Andropause and Compounding Pharmacy

Often referred to as male menopause, andropause has been the focus of many researchers and studies in recent years. Andropause is a process involving gradual alteration in sex hormone levels over a period of years, resulting in unbalanced testosterone and estrogen levels. These changes can result in physiologic and psychological changes that may lead to depression, impotence, and decreased libido. Historically, standard treatment has involved testosterone supplementation, often by injection. While this choice may be therapeutically appropriate in some cases, other men will benefit from a combination of agents. In addition to low testosterone, many men experience a decrease in dehydroepiandrosterone (DHEA), androstenedione, and growth hormone. Adrenal and thyroid deficiency is also common. Other prescription medications such as statins can lead to an imbalance in hormone levels. The most successful therapy begins with a thorough evaluation of the patient’s symptoms, possible drug interactions, and lab results. A well-versed pharmacist can be of benefit in cases such as these, and many compounding pharmacists have undergone additional training in hormone balancing and functional endocrinology.

One of the major keys in treating andropause is to use hormones that are bioidentical in nature. Physi-
Prostate Health Aided by Compounded Preparations

A man’s risk for developing prostate problems increases sharply with age. Benign Prostatic Hyperplasia (BPH) refers to a non-cancerous growth of the prostate gland, which often causes urinary symptoms. An enlarged prostate, though common in men at middle age and beyond, may compress the urethra or cause the muscles around the urethra to contract. Either of these problems can impede urine flow, leading to weak stream, nocturia, incontinence, and recurrent urinary tract infections.1 Prostate cancer occurs when abnormal cells form in the tissues of the prostate gland. According to the National Cancer Institute, every year more than 185,000 men in the U.S. are diagnosed with prostate cancer, and nearly 30,000 men die of the disease.2 The development of prostate cancer is strongly linked with the conversion of testosterone to dihydrotestosterone (DHT).3 Treatment of prostate cancer can be effective with a skilled compounding pharmacist. Studies have indicated that supplementation with saw palmetto extract can be of benefit in both the management of BPH and in prostate cancer prevention.2 Saw palmetto is a naturally occurring plant product derived from the berries of the Serenoa repens.4 It appears to work primarily by blocking the conversion of testosterone to DHT.5 Saw palmetto is widely used in Europe and is the preferred choice of managing BPH in countries such as Germany and Italy.7 Introduction of saw palmetto has been shown to reduce symptoms of BPH with few or no side effects.6

Saw palmetto may be compounded in a standardized dosage form, alone or in combination with other supplements shown to promote prostate health, such as Zinc and Pygeum. Zinc has been shown to reduce the severity of 5α-reductase inhibition and conversion of testosterone to DHT.7 Pygeum contains 14% terpenes, which exhibit anti-inflammatory properties.8 Pygeum stimulates secretory cells of the prostate gland and enhances the integrity of capillaries and veins in the pelvic environment. It can be compounded with saw palmetto for the management of BPH.8

Erectile Dysfunction Easily Treated with Compounded Preparations

In the last decade, a dramatic paradigm shift has taken place with regard to the public’s view of erectile dysfunction (ED) and its treatment. With the advent of direct-to-patient marketing campaigns on the part of pharmaceutical companies, the once rarely discussed condition has lost much of its former stigma, allowing clinicians to effectively treat their patients. ED is a relatively common problem, particularly among men over the age of 60. ED may occur as a result of a physical disease such as diabetes, or it may be the result of an endocrine imbalance. In many cases, ED is a side effect of commonly used medications such as beta-blockers and antidepressants. Fortunately, a host of treatment options exist for men experiencing ED, both in the commercial market and the specialized field of pharmaceutical compounding.

As is the case with andropause and prostate health concerns, a hormone evaluation is an important early step in the diagnosis and treatment of ED. Often, simply achieving a proper balance of testosterone and regulating the adrenals can improve erectile function.9 Compounding allows for specialized dosage forms of bioidentical hormones, which can be prepared according to the specific needs of the individual patient and can help patients achieve this necessary balance.

Commonly used commercial treatments include phosphodiesterase V (PDE5) inhibitors such as sildenafil. The oral tablet form of sildenafil has a limited bioavailability due to first-pass metabolism. Studies have shown that sublingual sildenafil is faster-acting and requires a smaller dose than the oral tablet form, thus reducing the likelihood of adverse effects such as priapism and vision loss.10 Many compounding pharmacists can prepare sildenafil either as a lozenge that dissolves under the tongue or a rapid-dissolving tablet that melts almost immediately.

Patients with diabetes are less likely to respond well to oral PDE5 inhibitors and often need to explore other treatment options such as intracavernosal penile injections.7 Alprostadil, phenolamine, and papaverine are the most commonly used agents in injectible ED therapies and can be prepared in various strengths and combinations according to the needs of the patient. These drugs work by increasing penile blood flow. Alprostadil and papaverine cause relaxation of the cavernosal smooth muscle and the penile blood vessels, while phenolamine antagonizes α-adrenoceptors. One of the most effective injectible therapies is a preparation including all three of these drugs in a single injection. While many men are initially hesitant about trying a penile injection, most find that with the use of a 28- to 30-gauge needle, this type of therapy causes minimal discomfort. Further, patients have the ability to titrate the dose to exactly what is needed to achieve erection.

Conclusion

Many men deal with health issues such as andropause, BPH, and ED as they age. Many options are available for the treatment and prevention of these conditions, both in the commercial market and with the help of a skilled compounding pharmacist. Pharmacists are well-equipped to screen for possible drug interactions and adverse effects that may be contributing factors in these conditions, and play a valuable role in patient education and treatment.

References


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FORMULATIONS FOR THE TREATMENT OF MEN’S HEALTH ISSUES

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