Editorial

Genetic testing for cancer risk

การตรวจพันธุกรรมเพื่อหาความเสี่ยงของโรคมะเร็ง

We all agree that “prevention is better than cure”, especially cancer. There are many screening tests for cancers available; however, only a genetic testing was explained in this editorial. Cancer can sometimes appear to “run in families”. The genetic testing examines specific mutations in a person’s chromosomes, genes, or proteins. Mutations that are harmful may increase a person’s chance, or risk, of developing a disease such as cancer. Inherited mutations are thought to play a role in about 5 to 10 percent of all cancers. The genetic testing is done on a small sample of body fluid or tissue - usually blood, but sometimes saliva, cells from inside the cheek, skin cells, or amniotic fluid. Tests are available for some inherited faulty genes. Currently tests are available for gene mutations that increase the risk of breast cancer, bowel cancer, ovarian cancer, womb cancer and prostate cancer.

The genetic testing can have several possible results: positive, negative, true negative, uninformative negative, false negative, variant of unknown significance, or benign polymorphism. A “positive test result” means that the laboratory found a specific genetic mutation that is associated with a hereditary cancer syndrome. A positive result may confirm the diagnosis of a hereditary cancer syndrome. It indicates an increased risk of developing certain cancers in the future. It shows that someone carries a particular genetic change that does not increase their own risk of cancer but that may increase the risk in their children if they also inherit an altered copy from their other parent. It also suggests a need for further testing.

People who have a positive test result may be able to take steps to lower their risk of developing cancer or to find cancer earlier, including being checked at a younger age or more often for signs of cancer, reducing their cancer risk by taking medications or having surgery to remove “at-risk” tissue. Changing personal behaviors (such as quitting smoking, getting more exercise, and eating a healthier diet to reduce the risk of certain cancers) should be promoted.

If your family members have cancers and you are worried you may get it too, you may be eligible for a genetic test. You may be eligible if you have a strong family history of cancer in your family. A strong family history means at least 2 close family members on the same side of the family who have the same cancer or related cancer types, such as bowel and womb cancer. Before you can have a genetic test, you will be asked some questions about your family history, including “Who in the family has had cancer”, “The type of cancer they had”, and “How old they were when they were diagnosed”. You can get a genetic test which has been available in some tertiary care hospitals in Thailand.

There are advantages of a genetic test. If you are found to have a gene mutation there are things you can do to reduce your risk of developing cancer. You may be able to make certain lifestyle changes or have regular screening to detect cancer early. You may be able to take medicines that lower the risk of developing cancer or have risk reducing surgery. Knowing that you have a particular cancer gene can help to reduce the stress and anxiety caused by not knowing any problems. There are the possible disadvantages. Some genetic test results identify a variation in a gene but it may not be clear whether it increases your cancer risk. If the test finds a faulty gene, you may have constant worry about developing cancer.

In conclusion, prevention is always better than cure. If you want to reduce your risk of cancer, there are things you can do, such as eating a healthy diet, exercising regularly, keeping to a healthy weight, not smoking and drinking, and reducing stress and staying happy. An appropriate uptake of cancer screening tests is also recommended.

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Source:

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