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Papillary renal cell carcinoma seeding along a percutaneous biopsy tract

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The use of percutaneous biopsies is useful in the diagnosis and management of renal masses with a complication rate of <0.01%. However, a potential hazard of this is tract tumor seeding but this is so rare in renal cell carcinoma (RCC) that its frequent use in the assessment of indeterminate renal masses has been justified. We report a case of tumor seeding caused by percutaneous biopsy of a papillary renal cell carcinoma detected on pathological assessment of the partial nephrectomy specimen in a 50 year old male. Literature review found that up until 1991, there were only 5 reported cases of RCC tract seeding and in 2013 there were a further 3 cases reported. In general, tract seeding will relate to the amount of disruption of the tumor capsule (needle caliber, number of punctures), pressure of egress at the puncture site (for example, cystic masses or escaping hematoma), whether tumor cells are dropped from the needle on its withdrawal (failure to maintain negative pressure, burred needle tip) and the ability of tumor cells to survive when deposited into a scar. This is one of only a few contemporary case reports of RCC seeding along a percutaneous biopsy tract. Whilst this complication is so rare that it does not warrant a need to cease the use of percutaneous biopsy of renal masses, it certainly highlights the possibility of tract seeding as a potential hazard. As such, certain considerations such as appropriate patient selection, the use of correct equipment and suitable biopsy technique, should be made to minimize the risk of this complication.

Biography

Deanne Soares is a Senior Surgical Resident at Concord Repatriation General Hospital in Sydney, Australia. She has completed her Master of Surgery from The University of Sydney and a Master of Health Leadership and Management from the University of Wollongong. She is currently engaged in multiple research projects in the fields of surgery and training and education.

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