The Krukenberg tumor

A case report

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Summary: Krukenberg tumor, a malignant ovarian neoplasm with well defined histological characteristics, is often bilateral and secondary to a tumor of the gastrointestinal tract.

We describe the case of a 44 year old woman affected by gastric cancer, who only 10 months after such diagnosis and subsequent total gastrectomy, came to our observation with ascites and bulky peritoneal involvement.

During this period the patient achieved only haematochemical dosages of tumoral markers, particularly of TAG-72 which after 180 days rose to pathological values.

We remark the importance of a careful clinical control and monitoring of TAG-72 for the follow-up of gastric cancer.

Key words: Krukenberg tumor; TAG-72.

INTRODUCTION

Krukenberg tumor, described for the first time in 1896 ([6]) represents a malignant ovarian neoplasm, usually bilateral and often secondary to a primary neoplasm of the gastrointestinal tract.

The histological peculiarities are well defined: presence of "signet-ring" cells, intracellular production of mucins, spread of stromal infiltration with a sarcoma-like appearance.

In spite of its proved metastatic nature, the possibility of its primary ovarian origin continues to arouse debate ([4]).

In case of ovarian metastases, the modalities of diffusion are represented by the haematic or lymphatic path, or by a direct plant through the peritoneal fluid.

Usually the ovarian involvement becomes evident simultaneously or successively to a primary neoplasm; the time interval appears to be very brief ([3, 8, 9]).

CLINICAL CASE

Our patient, 44 years old, underwent esophagogastroduodenoscopic examination for the appearance of subcontinuous abdominal pain, post prandial strain, nausea, asthenia and weight loss.

The endoscopic observation was the following: at the level of the corpus of the stomach, polypoid mass with central ulceration (2nd type by Boremann's classification) ([7]).

The histological examination of bioptic fragments yielded the following result: "Adenocarcinoma of the stomach".

In consequence of this result, the patient underwent total gastrectomy.

Furthermore, we recommended the patient to undergo a clinical examination every 60 days, an abdominal and pelvic ultrasonography, and

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haematochemic check for TAG-72 dosage (Tumor Associated Glycoprotein 72) [5], a mucinous complex with high molecular weight, that has resulted up to now particularly interesting as a tumor marker of gastric cancer [1, 2].

Nevertheless, the patient achieved only blood tests. We therefore dosed serous TAG-72 every 60 days, by the radioimmunologic method in solid phase of the sandwich type (Centocor CA 72-4 RIA) that uses two monoclonal antibodies in solid phase: cc49 and B72.3.

The range of normal values accepted by our laboratory is up to 5.5 U/ml.

The following results (60° day = 8.3 U/ml; 120° day = 12.7 U/ml; 180° day = 20.7 U/ml; 240° day = 31.5 U/ml) have shown a virage of about 180° day.

We advised the patient to undergo an explorative laparotomy.

Nevertheless, she dropped out of observation, and returned only 10 months after the first operation.

Subjected to a careful gynecological examination, a bulky neoplastic involvement of the pelvis was found ("frozen pelvis").

Exfoliative cytology of the uterine cervix showed a neoplastic diffusion in that seat, too. (Presence of malignant neoplastic cells).

The patient died a week after our observation.

The autopsy showed a bulky peritoneal involvement by a bilateral ovaric tumor, secondary to primary gastric cancer (Krukenberg Tumor).

CONCLUSION

Our case appears as a typycal clinical evolution of Krukenberg tumor.

The time interval relapsing between primary and secondary disease agrees with that reported in literature (less than two years) [3, 9, 10].

It is clear moreover that a careful and periodic clinical and laboratory examination is important in all patients undergoing gastrectomy for gastric cancer. Thus, we have to conclude by saying that, in spite of the many years which have passed from the first description of such disease, nothing seems to have changed in the natural history of Krukenberg tumor.

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