

INTRODUCTION

Alpha-1-blockers are widely used in urology to improve dysuria due to benign prostatic hyperplasia. By decreasing smooth muscle tone in the bladder neck and prostate, they allow urine to flow more easily and thereby decrease symptoms related to urinary outflow obstruction.

Alpha blockers are now also employed for obstructive diseases of the salivary glands. A similar pathophysiology is encountered in obstructive urological diseases as in obstructive salivary gland diseases.

In this study we report on 352 patients with obstructive salivary gland diseases treated with alpha blockers for a median follow-up period of 24 months.

METHODS AND MATERIALS

Three-hundred-fifty-two patients (282 men, average age 54, range 28-75 years, and 70 women, average age 49, range 35-62 years) were treated for an average of 8 months (range 3 to 24 months). The distribution of the 4 different salivary diseases is shown in table 1.

Twelve patients (3.4%) reported adverse effects (orthostatic hypotension, cutaneous allergy, dysejaculation, dysuria) and 10 (2.8%) discontinued the treatment due to this side effect. Alfuzosin was well-tolerated and improved symptoms related to stenosis or lithiasis of the parotid and submandibular glands in a majority of patients. A lower rate of improvement was seen for patients treated for residual lithiasis.

Eighty percent of the 69 patients with stenosis reported "very much" or "completely resolved" their symptoms. Muscular contractions or spasms could be seen through ultrasound and sialography in some cases but didn't cause any problem if treated in time. A lower rate of improvement in patients with submandibular lithiasis was surprising.

Alpha blockers were only administered to patients with normal hepatic and renal function and with no history of high blood pressure or postural hypotension. Each patient was specifically informed of the risk of adverse effects and eventual adverse effects. Patients were questioned concerning side-effects at every 3-month visit.

At the first 3-month follow-up visit, ultrasound was performed and a subjective evaluation of symptoms was obtained via a questionnaire. Any spontaneous evacuation of calculi was noted. Patients were further followed in the clinic with ultrasound every 3 months. If the treatment was well tolerated, it was continued for another period of 24 months.

DISCUSSION

Surprisingly, one female patient also complained of dysuria and discontinuation of the treatment. The pathophysiology for this paradoxical side effect is unclear. It is possible that this patient's treatment caused excessive decrease in muscle contractility.

The use of alpha blockers for obstructive symptoms in salivary gland disease is based upon animal and human studies showing alpha-1 receptors in the myoepithelial cells of the salivary gland ducts, with high levels of activity on alpha-1 and alpha-2 receptors. (7-8) Our study showed the highest symptomatic improvement in ductal stenosis treated for ductal stenosis in male patients reporting a high level of improvement or a complete resolution of their symptoms. Muscular contractions or spasms were recorded in many of our patients during ultrasound and sialography. This suggests the presence of alpha-1 blockade in many of these patients. The mechanism may be similar to that seen in the treatment of ductal stenosis with alpha-1 blockers.

The improvement in the parotid can be linked to an improvement in the myoepithelial function, which can sometimes lead to maximum glandular expression with a decrease in glandular secretion and a decrease in glandular heterogenicity and hypervascularization (Table 3).

At 6 months, the gland has a normal aspect and normal vascularity, and a symptomatic improvement for 60% of the patients treated for parotid stenosis was observed. The results of our study are consistent with the idea that alpha blockers may lead to a resolution of ductal stenosis with a decrease in glandular secretion and an improvement in glandular heterogenicity and hypervascularization.

CONCLUSIONS

A lower rate of improvement was seen for patients treated for residual lithiasis. alpha blockers were well-tolerated and their use in parotid and submandibular glands is effective in obstructive salivary gland diseases.

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