



FREE ANDROGEN INDEX LEVELS MAY INFLUENCE THE TRANS-ARTERIAL CHEMOEMBOLIZATION WITH DOXORUBICIN-ELUTING BEADS RESPONSE IN HEPATOCELLULAR CARCINOMA PATIENTS: PRELIMINARY RESULTS.

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INTRODUCTION

Hepatocellular carcinoma (HCC) has a male predominance. It has been demonstrated that testosterone avoid apoptosis and senescence in cells treated with doxorubicin. Bearing this mind, it can be hypothesized that testosterone can be related with a worse response to Trans-arterial Chemoembolization with Doxorubicin-Eluting Beads (DEB-TACE) in HCC.

AIM

To analyze the effect of total testosterone levels and free androgen index (FAI) in the DEB-TACE response in HCC patients.

METHOD

Patients with HCC with any indication of DEB-TACE were included.

Total testosterone was measured by radio-immune assay and FAI was calculated by using the formula reported by Vermeulen (1999)¹ the same day of the DEB-TACE. All chemoembolization were performed by a single radiologist and using the same kind of doxorubicin particles.

The main variable was the treatment response and it was measured after one month with a multiphase contrast-enhanced computed tomography (CT) and using mRECIST criteria.

For the statistical analysis we used parametric tests and we settled the statistical significance in a p below 0.05.

RESULTS

Forty-one DEB-TACE performed in 22 patients (3 women; mean age: 70.4 [SD=9.6]) were included. Total response was achieved in 12 DEB-TACEs (29.3%) and partial response in 13 (31.7%). Stable disease was considered after 13 procedures (31.7%) and progression was found in 3 cases (7.3%).

No significant differences were identified in total testosterone levels between the response groups (ANOVA; $p=0.542$) (figure 1). However, **higher levels of FAI were identified in the progression group** compared to the others (ANOVA; $p=0.029$). The main difference was between progression and stable disease groups (45.6 vs. 20.6. Bonferroni post-hoc test; $p=0.025$) (figure 2). Additionally, a binary-logistic regression analysis showed that higher FAI levels were associated with a slight increase in the risk of progression after a DEB-TACE (OR=1.142; 95% C.I. [1.008–1.293]; $p=0.037$).

Figure 1. Differences in total testosterone levels between the response groups.

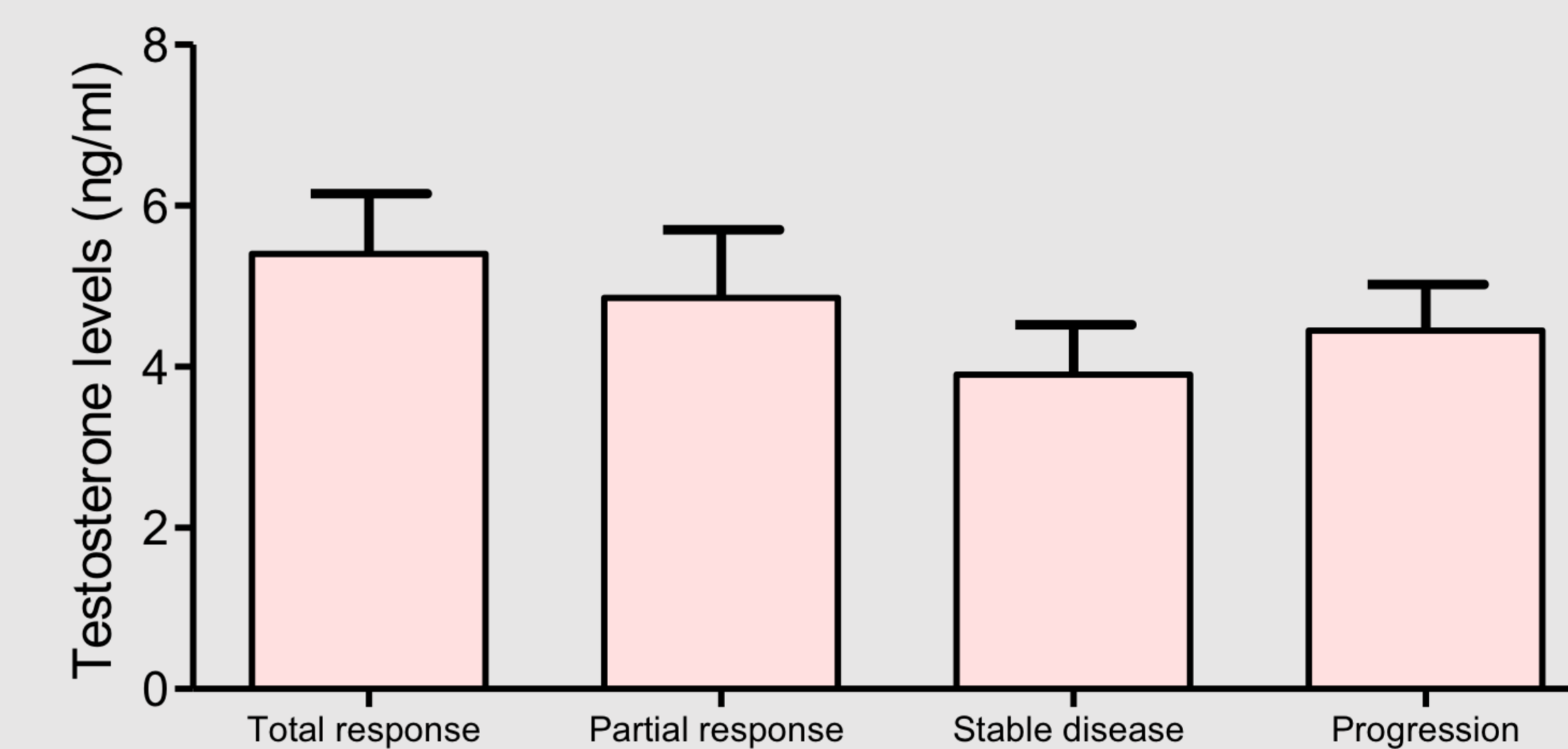
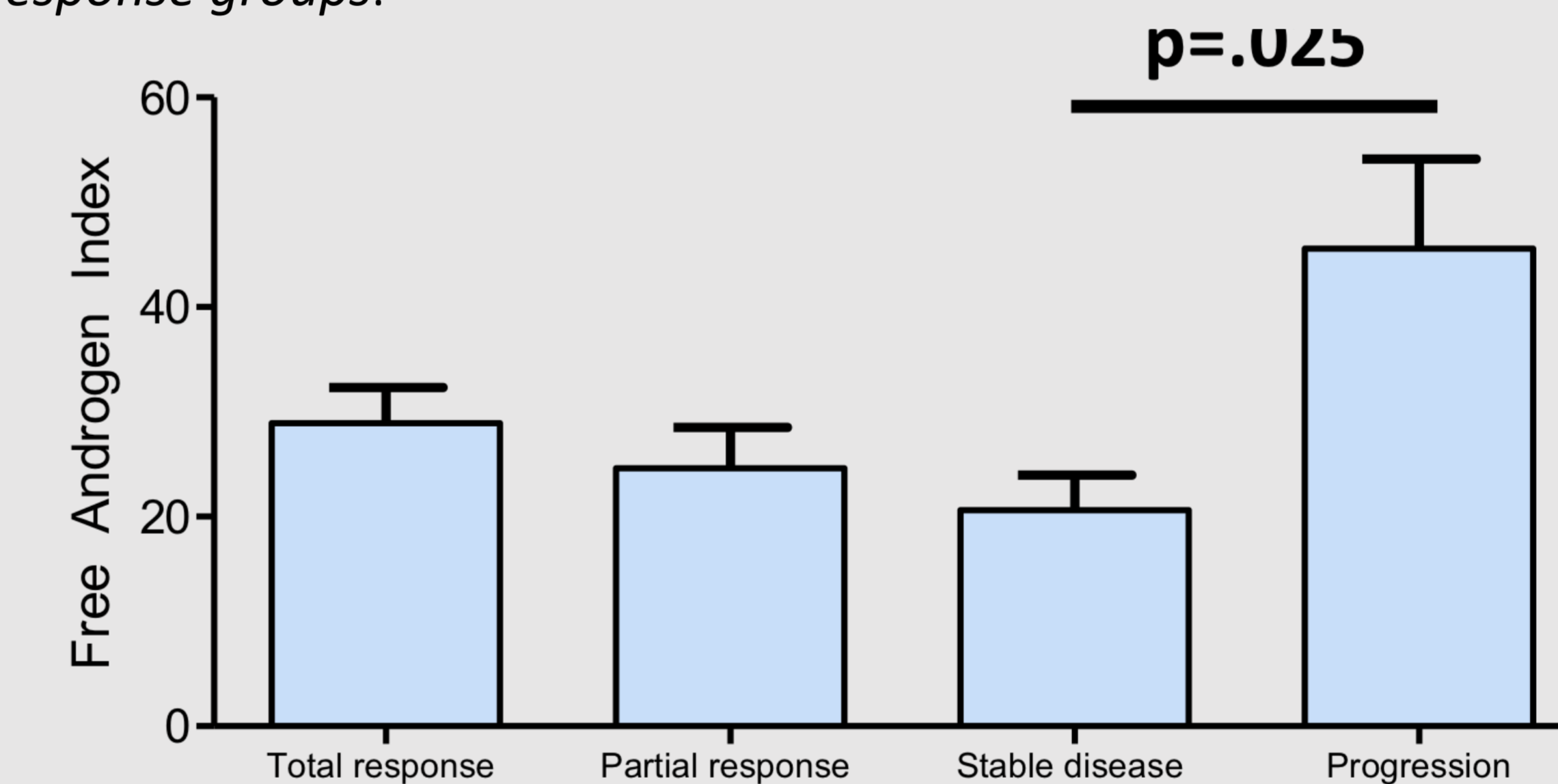


Figure 2. Differences in free androgen index (FAI) between the response groups.



CONCLUSIONS

Patients with higher levels of free androgen index prior to a DEB-TACE performance may be associated with a higher risk of progression at 1 month after the procedure.

REFERENCES

¹ A Vermeulen et al. A critical evaluation of simple methods for the estimation of free testosterone in serum. The Journal of clinical endocrinology and metabolism. 1999 Oct;84(10):3666-72.

CONTACT INFORMATION

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