Research Update

Anti-IgE asthma treatment reduces corticosteroid use

People with asthma can mitigate their symptoms and reduce — and in some cases completely eliminate — the need for oral corticosteroids with anti-IgE therapy, according to the results of a US study (*N Engl J Med* 1999;341:1966-73).

"IgE serves a critical role in activating allergic response. If we remove IgE from circulation, the allergic response is inhibited and patients have better symptom control," says Dr. Henry Milgrom, lead author and senior staff physician with the National Jewish Medical and Research Center in Denver.

The multicentre study involved 300 participants with moderate to severe asthma who were taking corticosteroids. During the first 12 weeks of the study the control group and the 2 treatment groups continued to use corticosteroids, in addition to either a low- or high-dose anti-IgE therapy or a placebo. Each group was weaned off corticosteroids over the following 8 weeks of the study.

Forty-three per cent of participants in the low-dose group and 33% in the high-dose group completely eliminated their use of oral corticosteroids by the end of the study period, compared with only 17% in the control group. Overall, those receiving anti-IgE were able to reduce corticosteroid use by more than 50% in 57% of cases in the low-dose group and in 78% of those in the high-dose group. As well, symptoms such as tightness of the chest, excessive coughing and wheezing improved in 40% of participants in the low-dose group and 42% of those in the high-dose group. Thirty per cent of participants in the control group experienced an improvement in these symptoms.

The only side effects associated with the anti-IgE therapy were rashes and hives that appeared with the first administration of the drug and then disappeared, says Milgrom, a professor of pediatrics at the University of Colorado.

IgE sets off an allergic reaction by attaching itself to particular cells, and when they come in contact with an allergen, allergic reactions occur. Anti-IgE treatment binds to IgE, effectively removing it from circulation. In the case of the 2 treatment groups, IgE in the blood was reduced by more than 95% overall.

It's not surprising that anti-IgE therapy is effective, says Milgrom. "This is how the drug was conceived. The surprise is that it is working as well as it is." — *Donalee Moulton*, Halifax

A less deadly form of colorectal cancer

Canadian researchers have discovered that patients with colorectal cancer arising from a genetic abnormality called microsatellite instability tend to survive longer and are less likely to have their cancer spread. The discovery could eventually mean different treatment options for the 1 in 5 patients with this form of the disease (*N Engl J Med* 2000;342[2]:69-77). At present, almost all patients with advanced cancer are treated with chemotherapy after surgery.

In a population-based study of 607 patients in whom colorectal cancer was diagnosed before age 50, scientists at Mount Sinai Hospital found that 17% had tumours with microsatellite instability (MSI). The remaining 83% of patients had tumours resulting from a more common gene abnormality called chromosomal instability (CSI). Patient data and tumour samples were drawn from the Ontario Cancer Registry and pathology departments across the province.

Although the MSI tumours tended to be larger that those originating from CSI, patients with this clinically distinct subtype of colorectal cancer had an 76% overall survival rate after 5 years, compared with a 54% 5-year survival rate among patients with CSI tumours. This sizeable improvement in patient outcome was independent of all standard predictive measures, including disease stage. As well, cancer characterized by MSI was less likely to metastasize to surrounding lymph nodes or organs elsewhere in the body — regardless of the depth of tumour invasion.

The findings are not all that surprising, according to Dr. Steven Gallinger, associate professor of surgery at the University of Toronto, and senior scientist with Mount Sinai's Samuel Lunenfeld Research Institute. "It's intuitive that cancers that develop from 2 significantly different pathways should have markedly different natural histories," said Gallinger. "But we need a large-scale, population-based study if we are to effect change in medical practice." Although the study looked at younger patients with colorectal cancer, Gallinger believes the results hold true for people over age 50.

Other researchers, including Gallinger and colleagues, are now going back to previous randomized chemotherapy trials to find out whether patients with MSI cancer would have fared just as well without that form of treatment. While his team's findings point to the possibility of "molecular tailoring" of treatment using new drugs currently undergoing prospective studies, Gallinger expects it will still be several years before there are changes in treatment practices. — *Greg Basky*, Saskatoon