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News

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*****At a May 7 meeting in Washington, D.C., University of Texas researchers will report new findings on a medical problem common in older males--prostate enlargement.

DALLAS--One of the most common medical problems in men over 60 years of age is non-cancerous enlargement of the prostate gland. Because the prostate encircles the urethra where it exits the bladder, when the gland increases in size--as it does in virtually all older men--it often obstructs the flow of urine, thus making it impossible to completely empty the bladder.

The condition, which is termed "benign prostatic hyperplasia" or BPH, produces discomfort and significantly decreases the quality of life for a large number of older men. In fact, in about 75 percent of men who reach the age of 75 the prostate growth results in symptoms of urethral obstruction, which include lack of bladder control, increased urinary frequency and urgency, excessive urination at night and prolonged retention of urine that can lead to urinary tract infection and even kidney failure.

In the past the cause of BPH was unknown. But now a team of researchers at The University of Texas Southwestern Medical School at Dallas has demonstrated that at least in the dog, BPH is caused by an accumulation of "dihydrotestosterone," a form of the principal male hormone testosterone. The scientists will present their findings May 7 in Washington, D.C., at the annual meeting of the American Federation for Clinical Research.

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Besides man, the dog is the only mammal that suffers from BPH. (In males of the other mammalian species, prostate glands reach a certain size and then stop growing.) Dr. Jean D. Wilson, professor of internal medicine and director of the McDermott Center for Human Growth and Development at the Dallas medical school, heads the research team. He is quick to point out that their findings in the dog may not be entirely applicable to humans.

"It's possible, but not proven, that this pathogenic sequence we have worked out in the dog may also apply to humans," Wilson says, "but it will be a long time before it is clear whether these findings have therapeutic implications for men."

There is already a highly effective surgical treatment for BPH, but some older men are poor surgical candidates because they have heart disease or other health problems. In these patients an effective drug therapy would be very useful.

Until now, most of the experimental drugs used to treat BPH have caused "chemical castration" by inhibiting testosterone formation in the testes or its action in the peripheral tissues, Wilson says. (In the 19th Century, surgical castration was the treatment for this condition, he adds.)

The Dallas research team's findings open up several new therapeutic avenues that Dr. Wilson and others are currently exploring. "It may be possible to inhibit the conversion of testosterone to dihydrotestosterone and thus prevent BPH without decreasing the sex hormone level," Dr. Wilson explains. "Another approach is to attempt to regulate the dihydrotestosterone receptor in the prostate."

"Although surgery will certainly continue to be the treatment of choice for years to come, there are reasons to look for an effective drug therapy," he concludes.

This study is supported by a grant from the National Institute on Aging. The other participants were Dr. John Gazak, formerly a post-doctoral fellow in Dr. Wilson's lab and now a urology resident; Dr. Ronald Moore, an assistant professor of internal medicine at UT Southwestern; and James Quebbeman, formerly a research associate in the department of internal medicine.