

Wednesday May 4, 2016

Spread of cancer may be prevented by good pain relief and use of morphine

Adequate pain relief after breast surgery, and perhaps use of the drug morphine, might help prevent the further spread of cancer, new research shows.

Evidence suggests that good pain relief is important to breast cancer patients because having high levels of pain suppresses the body's immune system, while other evidence suggests that morphine might help decrease the enzymes that cancer cells secrete to help themselves spread.

“When we treated mice with morphine and then injected breast cancer cells, it was found that the mice that received morphine had a lower tumour count,” says researcher Dr David Sturgess.

Dr Sturgess spoke today on this and other cancer research findings at the annual scientific meeting of the Australian and New Zealand College of Anaesthetists in Auckland.

Dr Sturgess and a team at the Mater Research Institute in Queensland are investigating whether morphine and its metabolites trigger inflammatory pathways that in turn amplify the immune response that helps fight cancer.

“The evidence around this is not clear,” Dr Sturgess says. “Other factors might be important too, such as the actual dose of morphine, or the quality of pain relief the patient experiences, rather than the actual drug that is used.

“The evidence that suggests morphine might improve outcomes was related more to higher doses of morphine.”

Dr Sturgess is taking multiple blood samples from 60 surgical patients who do *not* have cancer, and asking them about their sense of pain relief

at six, 12 and 24 hours after surgery. Then those blood samples will be used on breast cancer cells in the laboratory to see what effect, if any, they have.

“The mechanisms that we are exploring involve the immune system generally. This could prove applicable to other forms of cancer as well,” he says.

The results of previous studies about the effect of morphine have been mixed, with some finding it helped and some finding it didn't.

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