Hormone inhibitor promising for hard-to-treat prostate cancer

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For prostate cancer patients whose tumors have continued to grow despite medical or surgical castration, a new drug candidate that inhibits production of male hormones anywhere in the body is showing promise in early trials.

Two poster presentations at the ESMO Conference Lugano this week show that the drug, called abiraterone, reduced levels of “prostate specific antigen”, a marker of cancer activity, and shrank tumors in patients in whom hormone therapy had stopped working and also in patients who had previously been treated with chemotherapy.

Male hormones such as testosterone are produced mainly in the testes, but are also produced by the adrenal gland and elsewhere in the body. These hormones can stimulate prostate cancer cells to grow, so the first treatment option for all men with prostate cancer that has spread, is to use chemical suppressants or surgery to inhibit testicular synthesis of male hormones. However, this treatment does not block the production of male hormones elsewhere in the body. Abiraterone, a drug that is taken orally, inhibits an enzyme called CYP450c17, which is critical to the production of the male hormones — not only in the testes, but also at other sources.

Dr. Alison Reid from The Institute of Cancer Research and Dr. Gerhardt Attard from The Institute and The Royal Marsden NHS Foundation Trust in London described two ongoing Phase II trials of the drug in men with advanced prostate cancer.

Men in both studies were given 1000mg of abiraterone daily. The first study treated men who had not previously received chemotherapy. So far 34 men have been treated, of whom 22 have seen their PSA levels drop at least 50% after 2 months. Some patients have also had shrinkage of their tumors (partial response).

This represents “significant anti-tumor activity,” the researchers say.

In the second study, the UK team studied 28 men whose cancer was growing despite treatment with the chemotherapy drug docetaxel. Ten of these men have seen PSA declines of more than 50% that have lasted at least 3 months from the start of taking abiraterone, with no major toxicities or adverse events.

Overall, the results are significant, the authors say. The drug has produced PSA decline rates by greater than 50% in 60% of pre-docetaxel patients and 50% of post-docetaxel patients. These results are supported by evidence of tumour shrinkage on scans, drops in circulating tumor cell counts and improvements in symptoms.

A Phase III trial of abiraterone is planned for next year.

Source: European Society for Medical Oncology