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Oncology PET: miscellaneous 1

 Sunday October 11, 2009 16:30h - 18:00h
 Room: Hall 114

OP161 A rescue surgery protocol radioguided by PET-CT. Preliminary results with Roll Technique and PET Probe.

 17:47h -
 17:58h

J. R. Garcia, M. Fraile, M. Soler, J. Bechini, J. M. Gonzalez, G. Moragas, M. Ysamat, M. Buxeda, C. Lorenzo, I. Carrio, F. Lomeña;
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OBJECTIVE To assess the value of intraoperative radioguided probe detection to guide surgical resection of malignant lesions previously detected by 18F-FDG PET-CT and considered resectable after imaging and clinical evaluation. **MATERIAL AND METHODS** Twelve consecutive patients with suspected tumour recurrence (3 thyroid, 3 ovarian, 3 colon, 1 rectum, 1 breast, 1 unknown origin) detected by 18F-FDG PET-CT and considered resectable were included in the study. Ultrasound guided fine needle aspiration before surgery could be performed in 6 patients and biopsy guided by CT was performed in 1 patient. In 5 patients with accessible lesions, radioguided occult lesion localisation (ROLL) technique was performed after an injection of 99mTc-nanocolloid (100-1000 µCi) inside the lesion under ultrasound or CT guidance, pre-operatively. Radioguided surgical detection was then carried out 2-24 h afterwards using the gamma probe. In 7 patients with non accessible needle lesions or multiple lesions, 370 MBq of 18F-FDG were injected 3-5 hours before radioguided surgery using a PET-dedicated probe: Gamma-locator DXI GF&E which works with electronic collimation using multiple CsI-crystals to detect high energy gamma and positron emission annihilation quanta. **RESULTS** ROLL technique: All lesions injected with nanocolloid were resected (6 lesions in 5 patients, 1 patient with 2 lesions), and recurrence was histologically confirmed. Those were 3 cervical lymph nodes, 1 chest wall and 1 abdominal wall lesions and 1 liver metastasis. PET probe: Fourteen out of 16 hypermetabolic lesions detected on the PET-CT exam were ultimately resected (5 cervical lymph nodes, 1 mediastinal and 4 retroperitoneal lymph nodes and 4 peritoneal implants). One cervical lymph node and one mediastinal node in different patients could not be excised. Histological recurrence was confirmed in 12 out of 14 lesions. In one patient, the 2 lymph nodes excised were inflammatory. **CONCLUSIONS** 18F-FDG PET-CT can be key in deciding surgical approach and appropriate radioguided protocol. When lesions are solitary and easily accessible, ROLL technique seems the method of choice. PET probe is more adequate for less accessible lesions.

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