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RELEVANT UPSTAGING OF PN2 CM0 COLORECTAL CANCER PATIENTS WITH POST-SURGERY 18F-FDG PET-CT

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Aim: Data regarding the role of PET-CT in patients with colorectal cancer (CRC) are sparse. Patients with pN2 CRC are at high risk of early relapse. Our institutional guidelines recommend PET-CT in these patients prior to adjuvant treatment to detect occult metastatic disease. The main objective of the present study was to assess the proportion of pN2 CRC patients, in which PET-CT detected metastases.

Methods: In the present single centre cohort study pN2 cM0 CRC patients deemed fit for adjuvant chemotherapy and without evidence of metastatic disease on preoperative CT scans were included. All PET-CT findings were either confirmed by biopsy or unequivocal clinical course.

Results: 50 pN2 cM0 CRC patients (20 female, 30 male) were included from July 2007 to March 2014. Median age was 63 years (range: 37–78), median number of resected lymph nodes was 19 (range: 7–50), median number of metastatic lymph nodes was 8 (range: 4–18). New evidence of early recurrence or metastatic lesions was found in 8 patients (16%; 95% CI 7.2% - 29.1%), resulting in a number needed to screen of 6.25. Three of 8 PET-CT positive patients had oligo-metastatic disease potentially amenable for complete resection. CEA was normal in 4 of 8 PET-CT positive patients. Right-sided primaries seemed to show a tendency for higher rate of early PET-CT positive relapse (38% vs. 12%, P = 0.10). Age, number of resected lymph nodes or metastatic lymph nodes were not significantly different between PET-CT positive and negative patients (all P > 0.05).

Conclusions: This is the first analysis to evaluate the role of PET-CT in pN2 CRC patients. Our investigation demonstrates that previous occult disease prior to pre-planned adjuvant chemotherapy can be found in about 1 out of 6 patients resulting in a low number needed to screen in this high risk CRC group. Postoperative CEA levels were normal in half of these patients and thus cannot replace PET-CT. Integrating PET-CT findings in addition to routine staging procedures had a relevant impact in treatment decisions in our cohort of pN2 CRC patients. Further evaluation of PET-CT in larger cohorts is warranted.

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