

MEDICAL UPDATE

The RESCUE study: Does the use of daily temozolomide control the growth of recurrent brain tumours?

N THE LAST DECADE temozolomide chemotherapy has revolutionized the treatment of brain tumours. Since 2004, standard treatment for the most aggressive brain tumours has consisted of a combination of daily temozolomide with radiation therapy, followed by 6 months of temozolomide alone. Although it does not provide the much hoped for cure for this disease, temozolomide has few side effects, can be taken at home, and offers good disease control for many patients.

A new study at the BC Cancer Agency and elsewhere will examine whether a person with a high grade glioma who has received temozolomide in the past can still benefit from a low daily dose of this chemotherapy when the tumour becomes active again. Temozolomide's activity against brain tumours occurs through a number of different mechanisms. In its usual dose (when taken for five consecutive days per month), it kills tumour cells by damaging DNA and blocking the cells ability to divide and

reproduce. Usually, normal cells and tumour cells have a number of ways to fix this damage, including the use of DNA repair genes. In brain tumours, the methylguanine methyltransferase (or MGMT) repair gene is especially important. MGMT in tumour cells corrects the DNA damaging effect of temozolomide. Studies have shown that when MGMT is inactivated or "silenced" in aggressive brain tumour cells, patients have a better response to chemotherapy and live longer, presumably because the tumour cells cannot use this repair gene to fix the damage done to them by chemotherapy. Interestingly, continuous low doses of temozolomide have been shown to reduce the amount of MGMT in tumour cells. Therefore, in tumours that have developed resistance to standard doses of temozolomide, it may be possible to make them more sensitive with the low dose chronic administration of this drug.

In addition, aggressive brain tumours are characterized by the development of

an extensive network of poorly formed blood vessels which supply nourishment to the growing tumours. Continuous, low doses of some chemotherapy drugs appear to prevent the growth of these blood vessels. This is called an anti-angiogenic effect, meaning "active against the development of blood vessels." By this method, low dose continuous therapy with temozolomide may starve the tumour of its vital blood supply.

Early studies of low dose daily temozolomide in the treatment of brain tumours offer promising results, with few negative side effects.

Your doctor will discuss the option of enrollment in this clinical trial if you are a potential candidate. Participants must have a high grade glioma, and have completed at least 2 months of temozolomide (5 days per 28 day cycle) in the past, with no additional chemotherapy used since then. For additional information about this study, speak to your oncologist.

Editions of Headlines are also available as a pdf download at:
www.bccancer.bc.ca/HPI/CancerManagementGuidelines/NeuroOncology/PatientResources.htm

If you would like to submit an article, ask a question, or serve on our patient and family advisory board, please contact Rosemary Cashman at rcashman@bccancer.bc.ca or 604.877.6072 (phone) 604.877.6215 (fax).

All content by Rosemary Cashman unless otherwise specified.

Your love life

HEN YOU FIRST HEARD that you had a brain tumour, you and those you love were probably most concerned about what sort of treatment you would receive and how to maximize your chances for survival. But at some point after a cancer diagnosis, many people begin to refocus on "normal life" and look for ways to return to that life and to the relationships that bring meaning and joy to their lives. The ways in which we express feelings of intimacy and sexuality are defining features of our individual personalities. For many people, this sort of expression is important and satisfying on many levels throughout life, regardless of age or illness.

A brain tumour can threaten mobility and other aspects of normal functioning, deplete energy reserves, play havoc with emotions, and even change the way one views oneself. All of these things can have a profound effect on one's sexual life. In addition, treatments may pose risks to pregnancy and cause couples to rethink ideas about family planning. Here are some of the facts you need to consider

Changes in behaviour: The location of the tumour may cause changes in personality. These may include feelings of apathy, meaning a person may not seem to care about anything, including sex. By contrast, a tumour may cause a person to behave differently or even inappropriately, including experiencing or acting on unusual sexual feelings and desires. If changes in behaviour or personality are a problem for you or your partner, talk to your doctor for advice.

as you find the path back to "normal" that

is right for you and those you love.

Radiation: Brain irradiation can cause fatigue that may last for months, affecting one's ability to do many things, including making love. Radiation may also affect hormone production, leading to changes in an individual's usual feelings of sexual desire as well as the ability to perform sexually. Hormones can sometimes be replaced in pill-form to good effect. For men whose ability to achieve an erection is affected, other medications can be helpful.

Chemotherapy: Chemotherapy may cause nausea and often causes fatigue, neither of which enhances sexual feelings.

Let your health care team know

if you are experiencing these side effects, so that you can receive treatment or recommendations for controlling the problems. As far as fatique is concerned, timing activities appropriately is always helpful, no matter what those activities are. That may mean, for example, that you engage in sexual activities at the beginning of

the day or after a nap, rather than at the end of the day, when you are most tired. Chemotherapy may induce an early menopause in women, with associated problems of vaginal dryness, hot flashes, and the potential for discomfort with intercourse. Vaginal estrogen creams and moisturizers can be an effective remedy. Brain tumour treatments may increase the risk of infection, including yeast infections in the mouth or vagina, and these are easily treatable. Chemotherapy can also cause low blood counts. If platelets (which clot the blood) or white blood cells (which fight infection) are very low, you are at

risk for bleeding and infection. Intercourse should be avoided until your blood counts return to a safe level. And to protect your partner from the effects of chemotherapy which may be transmitted through bodily fluids, use condoms when you engage in intercourse for 24 hours during and after taking chemotherapy. Of course, sexual and emotional gratification are not dependent on intercourse, and many couples experience great satisfaction through other avenues of physical affection.

Reproduction: Remember that chemotherapy and some seizure medicines can cause grave problems or death to a fetus, so a reliable method of birth control is essential while taking these medications and for at least 6 months afterwards. If you are man about to begin chemotherapy, talk to your doctor about banking sperm, as chemotherapy can affect fertility, especially in men and in women over 40 years of age. Egg banking is also possible, but is less successful.

Coping with changes in your physical appearance: Hair loss from radiation, weight gain from longterm steroid (dexamethasone) use, changes in the skin and gums... there are no easy solutions to problems related to one's body image, even when these changes are temporary. However, it's important to remember that the way a person looks is just one aspect of his or her desirability. Talking to your partner, perhaps with assistance from a counselor, may help you to discover ways to overcome fears and insecurities about these changes and to focus on other, more positive aspects of your relationship.

BC Cancer Agency's Community Cancer Forum

The latest in cancer treatment: Participating in clinical trials

Managing pain and fatigue (in Cantonese)

A free public forum for all members of the community

Saturday, December 1, 2007, 9:30 a.m. to 3:30 p.m. Westin Bayshore Resort & Marina, 1601 Bayshore Drive, Vancouver, B.C.



When a loved one has cancer, family and friends become partners on a journey through care and treatment. Cancer patients, supporters, and caregivers are invited to learn how to better navigate this journey at the BC Cancer Agency's Community Cancer Forum, sponsored by the Provincial Health Services Authority. Learn about the latest in new cancer treatments, integrative cancer care, nutrition, physical activity, cancer survivorship, and pain and fatigue management, and visit displays from the BC Cancer Agency and its community partners.

Stanley Park Ballroom Salon 1

Time	Session	Speaker
10.30	Integrative cancer care: Five steps to empowering body, mind and spirit	Dr. Robert Rutledge, Nova Scotia Cancer Centre Dr. Teresa Clarke, InspireHealth
12.30	Picking up the pieces: Moving forward after surviving cancer	Dr. Sherri Magee, co-author of a cancer survivorship guide Cancer survivor
14.00	Lessons from the wise ones: Transformative stories from cancer patients — an interactive session drawing from Dr. Rutledge's experience leading support groups and daily practice	Dr. Robert Rutledge, Nova Scotia Cancer Centre
Stanl	ey Park Ballroom Salon 2	
10.30	Ten ways to prevent cancer and its recurrence with diet and lifestyle: a lecture and cooking demonstration	Geoffrey Cannon, World Cancer Research Fund / American Institute Cancer Research Gerry Kasten, Registered Dietitian / Chef

For more information about the Annual Cancer Conference, please see the following link: www.bccancer.bc.ca/HPI/ACC2007/default.htm

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12.30

13.30

themselves and life in general from a new perspective, and that even in the face of distress, they may experience stronger bonds with those they love. With regard to sexual relationships, one patient put it this way, "Expectations of the way things used to be or what others reportedly experience let go of all that. Imagine completely abandoning all sexual expectations – having none of yourself or your lover is a great starting point – no where to go but "up" from there!" For those who experience profound sadness, or who are unable to derive pleasure from the relationships and activities that are usually meaningful to them, talk to your doctor about therapy, including antidepressants.

For more discussion about these common concerns related to intimate relationships, talk to your health care team, participate in a brain tumour support group, or visit your community or cancer agency library. Or see the following links: http://www.bccancer.bc.ca/PPI/copingwithcancer/default.htm

http://www.bccancer.bc.ca/PPI/ RecommendedLinks/default.htm

Dr. Hagen Kennecke, BC Cancer Agency

Dr. Roy Ma, BC Cancer Agency

I was diagnosed with brain cancer in March. The surgeon removed it all, then I got radiation and chemo and now I'm just getting the chemo in a pill form. My doctor says I can't drive because I had a seizure, so I can't work (I was a truck driver). I'm always worrying about the cancer coming back. It makes me nervous and irritable and I can't sleep very well. Would a tranquilizer help me? I don't want to get addicted. Also, I feel nervous every time I even look at my chemo pills so I don't feel like eating anymore and have lost weight.

People living with cancer often experience intense emotional stress. Coping with pain, fear of recurrence of cancer, uncertainty, anxiety and loss of sleep are some of the experiences reported.

The Relaxation Support program at BCCA evolved over 20 years ago to assist in addressing these various concerns. It is a combination of teaching and practice of deep relaxation and imagery. A variety of techniques such as breath work and progressive muscle relaxation are paired with guided imagery and visualization.

The goal of therapy is to help people achieve a state of mental and physical tranquility through a Relaxation Response. The term Relaxation Response was coined by Dr. Herbert Benson in the late 1970's. Benson noted the physiological effects of relaxation from his experiments with transcendental meditation. These effects include a reduction in the body's demands for oxygen; decreased heart rate, breathing

rate and blood pressure; decrease in substances found circulating in the bloodstream during stress, such as lactic acid and cortisol; and decrease in arousal of the sympathetic nervous system, which primes our bodies to deal with stressful

situations. As a result of this Relaxation Response we experience a sense of calm and well-being.

A lot of time we're on automatic pilot and not aware of the chronic stress in our day to day lives. Learning relaxation techniques and practicing them regularly helps us to feel more in control when faced with stressful events. This can be very useful when you are meeting the challenges of a cancer diagnosis.

The drop-in sessions are 90 minutes in length, divided roughly into 30 minutes for check-in, 45 minutes for relaxation work, and 15 minutes for final check-in, feedback and closure. In the 45 minute relaxation

time, the trained facilitator guides people using techniques to help modify their breathing, unclench their muscles, and slow their racing thoughts towards regaining some calmness, equilibrium and perspective. This format is offered in

the four Cancer Centres as well as in numerous communities throughout British Columbia.

Relaxation is both an art and a skill that is learned and practiced. People who practice relaxation regularly report improvement in quality of life and significant reductions in nausea, pain, anxiety, and depression. You can contact Vancouver Cancer Centre, Patient and Family

Counseling Services at 604-877-6000 x2194 to find out when and where these programs are offered in your community.

by Sarah Sample, MSW, BC Cancer Agency, Patient and Family Counseling Services



Question

Cancer Centre Libraries

The BC Cancer Agency's Library and Cancer Information Centres provide materials and services to people in British Columbia and the Yukon primarily from its central location in Vancouver at 675 West 10th Avenue. Library staff will help patients, members of the community and health care professionals to find information through books, pamphlets, videos and electronic resources. Drop by your cancer centre library or call toll-free from anywhere in B.C. or the Yukon 1-888-675-8001 ext 8001. Or see the following link: http://www.bccancer.bc.ca/PPI/Library/default.htm

Brain Tumour Support Groups at the BC Cancer Agency

Kelowna

3rd Monday of each month 11:00 to 12:30 pm Facilitator: Brigitte Wagner 250-712-3929 or 250-712-3963

Vancouver

1st Wednesday of each month 11:00 to 12:30 pm Facilitators: Maureen Parkinson and Rosemary Cashman 604-877-6000 x 2194 or 604-877-6072

Victoria

2nd Thursday of each month 11:00 to 12:30 pm Facilitator: Catherine Traer-Martinez 250-519-5528

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