

One-stage laparoscopic procedure for a patient with bilateral colorectal tumours and renal carcinoma

M. FAZZIN, L. DELLACHIESA, G. RESTA, M. BANDI, S. MARINO, G. ANANIA

SUMMARY: One-stage laparoscopic procedure for a patient with bilateral colorectal tumours and renal carcinoma.

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We describe a case of a patient with synchronous bilateral colorectal tumours and renal carcinoma who underwent one-stage laparoscopic surgery procedure with right transperitoneal nephrectomy, right hemicolectomy and sigmoidectomy. One-stage laparoscopic procedure can be used safely and successfully for a patient with multiple primary tumours.

KEY WORDS: Synchronous tumours - Colorectal carcinoma - Renal carcinoma - Laparoscopic procedure.

Introduction

Renal and colorectal tumours can occur synchronously. In particular the incidence of synchronous renal and colorectal carcinoma is variously reported with percentages ranging from very rare findings (< 0.1%) up to 5% of patients with colorectal carcinoma (1-3). Laparoscopic surgery represents a therapeutic option for these patients. Indeed very few reports available in the literature have already described a simultaneous laparoscopic nephrectomy and hemicolectomy for both ipsilateral and contralateral tumours (4-8).

To our knowledge this is the first case report of a more complex one-stage laparoscopic surgery procedure consisting of a right transperitoneal nephrectomy, right hemicolectomy and sigmoidectomy for a patients with simultaneous multiple colon tumours and renal cancers.

Case report

A 79 year old female presented to our facility because of a solid lesion in the lower pole of the right kidney, colorectal polyposis, both

documented by total body CT scan (Figure 1), and positive fecal occult blood test (FOBT). The CT scan was performed during a previous admission to a Respiratory Disease Ward because of a pleural empyema.

Colonoscopy showed three polyps in the right colon and three polyps in the sigma. Biopsies of the polyps documented a low grade sigmoid carcinoma in one lesion and tubulovillous adenomas in all the others.

We planned a one-stage laparoscopic intervention for right hemicolectomy (with mechanical extracorporeal anastomosis), sigmoidectomy (with trans-anal mechanical anastomosis between left colon and rectum), and right transperitoneal radical nephrectomy.

Definitive histology showed : i) clear cell carcinoma of the right kidney with a maximum diameter of 3 cm; ii) moderated differentiated adenocarcinoma of the sigma (T1, N0); and iii) tubulovillous adenomas of the right colon. The immunochemistry of the sigmoid tumours documented the expression of the mismatch repair proteins MLH1, MSH2 and MSH6.

Discussion

We report a case of simultaneous renal and bilateral colorectal tumours treated with a one-stage laparoscopic procedure. The simultaneous occurrence of renal carcinoma and primary tumours of the others sites is already known (3). In particular, the urogenital and gastrointestinal tumours are the most common pairing of synchronous primary cancers (3).

The common pathogenic link remains largely unknown. Interestingly, it has been shown that patients with a diagnosis of urologic cancers are at higher risk for de-



Fig. 1 - Abdominal CT scan. Solid lesion in the lower pole of the right kidney (white arrow, continuous line) and polyp of the colon (white arrow, dash line).

veloping subsequent colorectal cancer than patients without urologic cancer (3). Similarly patients with colorectal cancers have increased risk for urologic cancers, in particular for ureteral cancers (3). Such incremented risk of synchronous urologic and colorectal cancer is further well established in specific genetic syndrome such as the hereditary non-polyposis colon cancer (HNPCC - Lynch Syndrome) (9-11). HNPCC is an autosomal dominant genetic condition which leads to increased risk

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of colorectal cancer (9-11). Mutations in genes involved in DNA mismatch repair pathway, such as MLH1, MSH2, MSH6 (as in the case of our patient), are hallmarks of HNPCC syndrome (12-14).

The diagnosis of simultaneous tumours is facilitated by the wide spread use of ultrasonography, computed tomography or magnetic resonance imaging techniques. The possibility of coexisting asymptomatic renal and colorectal cancer suggests the need to perform imaging studies when one of the two tumours is diagnosed.

Classically two-stage surgery is planned for resection of synchronous cancers. The literature already reported some cases of successfully one-stage laparoscopic surgery for simultaneous tumours (4-8). We reported that a multiple laparoscopic resection in the same session is feasible, safe, and probably the best choice for the patient.

Conclusions

Synchronous renal carcinoma and colorectal carcinoma is a well established condition that must be considered when one of the two tumours is diagnosed. Genetic alterations have been claimed to support the common pathogenetic link. We recommend a one-stage laparoscopic procedure even for bilateral lesions when the surgeon has solid experience in laparoscopic technique.

Conflict of interest

The authors declare that they have no conflict of interest.

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