Benefits of Dynamic Sentinel Lymphnode Biopsy Technique in the Management of Penile Cancer

Introduction and Objectives: Dynamic scintigraphy for the identification of a sentinel node and screening of subclinical metastasis in low and medium risk penile cancer seems to be a reliable method. Several studies have described a positive association between positivity of lymph nodes evaluated, and prognosis for penile cancer patients and also a large variation in the number of lymph nodes examined between departments of pathology, hospitals, regions, and countries. This variation may lead some to miss potentially metastatic sentinel nodes which influence staging and subsequent therapy. The aim of this paper is to demonstrate the advantege of sentinel node biopsy technique which can help pathological practice pattern, even in high risk cases.
Materials and Methods: There are 42 low and medium risk patients and 8 high risk patients with clinically-node-negative penile cancer entered in this study. Preoperative lymphoscintigraphy was performed after intradermal injection of 99mtechnetium nanocolloid around the primary tumor. In the low and medium risk cohort sentinel nodes were intraoperatively identified with gamma ray detection probe. Radical inguinal lymphnode dissections were only performed if metastasis were found with DSNB. In eight high risk patients inguinal lymphadenectomy was performed without DSNB, but the sentinel nodes were identified with gamma ray probe and marked in the sample sent to the pathology.
Results: Lymphoscintigraphy visualized 78 sentinel nodes of the 42 low and medium risk patients. All sentinel nodes were intraoperatively identified and removed. Sentinel node metastasis were found in 5 patients. In these five patients the additional radical lymphadenectomy proved no further metastasis in three cases. In two cases patients developed metastasis in more lymphnodes. Regional or distant recurrence after excision of a tumor negative sentinel node was not observed in a median follow up of 27 months (range 4 to 49). In the eight patients who underwent elective lymphadenectomy, the marked sentinel nodes were easily evaluable by the pathologist, and in two cases, occult metastasis were diagnosed.
Conclusions: DSNB is a reliable and safe method with low morbidity in the detection of occult metastasis of low and medium risk penile cancer, and may help diagnostic accuracy in high risk patients as well.