

## **5506 Pro/Con Debate: Androgens are the Best Option for Prophylactic Treatment of Hereditary Angiodema**

### Pro Speaker

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Efficacy of androgens for long-term prevention of symptoms in hereditary angioedema (HAE) was first provided in 1960 (1). In 1976, a placebo-controlled trial proved that the attenuated androgen danazol effectively prevents attacks in hereditary angioedema and acts to correct the underlying deficiency of C1 inhibitor (C1-INH) (2). Since that time danazol and two other attenuated androgens, stanozolol and oxandrolone, have been largely used for long-term prophylaxis of C1-INH-HAE. Reports from case list of patients with C1-INH-HAE treated long term with attenuated androgens, confirmed the initial evidence of high efficacy (3-6). Residual hormonal activity and hepatic metabolism are responsible for limitations in use and side effects of these drugs. Potential hormonal activity contraindicates use of attenuated androgens before adult age and in pregnancy. Liver metabolism imposes surveillance because of possible development of hepatocyte proliferation and necrosis. Occurrence of these events in C1-INH-HAE patients is rare and persistent damage can be prevented by appropriate monitoring (7, 8). Similarly, a negative effect on lipid profile with possible increase of atherosclerotic risk has been reported, but actual atherogenic effect of androgen treatment in C1-INH-HAE patients has not been documented (9, 10). A number of other, mostly hormonal-related, side effects as menstrual irregularities, acne, virilization, weight gain, depression have been reported with discrete frequency and may lead patients, particularly female, to discontinue the treatment (5). A minimal effective dose of attenuated androgens should be titrated on each patient based on the clinical response. Doses of danazol exceeding 200 mg per day are not recommended due to the increase in rate of side effects (11).

For adult, non pregnant C1-INH-HAE patients, attenuated androgens represent an effective prophylaxis of angioedema symptoms. Upon specific monitoring and wise practice, these drugs can be use long term with positive benefit to risk ratio.

### References

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