Colon Polyp Recurrence: Does the Apple Always Fall Close to the Tree
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Background Colorectal cancer is among the leading causes of morbidity and mortality in the western world. Screening and surveillance, performed through total colonoscopy, allow for the resection of pre-malignant adenomas as well as the stratification of risk of synchronous and recurrent polyps. Nevertheless, there is yet scant evidence analyzing the trends on the location of polyp recurrence based on previous colonoscopy polyp distribution. We aimed to assess whether there was a correlation between colon polyp distribution on index and follow-up colonoscopies.

Methods Included consecutive patients with two total colonoscopies with at least 12 month interval between 2008 and 2013 where polyps were detected and completely resected. Patients with previous colon surgery or poor bowel preparation in any segment were excluded. The colon was divided as distal colon (distal to splenic flexure) and proximal colon (proximal to splenic flexure). Statistical analysis was performed with SPSS 21.0, using Cohens Kappa and chi-square tests; p value < 0.05 was considered statistically significant.

Results Included 124 patients, 98 (79%) male, with mean age 67 (SD± 10.7) years. We encountered 435 polyps on the index colonoscopy (mean 3.5± 2.8) and 319 on follow-up (mean 2.6±1.9). The mean interval between total colonoscopies was 21.8 (SD± 9.5) months. In the index colonoscopy, 23% of the patients presented with polyps in the proximal colon, 33% in the distal colon and 44% in both; in the follow-up evaluation, polyps were found exclusively on the proximal colon in 30% of the patients, the distal colon in 39% and in both in 31%. We found a significant moderate correlation between distribution of the colon polyps at the index and follow-up colonoscopies (Kappa 0.358; p<0.001). Moreover, when looking at each segment, in patients with exclusive proximal polyps there was a 62% incidence of exclusive proximal polyps on follow up (OR=18.78; p<0.001), while 65.9% of patients with exclusively distal polyps on the index colonoscopy presented with exclusively distal polyps on the following exam (OR=19.02; p<0.001); similarly, two thirds of patients (66.7%) with both proximal and distal polyps on the index colonoscopy will also present with the same distribution on follow-up (OR=12.34, p<0.001). Conclusions In our series, we encountered a moderate and significant agreement between the location of colon polyps in the initial and subsequent total colonoscopies. Although two thirds of patients with polyps throughout the colon will present with a similar distribution on follow-up, our data show that up to one third of patients with exclusively distal polyps on the index colonoscopy will have proximally located polyps during follow-up. Thus, a thorough examination of the whole colon at surveillance colonoscopy is advisable, independently of polyp distribution at index colonoscopy.