

Prostate cancer may be caused by virus, study indicates

September 18 2009, By Jane Glenn Haas

Mounting evidence indicates that prostate cancer is an infectious disease caused by a recently identified virus.

It will be some time before researchers can definitively prove whether the virus causes prostate cancer. And even more time to develop a successful vaccine if it does. But the National Institutes of Health's cancer division is impressed enough with the data to encourage researchers to cooperate and collaborate on this topic.

Tabitha M. Powledge, a science journalist based near Washington, D.C., says her interviews of leading cancer experts leave her with the impression that few would be particularly surprised to discover prostate cancer is an infectious disease.

"There is a lot of indirect evidence from epidemiology and genetics that prostate cancer may turn out to be among the several cancers that are now proven infectious," says Powledge, who specializes in writing about basic research.

"The research does offer hope there will be ways in the future to prevent prostate cancer just as there are vaccines today that prevent cervical cancer."

Q. What have researchers identified as the potential virus?

A. The suspect is xenotropic murine leukemia-related virus, similar to



viruses known to cause cancer in animals. Researchers at Columbia University and the University of Utah found the virus in more than a quarter of some 300 prostate cancer tissue samples, especially in <u>malignant cells</u>. Let me stress, it is not yet proven that prostate cancer is a viral disease.

Q. Could there be more than one type of prostate cancer?

A. Ila Singh, from the University of Utah, senior author of that study, pointed out clinicians badly need better tools for distinguishing between prostate cancers that are potentially deadly and those that develop so slowly that the affected men die of something else.

Q. Experts you interviewed have said this virus could be sexually transmitted?

A. Yes. One bit of epidemiological evidence is that men with a high rate of sexually transmitted diseases tend to be more likely to get prostate cancer than men without a strong history of STDs. Another bit of epidemiological evidence surrounds aspirin. Researchers tell me men who take daily aspirin to reduce inflammation for heart problems also tend to get less prostate cancer. There is a reason, from that result, to believe a virus may be involved because a virus causes inflammation.

Q. If scientists can establish an infectious cause for prostate cancer, would men potentially be able to prevent this common deadly disease?

A. The new paper, published in the "Proceedings of the National Academy of Sciences," emphasizes how finding a viral cause for prostate cancer could impact biomedical research. It would trigger a number of studies for vaccine and other therapies.

Q. What about the men who have prostate cancer who do not die?



A. Researchers are looking for a marker that will distinguish men with aggressive cancer \hat{A} - those in serious health trouble \hat{A} - from those who don't need to do anything.

Q. A vaccine that protects against <u>cervical cancer</u> is now suggested for young women -- girls not yet in puberty -- on the theory they should be immunized before they risk getting exposed. As scientists work on studies about whether prostate cancer is caused by a virus -- and if it is, as they develop a vaccine -- what can <u>men</u> do?

A. Well, keep in mind that we don't know for sure yet that <u>prostate</u> <u>cancer</u> is an infectious disease or that it's an STD. But wearing a condom is always a sensible choice. That's the suggestion to lower the risk of getting any sexually transmitted disease -- and there are lots of them.

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