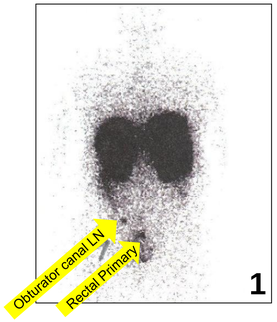
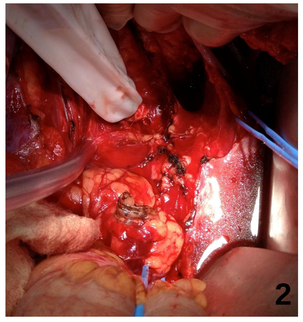
Obturator canal lymph node metastasis from rectal carcinoid tumor: Total mesorectal excision may be insufficient for some rectal carcinoids

Yi-Zarn Wang DDS, MD and Michael Hall MD, MS
Louisiana State University Health Sciences Center, Department of Surgery



1


2

3

Background

The optimal treatment option for rectal carcinoid tumor remains unsettled. It is generally accepted that small tumors (< 1-2 cm in size) without lymph node involvement can be treated with trans-anal excision. Larger tumors, and those with lymph node metastasis, however, are usually treated via low anterior resection with total mesorectal excision (TME). Mid gut carcinoid tumors have been found to have the tendency to obstruct lymphatic flow, subsequently developing a detour of lymphatic passage. We hypothesize that rectal carcinoid may have the same potential in developing an alternative lymphatic pathway outside of the mesorectal envelope, thus escaping surgical removal with traditional TME.

Methods

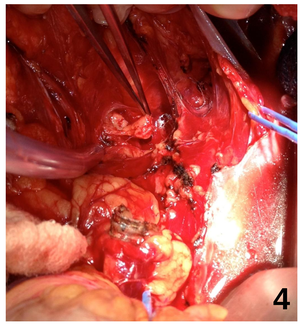
A retrospective review of 22 consecutive rectal carcinoid patients who underwent radical LAR with TME was undertaken, in order to determine if any extra-mesorectal metastasis had occurred.

Results

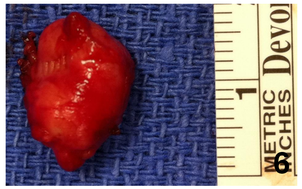
22 patients under went LAR with TME for rectal carcinoid. 18 patients had radio-guided surgery (RGS). 13 of which, were injected with TC-99 intra-operatively and 5 had a preoperative injection of In-111for Octreo-scan. 6 of the 22 patients (27%) were found to have obturator canal lymph node metastasis, confirmed by final pathologic review. Of these 6 patients, 5 had the nodal metastasis to the right side. Of note, 3 of the 6 patients complained of debilitating foot pain on the ipsilateral side of the metastatic obturator lymph node metastasis and all had symptom resolution after surgical excision.

Conclusion

Up to 27% of rectal carcinoid patients have extra-mesorectal lymph node metastasis that would easily be missed by the traditional TME. Preoperative octreotide scanning with In-111 injection or intra-operative Tc-99 peri-tumor injection, with concomitant RGS can easily identify and remove such metastasis. Symptomatic improvement can be accomplished with its removal. The effect of such extra-mesorectal metastasis on patients' long term or disease survival is yet to be determined.


4


5



6

Image 1: Pre-operative Octreoscan®; Image 2: Neoprobe localizing and identifying obturator LN; Image 3: Neoprobe reading on an obturator lymph node; Image 4: Obturator LN; Image 5: Total mesorectal excision (TME) specimen; Image 6: Final specimen- obturator canal lymph node