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Endocrine Disruption

ODP265

Bph, Androgenic Alopecia, and Acne - Markers of Progesterone Deficiency

Svetlana Kalinchenko, Prof., Igor Nikiforov, PhD, and Olga Samburskaya, PhD student

Materials and methods: The study at this stage involves 6 male patients from 21 to 50 years with the diagnosis: BPH. Androgenic alopecia. Acne disease. All patients were examined for vitamin D in the blood by calcidiol...
25(OH)D using mass spectrometry and steroid hormone levels using a steroid profile in saliva by mass spectrometry.

Findings. Vitamin D level in three patients was below 30 ng/ml, in three patients - below 20 ng/ml. The steroid profile in the saliva of all six patients revealed progesterone deficiency, with normal testosterone levels. Patients were prescribed vitamin D in a dose of 20,000 IU daily and progesterone in a dose of 100 mg daily; patients with acne were additionally prescribed topical treatment - progesterone in gel form. As a result, after 6 months of using this therapy, patients have a cessation of hair loss, growth of downy hair and transition of downy hair to terminal hair, improvement in all patients was 80-90%. Two patients with the papulopustular form of moderate acne improved by 90%, a patient with the conglobate form improved by 50% (transition to the papulopustular form of moderate severity).

Improvement of clinical picture of symptoms of BPH is also noted: decrease of IPSS questionnaire score to 7-9. Vitamin D level from 70 to 100 ng/ml. On the steroid profile of saliva, the levels of testosterone and progesterone are within normal limits. Interpretation. The main cause of androgenetic alopecia, acne, BPH is thought to be: an excess of DHT (dihydrotestosterone), increased activity of 5-α-reductase enzyme. These three diseases accompany each other. The main drug which is used 5-α-reductase blockers. The side effects of which greatly exceed the benefits of treating.

Vitamin D is involved in regulation of proliferation, differentiation and apoptosis of keratinocytes, regulation of skin immunity, regulation of pro-inflammatory cytokines, stimulation of the expression of antimicrobial peptides, regulation of the integrity and permeability of the lipid barrier, reducing the severity of systemic inflammation, regulation of cellular, humoral, congenital and acquired immunity. Also, in an in vitro study it was found that progesterone can inhibit the activity of 5-α-reductase, so in the skin the activity of this enzyme is reduced by 97±5.3%. And the positive effect was also established in the treatment of prostate diseases, inhibiting 5-α-reductase, progesterone reduces the growth of the prostate gland and the growth of prostate cancer cells. **Conclusion:** Laboratory studies have shown vitamin D and progesterone deficiencies in patients with these diseases. Correction of these deficiencies resulted in improvement both in BPH (reduction of clinical manifestations) and in androgenic alopecia (cessation of hair loss and restoration of terminal hair growth) and acne (significant reduction of inflammation).

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