Commentary

Contrast-enhanced CT colonography for colorectal cancer localization in laparoscopic surgery

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I have read the paper published in *The American Journal of Surgery* by Yap *et al.* (1) entitled "Colonoscopy localization accuracy for colorectal resections in the laparoscopic era", focused on the preoperative evaluation of patients with CRC with great interest. This topic is now subject of a relevant debate considering the laparoscopic-assisted colonic surgery era we are facing, and also the interest related to the large trial (2) that is currently investigating potential benefits of neoadjuvant chemotherapy for patient with colon cancer.

The authors have discussed the accuracy of colonoscopy in describing the site of colonic cancer, and useful methods to reduce the risk of an incorrect localization; by investigating alternative methods for this critical evaluation, they have highlighted the limitations of conventional CT, the importance of endoscopic tattooing, and they have suggested the potential use of a metal endoscopic clip.

Among these alternative methods, we believe that computed tomography colonography (CTC) should not only be included, but could probably be the most suitable method for a series of reasons.

There are different reports in literature describing how accurate CTC is in diagnosing the precise site of colonic cancer; in particular this test has precisely judged the site of colonic lesions in almost all reported cases, correcting the colonoscopy reports in percentages ranging between 4% and 21%.

Moreover, CTC can be easily added to the conventional abdominal CT normally prescribed by clinicians to know about local and distant cancer staging. Performing a combined contrast-enhanced CTC instead of the conventional contrast-enhanced abdominal CT doesn't significantly impact on costs or on the time span, nor is it dangerous for the patient.

In one of our previous reports (3), we observed that information given by CE-CTC concerning colorectal cancer location and synchronous colonic cancers and polyps changed the laparoscopic surgical strategy for almost 14% of patients.

Among the advantages of CE-CTC, optimal patient acceptability, synchronous CRC and/or polyps diagnosis, and information on the mesenteric vessels should also be mentioned.

Moreover, CE-CTC permits high accuracy in preoperative T staging (4); a recent meta-analysis (5) in particular has shown that conventional CT and CTC are able to detect tumor invasion beyond the bowel wall (T1–T2 *vs.* T3–T4), with summary estimates for sensitivity and specificity of 90% and 69% for CT, and of 97% and 81% for CTC.

For all of these reasons, we propose contrast-enhanced CTC as first line test in patients with colonic cancer, and in particular in those patients with cancer preventing a complete colonoscopy.

As described above, the use of CE-CTC offers several advantages, but some limitations should be mentioned. First of all, CTC is not such a well-known test by general practitioners, clinicians and even some radiologists, and this

is not a negligible factor limitating its diffusion worldwide. Secondly, there is a need for radiologists' training in CTC; to be ready to report about CE-CTC radiologists should be as familiar as possible with standard CTC.

Considering that CTC is about to become a screening procedure in Europe after being accepted as such in the United States, we believe that both limitations can be rapidly overcome.

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