

DEPENDING ON THE TYPE OF ALPHA-AR BLOCKAGE USED IN COMBINATION WITH DUTASTERIDE, THERE IS A DIFFERENCE IN SERUM PSA DECREASE RATE AND PROSTATE VOLUME REDUCTION RATE.

Hypothesis / aims of study

Dutasteride (DUT) reduces prostate volume and improves LUTS by releasing the mechanical obstruction in the prostatic urethra. This drug is often used with alpha-AR blockage different in action mechanism. Several kinds of alpha-AR blockage is used, however the report that compared the effect every drug has not been published as far as our knowledge. The report that inhibit prostate cancer cell growth by several alpha-AR blockage has been published 1,2), however, there are very few reports that naftopidil inhibit prostate growth in BPH patients3). Therefore effect may vary according to a combination drug. In this report, we examined changes of the prostate volume (PV), residual urine volume (RU), and serum PSA levels using DUT and several kinds of alpha-AR blockage to the patients, complaining of LUTS associated with BPH.

Study design, materials and methods

We included for 293 cases diagnosed BPH and performed combination therapy with DUT and alpha-AR blockage. DUT 0.5mg was administered once a day for over 12 months continuously. We divided alpha-AR blockage into tamsulosin (TAM), naftopidil (NAF), silodosin (SIL), and we compared the effect. We examined changes of the prostate volume (PV), post void residual (PVR), and serum PSA levels using DUT and several kinds of alpha-AR blockage to the patients.

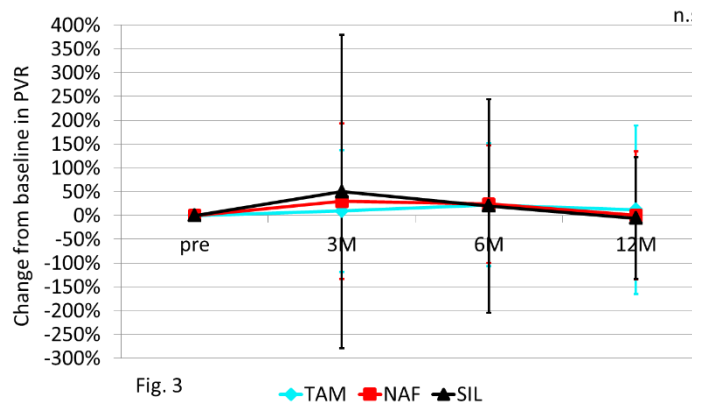
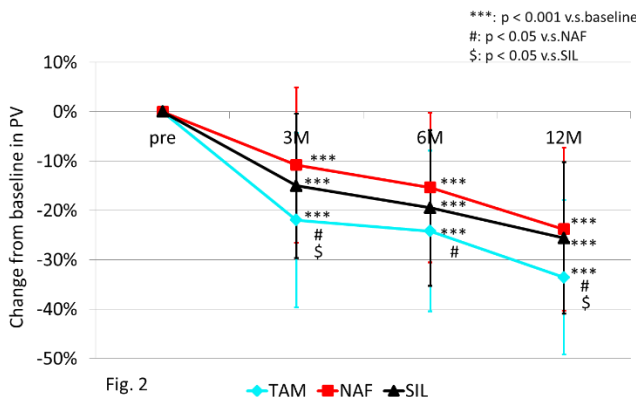
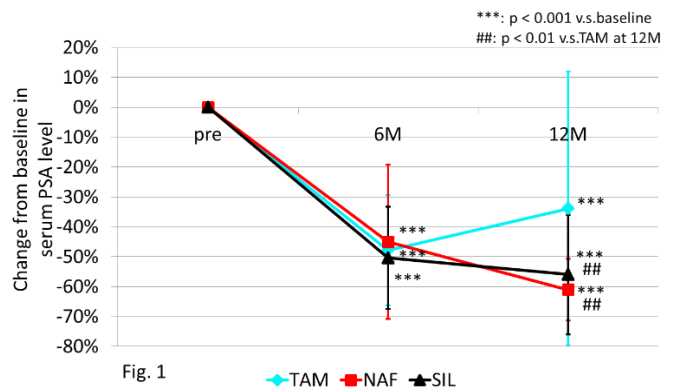
Results

Background of alpha-AR blockage use case was shown Table.1. Compared with TAM and NAF, SIL significantly increased PVR (p<0.01). The rate of change of serum PSA in each groups were -47.8±18.4, -45.1±61.0, and -50.4±56.0% (p<0.001) at 6M, and -33.9±45.8, -61.0±10.4, and -56.0±20.0% (p<0.001) at 12M, respectively. Compared with TAM, NAF and SIL were significantly decreased (p<0.01) at 12M (Fig. 1). The rate of change of PV in each groups were -21.9±17.7, -10.8±15.7, and -15.0±14.6% (p<0.001) at 3M, and -24.2±16.3, -15.4±15.2, and -19.5±15.8% (p<0.001) at 6M, and -33.6±15.6, -23.8±16.5, and -25.6±15.4% (p<0.001) at 12M, respectively. Compared with NAF, TAM was significantly decreased (p<0.05) at 3, 6, and 12M, and compared with SIL, TAM was significantly decreased (p<0.05) at 3 and 12M (Fig. 2). PVR in each groups were discussed in the rate of change from the baseline, 9.4±1.3, 29.7±1.6, and 49.9±3.3 at 3M, and 22.3±1.3, 23.8±1.2, and 20.2±2.2% at 6M, and 12.0±1.8, 0.47±16.5, and -5.8±1.3% at 12M, respectively. No significant difference was noted at 3, 6, and 12M among TAM, NAF, and SIL. (Fig. 3).

Table. 1 :Background of alpha-AR blockage use case

	TAM	NAF	SIL
n	43	56	194
age	79(54-97)	76(56-93)	74(53-92)
PSA	3.0(0.5-21.1)	3.4(0.2-31.7)	4.6(0.2-28.9)
PV	53.5(28.2-131.1)	53.2(24.2-124.8)	57.7(21.8-129.7)
PVR	19.9(0-180.2)	27.7(0-249.0)	60.7(0-178.0)

Median (range)
 PSA : Serum PSA (ng/mL) , PV : Prostate Volume (mL) , PVR : Post Void Residual (mL)



Interpretation of results

In the present study, TAM was strong in prostate volume reduction effect, while PSA lowering effect was stronger in NAF and SIL. This result may be related to prostatic cell atrophy effect including cancer cells in NAF and SIL.

Concluding message

In this study, we investigated the change in PSA value and prostatic volume by combination therapy of DUT and alpha-AR blockage, and in particular, comparison of effects between various kinds of alpha-AR blockage seemed to be the first report. In this study, it was suggested that the difference in PSA decrease rate and prostate volume reduction rate may be different depending on the α blocking drug used in combination. In the future, prospective and randomized examination seemed to be necessary for strict comparison.

References

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Disclosures

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