best management of women with microscopic disease. But for now, I suggest that these women be staged at the time of their risk-reducing surgery.

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Conference update

The **Familial Cancer: Research and Practice** conference will be held at Couran Cove Island Resort, Queensland from 19–22 August, 2008. Visit www.kconfab.org.au for full details and registration.

Resource update

The Cancer Council

The **Cancer Council Helpline 13 11 20** can now be called from 8.30 am to 8.00 pm Monday to Friday. The trained nurse counsellors provide information and support and can be reached on **13 11 20** for the cost of a local call.

On the web

In February this year the National Breast Cancer Centre (NBCC) changed its name to the **National Breast and Ovarian Cancer Centre (NBOCC)**. Their website contains a wealth of information for health professionals and the general public about breast and ovarian cancer. Visit their updated website at www.nbocc.org.au

Clinical update – Ovarian cancer is a NBOCC publication for health professionals. Issue 5 examines: Annual surveillance by CA125 and transvaginal ultrasound for ovarian cancer in both high-risk and population risk women is ineffective. The report can be viewed at www.ovariancancerprogram.org.au/publications/clinicalupdate/cuoc_iss05.html

The Kathleen Cunningham Foundation Consortium for research into familial breast cancer (kConFab)

April 2008 newsletter is now available. It contains research updates, book reviews and can be viewed at http://www.kconfab.org/Newsletters/Newsletter_Autumn%2008.pdf

Book review

A Practical Guide to Human Cancer Genetics 3rd edition

(2007) by Shirley Hodgson, William Foulkes, Charis Eng and Eamonn Maher. It provides a comprehensive and practical guide to the diagnosis and management of inherited disorders conferring susceptibility to cancer. Available through Cambridge University Press www.cambridge.org

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Feedback?

If you have any feedback from this edition or suggestions for future editions please send them to the Cancer Genetics Education Project Officer at genetics@cancersa.org.au

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