Reviewer's report

Title: Bladder metastases of appendiceal mucinous adenocarcinoma: a case presentation

Version: 1 Date: 22 November 2009

Reviewer: Alessandro Cois

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Major compulsory revisions

The major issue to be exhaustively analyzed is whether the adenocarcinoma located in the anterior bladder wall actually was a metastatic adenocarcinoma of the appendix rather than a concurrent primary bladder. Authors state: “The definitive pathological examination revealed a mucinous cystoadenocarcinoma of the appendix invading the caecal wall with metastasis of the anterior wall of the bladder. Adjacent to the tumour in the intestinal mucosa foci of high grade dysplasia/adenocarcinoma in situ were also identified thus confirming the appendiceal origin of the primary tumour. In addition, metastasis were found in 15/37 (40%) lymph-nodes." And: “The primary lesion of the appendix was nearby the posterior bladder wall without local invasion. Thus confirming that the anterior bladder lesion was a secondary localization of appendiceal carcinoma”.

These are opinions not supported by scientific evidence. Several papers in literature point out the need for an immunohistochemical characterization in order to distinguish between primary adenocarcinomas and secondary adenocarcinomas of the urinary bladder, which is often difficult because they appear morphologically similar but invariably require different treatment strategies. Authors support the metastatic origin of the tumor on this base: “Tumoural cells were found immunopositive for cytokeratin 7 and CDX2 (nuclear immunoreactivity), and #-catenin (membranous immunoreactivity)”.

Evidence against metastatic nature can be supported by several authors such as those cited under and others;

R. Torenbek et al. Histopathology 1998, 32, 20-27: CK 7 was expressed in (nearly) all adenocarcinomas of the urinary bladder and ..... Focal CK 7 expression was only incidentally observed in adenocarcinomas of colonic origin.

R. W. Werling et al. The American Journal of Surgical Pathology 27(3): 303–310, 2003: CDX2 expression can be seen in selected non-GI adenocarcinomas such as mucinous ovarian carcinomas and adenocarcinomas of the urinary bladder.

H.L. Wang et al. The American Journal of Surgical Pathology 25(11): 1380–1387, 2001: this report clearly show a lack of nuclear localization of #-catenin in primary adenocarcinomas of the bladder as well as in conventional urothelial carcinomas, in contrast to that seen in the majority of colorectal adenocarcinomas secondarily involving the bladder.
A second question to be answered is which lymphonodes were metastatic: colonic ?, iliac ?

Demonstration of the metastatic origin of the bladder tumor is thus needed carrying stronger evidences than those reported.

**Level of interest:** An article of limited interest

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests