

## SUMMARY

Transrectal ultrasound guided prostate biopsy (TRUS-Bx) is the gold standard method in the diagnosis of early stage and organ confined disease.

Rectal lidocain gel application and periprostatic local anesthesia infiltration are the most widely used anesthetic methods to provide pain control in TRUS-Bx.

Another important factor affecting the pain is the anxiety level of the patients. Within this perspective; the aim of the presented study was to investigate the effect of pre-procedural waiting period and anxiety level on the pain perception during the TRUS-Bx.

Between January-June 2008, 60 patients with abnormal digital rectal examination findings or high levels of PSA were enrolled into the patient group of this prospective study. All the subjects were asked to fill-out the State-Trait Anxiety Inventory scale - 1 (STAI-1) to obtain immediate anxiety level at three consecutive time period: 1) when procedure requested 2) just before procedure 3) before getting the pathological result. The STAI scales are the gold standard tests to determine the anxiety levels; STAI-1 and STAI-2 measure immediate and general anxiety status, consecutively. The STAI-1 scale used in this study consisted of 20 statements with the following answers: 1) never 2) slightly 3) substantially 4) exactly.

All the patients TRUS-Bx appointments were randomly arranged between 1 - 55 days. Biopsy procedures were carried out after rectal lidocain gel application. Standard 8 quadrant systematic prostate biopsy samples were obtained. One sample from each transitional zone and suspicious nodule samples were added, if any suspicious peripheral zone nodule was detected on US examination. All the biopsies were done by the same operator.

Just after biopsy, the patients were asked to fill-out the Visual Analogous Scale (VAS) to evaluate the pain perception due to biopsy procedure, according to the previous pain experiences of the patients. Each patient responded to the 21 statements and scored between 0-10 points.

On histopathological examination; 19 cases were diagnosed as prostate adenocarcinoma, 1 case was diagnosed as high-grade prostatic intraepithelial neoplasia and the other cases were named as prostatitis or benign prostatic hiperplasia.

Correlation between the pre-procedural waiting period and the anxiety level with the pain perception at TRUS-Bx was investigated by SPSS 10.0. According to the statistical analysis; STAI-1 scores just before biopsy and before getting the pathological result were significantly higher than STAI-1 score when procedure requested. By the same way, these scores were well correlated with VAS score.

Both STAI-1 and VAS scores of the patients, whose procedures were performed more than 10 days after the request, were significantly higher than the other group.

No statistically significant correlation was found between patient's age, prostatic volume or pathologic diagnosis and the pain perception.

From another point of view, the wide-spread use of multi-quadrant biopsies, sampling of younger individuals and increased re-biopsy rates raise the perceived pain during the procedure.

As far as we can find on the web-based English literature, the presented study is the first one that investigated the potential correlation between pre-procedural waiting period, anxiety level and pain perception at TRUS-Bx. According to these results, anxiety levels of the patients increase before the procedure and maximize before getting the pathological results. There is also a strong correlation between anxiety levels and VAS score.

Relatively limited number of the cases is a potential drawback in this study. Also, the difference between the efficacy of various anesthetic methods on the pain perception was not assessed. Nevertheless, the presented study may be accepted as a preliminary work.

In conclusion; performing the TRUS-Bx procedure as soon as possible the use of more effective anesthetic methods especially for patients with high levels of anxiety may have a positive impact on patient tolerance.