Metachronous solitary left adrenal gland metastasis of right colon cancer treated with laparoscopic approach

Alberto Oldani, Manuela Monni, Enrica Soligo, Sergio Gentilli, Marcello Garavoglia

Department of Surgery, University of Eastern Piedmont "A. Avogadro" Hospital “Maggiore della Carità” Novara, Italy

Metachronous solitary left adrenal gland metastasis of right colon cancer treated with laparoscopic approach

AIM: Adrenal gland metastasis are the second most common type of adrenal mass lesions after adenomas and they could be related to numerous malignancies; Literature shows that adrenal metastasis deriving from colorectal cancer are very rare.

MATERIAL OF THE STUDY: A 71-year old - male patient, treated two years before with right colectomy and adjuvant chemotherapy for right colon cancer, came to our attention after the diagnosis at follow up, of a left adrenal gland mass; CT scan and CT – PET did not show other pathological findings.

RESULTS: The patient underwent left adrenalectomy with trans-peritoneal laparoscopic approach: the definitive histological examination diagnosed metastatic tissue of colonic cancer in left adrenal gland.

CONCLUSIONS: Adrenal gland metastases are common clinical entities, but which of them arise starting from colonic cancer are very rare and they are generally discovered about 1 year after the first diagnosis of cancer. Early diagnosis, laparoscopic radical excision when feasible and eventual adjuvant radio-chemotherapy are actually the proper clinical management of adrenal gland metastases finalized to better outcomes in terms of longer survival rate and quality of life.

KEY WORDS: Adrenal gland, Colorectal cancer, Laparoscopic, Metastasis

Introduction

Adrenal gland metastasis are the second most common type of adrenal mass lesions after adenomas and they could be related to numerous malignancies 1, even if isolated or solitary ones are uncommon especially when related to colonic cancer 2. Adrenal gland metastasis are generally discovered during oncologic follow-up in patients with good performance status; no symptoms are usually referred and there’s not significant difference of incidence between those that arise as bilateral (51%) to monolateral ones (49%); Literature reports a 66% rate of metachronous adrenal gland metastasis, discovered within one year after the first diagnosis of primitive cancer 3.

Case report

In September 2011, a 71-year old - male patient required right hemicolectomy for malignant right colonic cancer (pT3 N1 M0), treated after surgery with adjuvant chemotherapy; periodic oncologic follow-up with thorax-abdomen CT scan resulted completely clear until August 2013; the patients was completely asymptomatic and in good general conditions. The thorax–abdomen CT scan performed in August 2013, revealed the presence of dimensional increase of left adrenal gland (27x23 mm) (Fig. 1).
The subsequent PET-CT confirmed an increased FDG uptake in the left adrenal gland and in colonic fields (SUV max 9.89) (Fig. 2).

Completed colonoscopy not identified mucosal anomalies.

Results

The patient underwent left adrenalectomy with trans-peritoneal laparoscopic approach. Histological examination diagnosed metastatic tissue of colonic cancer in left adrenal gland (Figg. 3, 4).

The patient was discharged in first post-operative day with no pain; no complication occurred during hospitalization.

Discussion

Adrenal gland metastases are the second most common type of adrenal mass lesion after adenomas, and which of them arise starting from colonic cancer are very rare⁴, and they are generally discovered about 1 year after the first diagnosis of cancer. Metastases to the adrenal gland are often revealed during regular oncologic follow-up with thorax-abdomen CT-scan while the patient is completely asymptomatic, but it is necessary to perform a PET-CT to confirm the neoplastic behavior of the lesion [⁴]: about 66% of adrenal gland metastasis are metachro-
Metachronous solitary left adrenal gland metastasis of right colon cancer treated with laparoscopic approach

Nous and about 49% of them are monolateral as our case exposes. Once adrenal gland metastases is diagnosed, the proper treatment consists in radical surgical adrenalectomy, performing open versus laparoscopic surgical approach, chosen after an accurate patient selection, especially when adrenal gland is the only site of secondary neoplastic involvement.

Many authors referred that laparoscopic adrenalectomy offers a minimally invasive approach, with better perioperative and post-operative parameters as decreased blood loss, fewer complications, and shorter length of hospital stay compared to open technique, that is however feasible for adrenal gland primitive cancers or for giant metastatic lesions more than 9 cm. Actually adrenalectomy with complete exeresis of metastasis also improves survival about 30 months, compared to chemotherapy alone.

Conclusions

Early diagnosis, laparoscopic radical excision when feasible and eventual adjuvant radio-chemotherapy are actually the proper clinical management of adrenal gland metastases finalized to better outcomes in terms of longer survival rate and quality of life: the case that we have described exposes an isolated metachronous right colonic cancer metastasis on left adrenal gland: our case demonstrates the fundamental role of periodic oncologic follow-up even in complete absence of local either systemic symptoms to detect earlier metastatic localizations.

References


Riassunto

Le metastasi sono le più comuni forme di massa surrenale dopo gli adenomi, e possono derivare dalla diffusione di svariate neoplasie; la Letteratura dimostra comunque che raramente tali lesioni derivano da tumori primitivi colo–rettali.

Un paziente di 71 anni di età, sottoposto due anni prima ad emicolectomia destra e chemioterapia adiuvante per adenocarcinoma del colon ascendente, è giunto alla nostra osservazione a seguito del riscontro, al follow up, di una lesione surrenale sinistra, indagata tramite TC e PET –TC; le procedure di stadiazione non avevano evidenziato ulteriori reperti patologici di rilievo.

Il paziente è stato sottoposto a surrenalectomia sinistra laparoscopica con approccio trans peritoneale. Esame istologico definitivo: metastasi surrenale di adenocarcinoma del colon.

Le metastasi surrenaliche sono entità patologiche molto comuni; le lesioni di questo tipo derivanti da neoplasie colo–rettali risultano comunque molto rare, e sono in genere diagnosticate entro l’anno dalla diagnosi della neoplasia primitiva.

La diagnosi precoce, l’escissione chirurgica radicale se possibile ed una eventuale radio – chemioterapia risultano il gold standard per ottenere migliori risultati in termini di sopravvivenza e qualità di vita.