

Oestrogen patches could offer a new treatment option for prostate cancer patients

March 4 2013

Patches giving oestrogen through the skin could be an easy and safe alternative to the hormone therapies used to treat prostate cancer, according to new research published in the *Lancet Oncology*, today (Monday).

The Cancer Research UK funded study, run by researchers at Imperial College London, found that [oestrogen](#) patches, usually used to treat [menopause symptoms](#) in women, reduced levels of testosterone in men to a similar extent as the current [hormone treatment](#), LHRHa injections.

Many prostate cancers need the [male hormone](#) testosterone to grow. Using drugs to reduce testosterone in advanced stages of the disease can shrink the tumour or slow growth**.

In the 1960s this was done by using oestrogen tablets, but this caused heart and blood clotting side-effects for some men. Now, LHRHa injections are the main treatment for reducing testosterone but these may also cause serious side-effects including osteoporosis, [bone fractures](#) and diabetes.

The Cancer Research UK trial was led by a clinical researcher from Imperial College Healthcare NHS Trust, and Imperial College London, and the Medical Research Council Clinical Trials Unit.

The trial compared the standard treatment – LHRHa injections – to oestrogen patches for men with locally advanced [prostate cancer](#) or

prostate cancer that has spread, in order to test the benefits and side effects from the patches.

254 men took part in the initial trial which showed patches appeared to suppress [testosterone levels](#) to a similar extent as LHRHa injections. Importantly the patches did not cause the same degree of heart and blood clotting problems caused by oestrogen tablets.

And after 12 months, the researchers also found that those having the LHRHa treatment had higher [blood glucose](#) and [cholesterol levels](#), which can increase the risk of heart disease compared to men treated with patches.

The initial trial has now been extended to look at 660 men to study the long-term effectiveness and side effects of oestrogen patches.

Dr Ruth Langley, study author from the Medical Research Council Clinical Trials Unit, said: "These promising new findings suggest that we might be able to use oestrogen patches or an oestrogen gel to treat prostate cancer without significantly increasing the risk of heart disease and stroke. We think the reason oral oestrogen caused these side effects is because the oestrogen reached the liver in high concentrations straight from the stomach, whereas if the oestrogen can be absorbed through the skin the effect on the liver is avoided."

Professor Paul Abel, honorary consultant in urology at Imperial College Healthcare and study author from Imperial College London, said: "The next step is to test if the oestrogen patches are as effective at stopping the growth of prostate cancer as the current hormone treatments. We're now testing this in over 600 patients and some early results could be available later this year."

Kate Law, director of clinical and population research at Cancer

Research UK, said: "More men than ever are surviving prostate cancer thanks to advances in research, but we still urgently need to find more effective treatments and reduce side effects. This trial is an important step towards better and kinder treatments that could bring big benefits to men with prostate cancer in the future."

John Reynolds, 90 year old prostate cancer patient from London, said: "I was diagnosed three years ago and I was given a choice of going for injections or patches. I chose patches and it's been a marvellous treatment – within a month or two I had no pain or blood."

Richard Dudley, 88 year old prostate cancer patients from London, said: "The last thing I wanted was radical surgery, and the patches are very easy to use. When I started, my PSA was 100, but now it's around 6-7, which has made me very happy".

More information: Langley et al. Cardiovascular outcomes in patients with locally advanced and metastatic prostate cancer treated with luteinising-hormone-releasing-hormone agonists or transdermal oestrogen: the randomised, phase 2 MRC PATCH trial. *Lancet Oncology* (2013). [dx.doi.org/10.1016/S1470-2045\(13\)70025-1](https://dx.doi.org/10.1016/S1470-2045(13)70025-1)

Provided by Cancer Research UK

Citation: Oestrogen patches could offer a new treatment option for prostate cancer patients (2013, March 4) retrieved 26 April 2024 from <https://medicalxpress.com/news/2013-03-oestrogen-patches-treatment-option-prostate.html>

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