Goserelin Treatment and Blood Loss Associated with Transurethral Resection of the Prostate

Goserelin Tedavisi ve Prostatın Transüretral Rezeksiyonu ile İlişkili Kan Kaybı

Goserelin ve Prostatın Mikrovasküler Dansitesi / Goserelin and Microvessel Density in Prostate

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To the Editor:

We have read the article in which investigated the microvascular density (MVD) in the sections of transurethral resection materials and blood loss during the operation of benign prostate hyperplasia cases to whom goserelin is applied before the treatment with great interest.[1] In numerous studies; it is specified that new vessel formation has an important role in tumor enlargement, development and also metastasis.[2,3] As in the malignant solid tumors; significant angiogenesis namely microvascular density is observed in benign lesions like prostate hyperplasia. Its importance is that it can cause increased blood loss during the operation due to the easy decomposition feature of new formed proliferated vessel structures. In order to prevent this; preoperative 5alpha reductase inhibitor (finasteride) or gonadotropin releasing hormone analogue (goserelin) can be used and the suppression of angiogenesis can be wise. In the literature; it is specified that angiogenesis in BPH has a critical importance and angiogenesis can be suppressed by androgen suppression.[4] Immunohistochemically; numerous indicators can be used in the measurement of microvascular density such as CD31, CD105, CD144, CD146, CAV1 and VEGFR2 besides CD34.[5] In some of the studies; normal prostate tissue and prostatic adenocarcinoma are compared and it has drawn attention that CD34 positive capillary network has shown an increase.[6] In the study; no significant relationship is found between the total blood loss and MVD which are observed throughout TUR-P. Because of that single dose depot 3.6 mg Goserelin application is not recommended before TUR-P, and they have recommended long-term treatments that will decrease the testosterone level to the castration level. However the remarkable case in the study results is that in Group 1, in other words the patients receiving treatment, MVD quantity is determined as significantly higher. According to our opinion; in case the treatment is not efficient; MVD ratio could be close to the ratio of Group 2 but there is a confusing situation in this case. Thus, it was reported that GnRH analogues decrease VEGF release and suppress angiogenesis.[7] So the immunohistochemical technical-evaluation that is applied to evaluate MVD2 should be investigated or besides CD34; at least one of the above mentioned microvessel indicators should be added to the method.

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