

Research Update: Cancer in Lupus

Based on a presentation by Dr. Sasha Bernatsky at the BC Lupus Society Symposium held October 22, 2005.

Background

Dr. Bernatsky is currently an assistant professor in the Department of Medicine at McGill University. Her current focus is on understanding the risk of cancer in SLE. She is also co-editor of "Lupus: The Disease with a Thousand Faces."

Research Update: Cancer in Lupus

There has been an increased interest in understanding the risk between autoimmune diseases and cancer. This arises largely because people are living much longer with such diseases. As such, issues surrounding diseases such as cancer and heart disease are of interest. Concern has been raised by both the patients and those treating them. However, there were not a lot of facts known as to the magnitude of risk, thus creating the need for patients and practitioners to come together to research this issue. To date, there has been some progress.

Summary of Previous Studies on Cancer on SLE

Why might there be a link with cancer? Genetic factors drive many conditions, including lupus and cancer. People have argued that genetics of lupus may protect against cancer. Conversely, the opposite argument has been made. With each decade we know more about lifestyle factors which also predispose a person to cancer. Immunosuppressive drugs are interesting in that their effect might not be so simple. We need to understand not only the effects of the drugs, but the risks they create. There have been at least 12 small studies addressing the question of just how common cancer is for those with lupus. While results have not been entirely conclusive, they suggest a small chance of increase in cancer for lupus patients, in particular lymphoma, a rare blood cell cancer.

International Study on Cancer in SLE

In 1998 and 1999 research was expanded and an international study conducted. Because lupus is a relatively rare disease, this study was conducted broadly, with 23 centres in North America, Europe, Iceland, and Asia. The desire was to compare this group with the general population. The study obtained information by checking with cancer registry records and their "expected rates of cancers" to compare those with lupus patients. Almost 10,000 patients were followed. Over time, 431 developed cancer. This was about a 15% increase from that of the general population. While this statistic creates an understandable gasp of concern, keep in mind that cancer is a problem for anyone. Some people say that the cancer life-time risk for anyone is 30%. As such, the baseline risk is actually not increased that dramatically (to 35%).

Lymphoma and Lung Cancer

Non-Hodgkin's lymphoma (rare cancer of the lymphocytes-immune system cells, found in blood) was specifically studied. For this cancer, the risk is increased in lupus, but the absolute risk of getting lymphoma in general is actually less than 1%. There is a real opportunity for

researchers in the area of cancer and auto-immune to learn more about the pathology of lupus development and auto-immune diseases.

Also, lung cancer was 1.4 times more common in lupus patients. Again, if the risk of lung cancer is only 4% in the general population, the risk in SLE would still be less than 6%. Further, risk factors such as smoking etc. are very important, thus these lung cancer risks can be modified by lifestyle. Previously, quitting smoking may not have always been emphasized to lupus patients. It is hoped that this has now changed and that quitting smoking is always strongly advocated.

The greatest risk of cancer was early in the diagnosis of lupus. This was very interesting and suggested that cumulative drug use may not actually be the primary cause.

Importance of Findings

In conducting the study, it was hoped that once the magnitude of cancer risk in lupus was known, eventually we could find strategies to lower that risk. If cancer is occurring early in the disease, one might hypothesize that the focus should perhaps be on lupus treatment and diagnosis in the very early stages.

Lymphoma

As mentioned, lymphoma is very rare, and there are various prognostic groups. Many patients manage well with this disease. The progression of others is not so favourable. There is interesting research from Sweden which suggests that those with lupus that develop lymphoma actually do have a better outcome than others with lymphoma generally. The reason for this is not known.

Pap tests

Another concern is cervical dysplasia, cell changes which pre-date cervix cancer. If such cells are found (detected by Pap smear tests), treatment can be done early. If not detected early, treatment is much more difficult. Previous studies have found that women with SLE should be attentive to having Pap tests done as they have a greater risk for cervical dysplasia (which can lead to cancer) than women in the general population. Also, smoking and immunosuppressive drugs do increase the risk.

Modification of Lifestyle

Risk of some cancers can be modified by altering lifestyle habits. Diet is very significant. Whole grains, vegetables, fruits, beans and other fibre-contained foods may decrease the risk for some cancer types. These foods are also rich in vitamins, minerals, and have other factors which lower cancer risk (e.g. lycopene, as found in tomatoes.)

It should be noted that a diet high in animal products (red meat) and high fat may increase the risk of some cancers, mostly the gastro-intestinal cancers. Excessive alcohol also increases risk of liver cancer. Being overweight increases the risk of gastro-intestinal cancer, breast cancer, and others.

Therefore, it is recommended that vegetable servings be increased – eat 5 or more helpings a day. Try to increase fibre consumption with whole grain foods. Also, you should limit your

intake of red meat and high fat/processed products. Alcohol should be limited to 1-2 drinks per day. Finally, choose foods that help you maintain a healthy weight.

In conjunction with this, patients should maintain physical activity. Thirty to forty minutes per day of moderate/vigorous activity is recommended. If you have been inactive, you should develop such an exercise program gradually, and if there is any concern regarding heart disease, developing any exercise program should be done in consultation with your doctor. However, just taking the stairs, walking more often, and making healthy choices will optimize your health outcomes, not only for cancer, but also for heart disease and cholesterol.

With respect to other cancers, skin cancer can be caused by sun exposure. Simply, avoid the sun.

Tobacco is found to cause 85% of lung cancers, as well as a significant cause of other cancers such as breast cancer. If you are a smoker, we encourage you to do your best to quit. For help, contact the BC Lung Association [www.bc.lung.ca, 1-800-665-5864 or 604-731-5864] or Lung Association Smoking Cessation Programs [<http://bc.quitnet.com>, 1-877-455-2233.]

In terms of regular screening, women under the age of 30 should have a yearly Pap test. For women between the ages of 30 and 65, some guidelines suggest that if you have 3 consecutive annual negative Pap tests, screening could be reduced to every 2-3 years. Women on immunosuppressive drugs should be tested annually. Discuss this with your family doctor or gynaecologist.

With respect to breast cancer, Canadian guidelines suggest mammograms starting at the age of 50; however, if you have a family history of breast cancer speak with your doctor about earlier screening.

With colorectal cancer, most guidelines recommend that if you are 50 or older you should start a screening program. If you have family history of colon or rectal cancer, speak to your doctor about starting screening earlier.

With other types of cancer, it is not clear what the screening strategy is, but you can discuss with your doctors. Some dermatologists do recommend skin examinations every 3 years between the ages of 20 and 40, and yearly over the age of 40.

In summary, despite the studies suggesting that there is an increased risk of cancer with SLE, this should not cause a shock wave of dismay. There are lifestyle modifications that you can make to help you to live a long and healthy life.

This report has been reviewed by Dr. SSasha Bernatsky and is printed with her permission.