

Paradigm change in the therapy of localized prostate cancer

If prostate cancer is detected at an early stage, surgeries, brachytherapy and external irradiation offer equal chance of recovery. Since a direct comparison of the methods derived from randomized studies failed to materialize, for a long time the operation was favored as the treatment of choice despite significant side effects. A current meta-analysis that was recently published in the British Journal of Urology International (BJUI) demonstrates for the first time that the so-called brachytherapy, alone or in combination with an additional radiation or hormonal therapy, is in all disease stages of localized prostate cancer at least equivalent to a radical prostatectomy or even better. "The scientific confirmation of the high effectiveness of brachytherapy in the treatment requires a rethinking of the localized prostate carcinoma" commented Dr. Stephan Neubauer of West German Prostate Center in Cologne. The current results of the largest comparative study: "The radical prostatectomy as the gold standard is thus void once and for all."

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About 60,000 men in Germany are confronted each year with the diagnoses of prostate cancer and face the difficult task to choose the "right" treatment. If the tumor is confined to the prostate gland (localized prostate cancer), various treatment options like brachytherapy (internal radiation therapy), external radiation, surgery or active monitoring (Active Surveillance) are

available to the affected persons.

In the recently published meta study¹ now for the first time in a comprehensive analysis treatment results of different therapies were compared - in fact the analysis included all studies published between 2000 and 2010. An international panel of prostate experts examined therapy results of more than 52,000 patients, categorized by radical prostatectomy (16 697 patients, of which 1381 underwent robot-assisted surgery), brachytherapy (a total of 22 479 patients, sometimes in combination with external beam radiation and hormone therapy), sole external beam radiation (12,082 patients) or other procedures (532 patients with high intensity focused ultrasound, cryotherapy with 227 patients). The valid measure for the effectiveness of the therapy was the so-called biochemical recurrence-free survival rate, which is achieved when the PSA level in the blood following treatment does not increase again. Previously, patients were assigned to three risk groups - low, medium, and high risk associated with.

Brachytherapy achieves a very high biochemical recurrence-free survival rate

The results speak for themselves: Radio therapeutic procedures in terms of their effectiveness are in comparison to the surgical removal of the prostate at least as equal or even superior. Although the evidence for the "best therapy" for localized prostate cancer may not be provided statistically, the brachytherapy alone or in combination with external radiation and hormone therapy shows the highest biochemical recurrence-free survival rate This applies to both the early and the advanced stages of disease. The sole external irradiation shows in terms of biochemical recurrence-free survival the same results as does radical prostatectomy.

It is high time to rethink, demands Dr. Neubauer and his colleagues from the West German Prostate Center. "To consider the operation as the only treatment option for patients with localized prostate cancer is out of date, sometimes even wrong." as pioneers of brachytherapy in Germany they regret that still more than 60 percent of all patients with prostate cancer are treated with radical prostatectomy, while in the U.S., the modern form of radiation therapy has been more frequently performed for many years.

"And these despite numerous studies² in addition to the now clear evidence that no advantage in terms of healing can be demonstrated. To the contrary, serious side effects like incontinence and impotence after radical surgery are significantly higher than after brachytherapy", emphasizes Dr. Gregory Spira, radiation therapist at the West German Prostate Center. Also the modern robot-assisted surgery, which is considered to be a "gentle" non-evasive treatment

option for patients, results in more side effects than previously advocated. A study in the USA Physicians Journal³ showed that impotence and incontinence were despite the minimally invasive technique here even more pronounced than in radical prostatectomy operations.

Experience an essential foundation

But like with all treatment techniques, in radiation therapy experience is essential for the therapeutic success: "In particular, brachytherapy places high demands on the experience and expertise of the treating physicians," says Dr. Neubauer. Thus, numerous studies show that the quality can improve significantly with the number of treated patients. "When choosing an appropriate therapy it is not only the type of the process that is important, but also the specialization and experience of the treating physicians must be taken into consideration" Neubauer concludes.

1Grimm P, Ignace Billiet I, Bostwick D et al. Comparative analysis of prostate-specific antigen free survival outcomes for patients with low, intermediate and high risk prostate cancer treatment by radical therapy. Results from the Prostate Cancer Results Study Group. BJUI 109, Suppl. 1, 22-29, 2012

2Naselli A, Simone G, Papalia R, Gallucci M, Introini C, Andreatta R, Puppo P: Late-onset incontinence in a cohort of radical prostatectomy patients. Int J Urol. 2011 Jan;18(1):76-9.

3Jim C. Hu, MD, MPH; Xiangmei Gu, MS; Stuart R. Lipsitz, ScD; Michael J. Barry, MD; Anthony V. D'Amico, MD, PhD; Aaron C. Weinberg, MD; Nancy L. Keating, MD, MPH: Comparative Effectiveness of Minimally Invasive vs Open Radical Prostatectomy; JAMA. 2009;302(14):1557-1564.