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KEY WORDS:

MALIGNANT GERMINAL TUMORS OF THE OVARY: ABOUT 11 CASES

Kamal EL Bakraoui* Department of Medical Oncology, National Institute of Oncology, CHU Rabat, Morocco. *Corresponding Author

Rabie Rahhali Department of Medical Oncology, National Institute of Oncology, CHU Rabat, Morocco.

Hassan Errihani Department of Medical Oncology, National Institute of Oncology, CHU Rabat, Morocco.

ABSTRACT

Introduction: Malignant germinal tumors of the ovary (MGTO) are a rare entity, accounting for 1-5% of all ovarian tumors and 58% of all ovarian tumors in girls and adolescents. Their diagnosis is generally easy and the treatment of TGMO has been modified by the introduction of cisplatin-based chemotherapy, which has given excellent results in terms of survival while allowing a conservative surgical approach to fertility.

Patients and methods: We report in this work a retrospective review of the management of this pathology at the National Institute of Oncology, including patients treated for an ovarian germ cell tumor during the last seven years. The epidemiological, pathological, clinical and therapeutic aspects have been noted.

Conclusion: For germinal tumors of the ovary, the diagnostic modalities and therapeutic indications are dependent on the histological type and stage of extension of the disease. They are tumors which, most often, are of very good prognosis, provided they are treated by a suitable protocol and without loss of time.

INTRODUCTION:

Malignant germinal tumors of the ovary (MGTO) are a rare entity, accounting for 1-5% of all ovarian tumors and 58% of all ovarian tumors in girls and adolescents. Their diagnosis is usually easy as long as you think about it, their management has been upset by the introduction of cisplatin-based chemotherapy, which has given excellent results in terms of survival while allowing a surgical approach conservative of fertility (1-2).

PATIENTS AND METHODS:

We report in this work a retrospective review of the management of this pathology in the National Institute of Oncology, including patients treated for a germinal tumor of the ovary during the last seven years. The epidemiological aspects, clinical, pathological and therapeutic studies were noted.

RESULTS:

The median age of our patients was 22 years, with extremes ranging from 15 to 67 years . The median consultation time was 2 months with extremes ranging from 1 to 15 months.

Clinically, the tumor syndrome was always in the foreground, only one patient presented with endocrine signs.

No patient has benefited from a tumor marker assay preoperatively, the diagnosis of an ovarian tumor to be made using a radiological assessment always including an abdominal ultrasound sometimes associated with a CT scan, this assessment had allowed suspecting the presence of MGTO in a single patient. The initial treatment consisted of primary surgery for diagnostic and therapeutic purposes, note that no extemporaneous histological study was performed and only one patient had lymph node dissection. Table 1 summarizes the nature of surgical procedures performed in our patients.

Surgical Gesture	Number of Cases
Oavriectomy / Annexectomy	5
cystectomy	2
Radical Surgery	3
lymph node dissection	1

Table 1: Surgical treatment.

Surgical staging gave the following results: stage I (6cases) and stage III (5cases). It should be noted that in stages III, no patient had a complete resection of macroscopic lesions. At the end of this surgery, the preservation of fertility, which we define as the preservation of the uterus with at least one appendix in an unmaintained patient, concerned 7 patients.

The median size of the tumors was 14 cm, with extremes of 9 to 30 cm. The histological types found are shown in table 2.

Histological type	Number of cases
dysgerminoma	1
Immature teratoma	5
Endodermal sinus tumor	2
Embryonic carcinoma	2
Mixed cell tumor	1

Table2: Histological types represented in the series according to the WHO classification.

Postoperative chemotherapy was administered to 8 patients; the median time to perform the first course of treatment was 1 month, ranging from 15 days to 2 months.

This chemotherapy was adjuvant for 3 patients with stage I and aiming for unrespectable peritoneal lesions for the 5 patients with stage III. It should be noted that adjuvant chemotherapy was not performed in two patients with Stage I who were expected to benefit.

The protocols used were platinum Cisplatine in 6 patients, and did not contain this molecule in two patients and the number of cycles administered varied between 3 and 6 cycles, with a median of 4 cycles.

DISCUSSION:

The diagnosis of TGMO is easy whenever you think about it; before any young woman presenting with an ovarian mass, the tumor markers should be assayed, these are all the more important that the TGMOs have no specific aspects in imaging, and that a diagnosis made preoperatively could change the initial therapeutic management (1).

Surgery should be conservative in the vast majority of cases of germ cell tumors. The prognosis is most of the time excellent for these young patients, and for whom one wishes to preserve fertility (2).

As for adenocarcinomas, the goal of the surgery is threefold: therapeutic (removal of the tumor), diagnostic (determination of the histological type of the tumor) and help to determine the stage of extension (3).

The gesture, therefore, consists at least in unilateral adnexectomy, complete exploration of the pelvis and the entire abdominal cavity, peritoneal lavage and/or removal of any ascites present during the opening of the abdomen, systematic peritoneal biopsies (including the epiploon) and removal of any suspicious item (4).

The ganglionic dissection is not systematic; it is often performed in case of abnormality visible on the scanner or palpable during surgical exploration (5).

The BEP protocol is currently the standard protocol for primitive malignant germ tumors. It is important to start chemotherapy as soon as possible after surgery; the time to start chemotherapy should be in the range of one to two weeks maximum given the high proliferation rate of these tumors. It is also important to respect the dose intensity of the treatment (respect the interval of three weeks between the cures and not to make "untimely" reductions of the doses). the indication of chemotherapy depends on the histological type and stage of the disease (6-11).

In the Low study, during chemotherapy (47/74 patients, BEP protocol: 30 patients), 61% of patients had amenorrhea, but in 91% of them, normal cycles returned to distance from the treatment. Of the 47 patients who received chemotherapy, 20 were seeking maternity. One woman had definitive sterility and another had transient infertility. In total, 19/20 maternity patients who received chemotherapy had a pregnancy: 14 children were born term with no congenital abnormality detected (12-13).

In the Gershenson series (40 patients treated by conservative surgery and chemotherapy), no malformations were observed in 22 live-born children of 11 patients (14-15).

CONCLUSIONS:

The characteristics of ovarian germ-cell tumors are very important to know, given the therapeutic consequences that follow from them. When an ovarian tumor is discovered in a young woman, if the marker assays are not carried out (emergency context) and if the extemporaneous examination is impossible, it is preferable to perform only an adnexectomy, even if it is necessary to re-intervene quickly. it is an adenocarcinoma (thus avoiding mutilating surgeries that are not necessary in patients with germinal tumors).

In germ tumors, the diagnostic modalities and therapeutic indications are dependent on the histological type and the stage of extension of the disease. They are tumors which, most often, are of very good prognosis, provided they are treated by a suitable protocol and without loss of time.

Conflict of interest:

The authors declare that they have no conflict of interest.

Informed consent:

All patients expressed their informed consent for the publication of this study.

REFERENCES:

1. Tewari, K., Cappuccini, F., Disaia , PJ. and al. (2000) Malignant germ cell tumors of the ovary: Obstet Gynecol 95: 128-33.
2. Tangir, J., Zelterman , D., Ma, W. and al. (2003) Reproductive function after conservative surgery and chemotherapy for malignant germ cell tumors of the ovary : Obstet Gynecol 101: 251-57.
3. Herrin, VE., Thigpen, JT. (2000) Germ cell Tumors of Ovary. In: D. Raghavan, ML Brecher, DH Johnson, NJ Meropol, PL Moots, JT Thigpen, ed. in Textbook of uncommon cancer. J Wiley and Sons Ed, West Sussex, England, p 671-80.
4. Jo Bailey, David Church. (2005). Management of germ cell tumours of the ovary :Reviews in Gynaecological Practice 5 201–206.
5. Kumar and al. (2008). The prevalence and prognostic impact of lymph node metastasis in malignant germ cell tumors of the ovary: Gynecologic Oncology 110 125–132.
6. Jean-Paul Guastalla, Isabelle Ray-Coquard, (2006). Les cancers ovariens : Springer-Verlag France.
7. Culine, S., Lhommé, C., Kattan, J. et al. (1995). Cisplatin-based chemotherapy in dysgerminome of the ovary: thirteen-year experience at the Institut Gustave-Roussy : Gynecol Oncol 58: 344-8.
8. Culine, S., Lhommé, C., Kattan, J. et al. (1994). Long-term results of two VAB-like regimens (vinblastine + actinomycine-D + bléomycine + cyclophosphamide + cisplatine) in malignant germ cell tumours of the ovary : Eur J Cancer 30A: 1239-44.
9. Williams, SD., Blessing, JA., Liao, SY. et al. (1994). Adjuvant therapy of ovarian germ cell tumors with cisplatin, etoposide and bleomycin: a trial of the Gynecologic Oncology Group : J Clin Oncol 12: 701-6.
10. Culine, S., Kattan, J., Lhommé, C. et al. (1994). A phase II study of high-dose Cisplatin, Vinblastine, Bleomycin, and Etoposide (PVeBV regimen) in malignant nondysgerminomatous germ-cell tumors of the ovary : Gynecol Oncol 54: 47-53.
11. Williams, SD., Birch, R., Einhorn, LH. et al. (1987) Disseminated germ cell tumors: chemotherapy with cisplatin, bleomycin plus either vinblastine or etoposide : N Engl J Med 316: 1434-40.
12. Low, JJ., Perrin, LC., Crandon, AJ. et al. (2000). Conservative surgery to preserve ovarian function in patients with malignant ovarian germ cell tumors. A review of 74 cases : Cancer 89: 391-8.
13. Zanetta, G., Bonazzi, C., Cantu, M. et al. (2001). Survival and reproductive function after treatment of malignant germ cell ovarian tumor: J Clin Oncol 19: 1015-20.
14. Gershenson, DM., Morris, M., Cangir, A. (1990). Treatment of malignant germ cell tumors of the ovary with bleomycin, etoposide and cisplatin : J Clin Oncol 8: 715-20.
15. Gershenson, DM., Kavanagh, JJ., Copeland, LJ. et al. (1986). Treatment of malignant nondysgerminomatous germ cell tumors of the ovary with vinblastine, bleomycin, and cisplatine : Cancer 57: 1731-7.