

Cause for hope in battle against prostate cancer

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New frontiers have suddenly opened up in the treatment of advanced prostate cancer. Since the arrival of a new form of chemotherapy last June, several more developments have followed, raising the possibility of extending the lives of men with this cancer.

These developments are doubly exciting. Not only are they promising for patients, but they have generated renewed enthusiasm in the prostate cancer research community.

Until recently, the path for men with advanced prostate cancer has been depressingly narrow.

First, such men are offered hormone therapy to suppress the cancer. This works for two to four years but eventually the cancer breaks through the hormone barrier and the therapy becomes useless,

When this happens, the only remaining option used to be standard chemotherapy. But this was a mixed blessing because, while it controlled pain, it would inflict its own side effects and do nothing to extend their lives. Most of these men would die within a year.

The new treatments look far more promising. They appear to increase survival rates and cause fewer side effects.

Manish Patel, a consultant cancer urologist at Westmead and Sydney Adventist Hospital, describes them as “really impressive”.

He was at the American Society of Clinical Oncology meeting in the US last June when docetaxel, the new chemotherapy agent for prostate cancer, made its debut.

Although this drug had been used in breast cancer, it was the first time it had been used for the prostate.

It was also the first drug to improve survival in men with hormone-resistant prostate cancer and was hailed as the new standard of care.

News of it spread around the world and, since then, the drug has been approved in Australia and is used here.

Made from yew tree needles, it is less toxic than standard chemotherapy and decreases the chances of dying by 24 per cent.

Patel says it re-opened the research books:” We were all surprised because we never thought we were going to find a single agent chemotherapy agent that would improve survival.

“It adds a median three months to survival. While this doesn’t sound like much to healthy people, to patients it is highly significant.”

In this case, median survival means some men don’t benefit at all and some benefit for more than 24 months.

Patel says researchers quickly postulated that if docetaxel was good by itself, it would probably be even better if boosted by other drugs.

Two weeks ago, he was back in the US at a multidisciplinary prostate cancer symposium that was full of surprises. One was a study showing that a combination of docetaxel and thalidomide almost doubled survival.

Thalidomide was used because it stops the formation of new blood vessels to tumours.

With docetaxel alone, the median survival was 14.7 months. When

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thalidomide was added, survival rose to 25.9 months.

These were encouraging results, and a trial using the combination is currently being run here by medical oncologist Gavin Marx. through Sydney’s Royal North Shore Hospital, the Sydney Haematology and Oncology Clinic and other sites.

But the biggest surprise at the US symposium was the presentation of a prostate vaccine that worked. Not only did it appear to extend survival but it had very light side-effects.

Called Provenge, it was shown to provide a survival advantage of 4½ months.

Unlike traditional vaccines that prevent disease, this one treats disease.

It is customised for each patient and actually trains their immune system to fight the tumour. The process involves doctors removing certain cells from the patient, mixing them with the vaccine, and then giving the concoction back to the patient in three infusions over a month.

The only side effects are a couple of days of fevers and chills, which feel like a common cold.

In the study presented to the symposium, after three years 28 of the 82 men who got the vaccine were still alive. Of the 45 men who got the dummy vaccine, only five were still alive.

“This made a huge impact,” says Patel. “All this time we thought the only way we were going to get a survival advantage was by finding the right chemotherapy and giving more of it.

“Because so much effort had gone into different kinds of vaccine with practically no response, they had been sidelined. Now there’s a resurgence interest.

“This means that all men with advanced prostate cancer may be eligible for this vaccine. With chemotherapy, men have to be quite healthy, fit and young.”

Patel says two things will flow from this discovery. The vaccine will be refined and improved upon, and studies will be conducted to find its place in treatment.

These studies will determine if it is better to use a docetaxel combination first and then the vaccine, or do it the other way around. Either way, these new treatments could potentially extend survival.

Patel believes it will be at least a year before this vaccine is available in Australia.

This vaccine is also being tested for less serious cases of prostate cancer, to see if it can be effective in the earlier stages of the disease.

From another frontier, the symposium heard about a targeted form of chemotherapy for advanced prostate cancer. Rather than delivering chemotherapy to the whole body and inadvertently causing damage along the way, researchers described how they send it directly into the prostate.

The researchers, from the Memorial Sloan Kettering Cancer Center, bound chemotherapy molecules onto particular prostate antibodies and then injected them into the body.

These engineered antibodies then entered the prostate, where they were quickly ingested by cancer cells- Once inside the cell, the chemotherapy molecule did its work. This meant there was minimal toxicity to the rest of the body. Although still experimental, Patel says this is very promising, adding that the recent developments have been so positive they have suddenly re-energised research into advanced prostate cancer.

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