Salvage HIFU therapy in 5 patients after radical prostatectomy with biopsy confirmed local recurrence

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Introduction: In Russian Federation the growth of prostate cancer incidence rate for last decade was 155%. With most of the newly identified diseases were organ confined (44.8%). In spite of high cancer specific survival rates, the rate of recurrence-free survival is still not satisfying. Salvage therapy can help to avoid distant metastasis in 2/3 of patients with biochemical recurrence.

Objective: to assess high intensive focused ultrasound therapy safety and efficiency in patients with biopsy proven local recurrence of prostate cancer after radical prostatectomy.

Material & Methods: Since 2009 5 patients with biopsy proven local recurrence underwent transrectal HIFU therapy as an alternative option to radiotherapy. To exclude distant metastasis and prove local recurrence all patients underwent MRI of abdomen and pelvis, bone scintigraphy and biopsy of suspicious areas under TRUS control. All patients underwent HIFU as a single-session procedure under general anesthesia with prior cystoscopy and ureteral catheterization. Early and late complications and oncological outcomes were evaluated.

Results: The longest follow-up period was 40 months. The shortest – 3 months, other three patients median follow-up period was 20 months. Mean urethral catheterization period was 3 days. One patient had an episode of ureteral obstruction due to local swelling. After installation of internal stent for 1 month no dilatation of renal pelvis system after stent removal was observed. No cases of urethrorectal fistula and stricture were observed. All patients were continent before procedure. After salvage HIFU one patient claimed to use 1 to 3 pads per day. Only one patient had erectile function before procedure, which reduced to full dysfunction after savage HIFU. Pretreatment mean PSA level was 2.8 ng/ml. 4 patients managed to reach nadir less 0.1 ng/ml. 1 patient had nadir 0.23 ng/ml.

One patient had a repeat HIFU session 17 months after the primary due to PSA level progression. 2 patients started hormone therapy 24 and 21 months after salvage HIFU.

Conclusion: Salvage HIFU therapy for patients with recurrence after RP is feasible with acceptable morbidity rate. To evaluate the safety and oncological outcomes of this minimally invasive method more patients are needed.