Operative procedure[1-3] (Required)

Reason/Evidentiary Support

Treatment of penile carcinoma is primarily surgical. The development of supranetworks in some countries has made organ sparing techniques associated with reconstruction widely available and radical or partial penectomy is no longer the standard treatment for this disease except in advanced cases.[4,5]

Nodal involvement is a recognised predictor of poor prognosis. In node positive disease, the number of positive nodes, the presence of extracapsular spread (ECS) and the level of nodal involvement (pelvic versus inguinal) have been shown to influence survival by multivariate analysis and this is reflected in both TNM7[6,7] and TNM8[8] which classify any pelvic lymph node involvement or extracapsular extension of any regional lymph node (inguinal or pelvic) as pN3 in the penile but not in the urethral TNM.

Extent of inguinal node involvement and presence of ECS also predicts pelvic node involvement.[6,7,9,10]

The number of nodes found within an individual specimen should be specified in the report. The size of the largest nodal tumour deposit (not the lymph node size) together with presence of extranodal spread must also be recorded as there is evidence that this may affect prognosis.

Tumour presence or absence, size of tumour deposit and presence or absence of ECS are reported separately for each individual node site. Occasionally individual tumour cells are identified in the peripheral sinus. The significance of these is uncertain but they should be described within reports.

Immunohistochemistry is essential for the assessment of micrometastases in sentinel lymph nodes as small metastases under 2 mm or single isolated tumour cells may be easily missed.

References

1 RCPath (Royal College of Pathologists) (2015). Dataset for penile and distal urethral cancer histopathology reports. Available from: https://www.rcpath.org/resourceLibrary/dataset-for-penile-and-distal-urethral-cancer-histopathology-reports.html (Accessed 1st March 2016).

2 Horenblas S (2012). Sentinel lymph node biopsy in penile carcinoma. *Semin Diagn Pathol* 29(2):90-95.

3 Lam W, Alnajjar HM, La-Touche S, Perry M, Sharma D, Corbishley C, Pilcher J, Heenan S and Watkin N (2013). Dynamic sentinel lymph node biopsy in patients with invasive squamous cell carcinoma of the penis: a prospective study of the long-term outcome of 500 inguinal basins assessed at a single institution. *Eur Urol* 63(4):657-663.

4 Hakenberg OW, Comperat EM, Minhas S, Necchi A, Protzel C and Watkin N (2015). EAU guidelines on penile cancer: 2014 update. *Eur Urol* 67(1):142-150.

5 Lawindy SM, Rodriguez AR, Horenblas S and Spiess PE (2011). Current and future strategies in the diagnosis and management of penile cancer. *Adv Urol* 2011:593751.

6 International Union against Cancer (UICC) (2009). *TNM Classification of Malignant Tumours (7th edition)*. Sobin L, Gospodarowicz M and Wittekind C (Eds). Wiley-Blackwell, Chichester, UK and Hoboken, New Jersey.

7 Edge SE, Byrd DR, Compton CC, Fritz AG, Greene FL and Trotti A (eds) (2010). *AJCC Cancer Staging Manual 7th ed.*, New York, NY.: Springer.

8 Amin M.B., Edge, S., Greene, F.L., Byrd, D.R., Brookland, R.K., Washington, M.K., Gershenwald, J.E., Compton, C.C., Hess, K.R., Sullivan, D.C., Jessup, J.M., Brierley, J.D., Gaspar, L.E., Schilsky, R.L., Balch, C.M., Winchester, D.P., Asare, E.A., Madera, M., Gress, D.M., Meyer, L.R. (Eds.) (2017). *AJCC Cancer Staging Manual 8th ed.* Springer, New York.

9 Graafland NM, van Boven HH, van Werkhoven E, Moonen LM and Horenblas S (2010). Prognostic significance of extranodal extension in patients with pathological node positive penile carcinoma. *J Urol* 184(4):1347-1353.

10 Lughezzani G, Catanzaro M, Torelli T, Piva L, Biasoni D, Stagni S, Crestani A, Guttilla A, Raggi D, Giannatempo P, Necchi A, Pizzocaro G, Colecchia M, Salvioni R and Nicolai N (2014). The relationship between characteristics of inguinal lymph nodes and pelvic lymph node involvement in penile squamous cell carcinoma: a single institution experience. *J Urol* 191(4):977-982.