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RESEARCH ARTICLE

STRUMA OVARII: ABOUT A CASE AND REVIEW OF THE LITERATURE

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Abstract

Struma ovarii or ovarian goiter is a rare ovarian tumor which belongs to the group of monodermal teratomas. This tumor may be associated with signs of hyperthyroidism and it is benign most of the time. An increase of CA125 levels in the serum can potentially lead to a mis-diagnosis of malignant ovarian carcinoma preoperatively. The diagnosis is usually made on histopathology. Given the risk of malignant transformation, surgical treatment remains the only therapeutic option with a good prognosis. Our patient had an unilateral multilobed ovarian mass with ascites, without signs of hyperthyroidism, an oophorectomy was performed. Pathological examination confirmed the diagnosis of struma ovarii.

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Introduction:-

Ovarian goiter or Struma ovarii is defined - According to the World Health Organization (WHO) classification- , as ovarian goiter which comprises thyroid tissue either entirely or predominantly (> 50%); it's considered a mature monodermal teratoma [1]. First described by Bottlin in 1888, struma ovarii is relatively a rare tumor that accounts for 0.3-1 % of all ovarian tumors and 3% of dermoid ovarian tumors [2]. Most cases of Struma ovarii are benigns and usually unilateral, malignant struma ovarii is even rarer as occurring in less than 5% of cases and metastases were seldom seen [1]. Although the thyroid tissue is predominant in these tumors, hyperthyroidism is only seen in about 8% of patients with ovarian goiter [3]. We report a case of benign ovarian goiter in a 65-year-old patient, through our observation; we consult the literature to better understand the epidemiological, diagnostic, histological and therapeutic aspects of this rare clinical entity.

Patient And Observation:-

Mrs. B.A, 60 years old, without notable pathological history. She consulted for moderate and intermittent pelvic pain evolving for two months without notion of metrorrhagia, leucorrhoea, urinary or digestive signs. The clinical examination was unremarkable. Furthermore, the patient did not present signs of hyperthyroidism. The patient underwent an abdominal computed tomography which revealed a polylobed right latero-uterine mass, measuring 106 mm * 98 mm * 98.4 mm, with three components: fatty, liquid and fleshy with arciform calcifications suggesting an ovarian immature teratoma ,a septate peritoneal effusion is associated with it (figure 1), an exploration by magnetic resonance imaging showed a right ovarian mass, with a cystic, fatty and tissue component with thick and irregular walls and partitions, enhancing after injection of contrast product, associated with ascites of moderate abundance, possibly suggesting a malignant lesion of germinal origin . The assay of tumor markers (ACE, CA 15-3, CA 125) showed an increase in CA 125 to 143 u / ml. Intraoperative exploration after subumbilical laparotomy

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showed a large polylobed right ovarian mass, associated with low abundance peritoneal effusion. The rest of the abdominal exploration was unremarkable. We performed ascites aspiration (after sampling for cytological study) and right oophorectomy (Figure 2). The postoperative consequences were simple. The pathological examination was in favor of a remodeled ovarian goiter without obvious histological signs of malignancy, with inflammatory cytology (ascites) without suspicious cells (Figures 3 and 4). The patient's follow-up was unremarkable with a follow-up of 18 months.

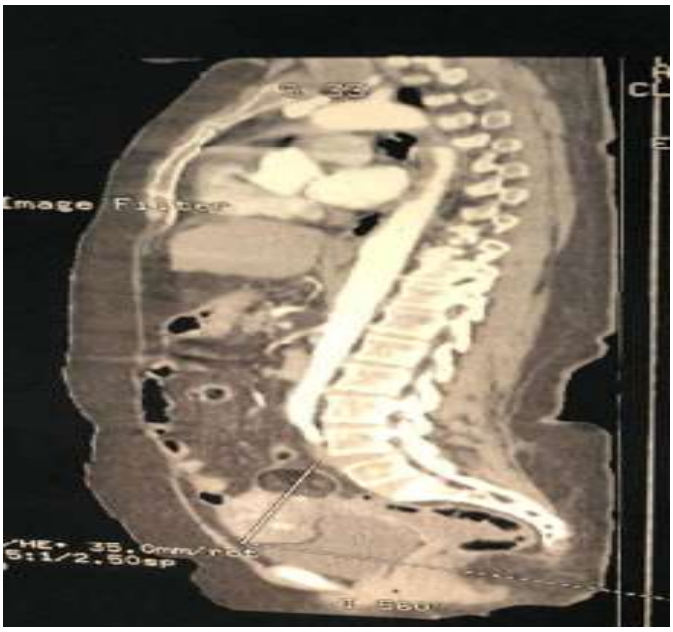


Figure 1:- CT image in sagittal section showing the pelvic mass**.**

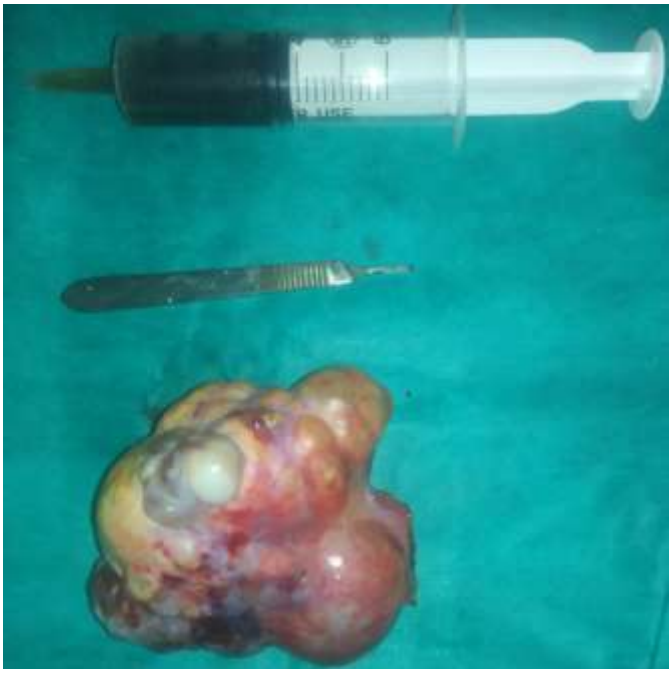
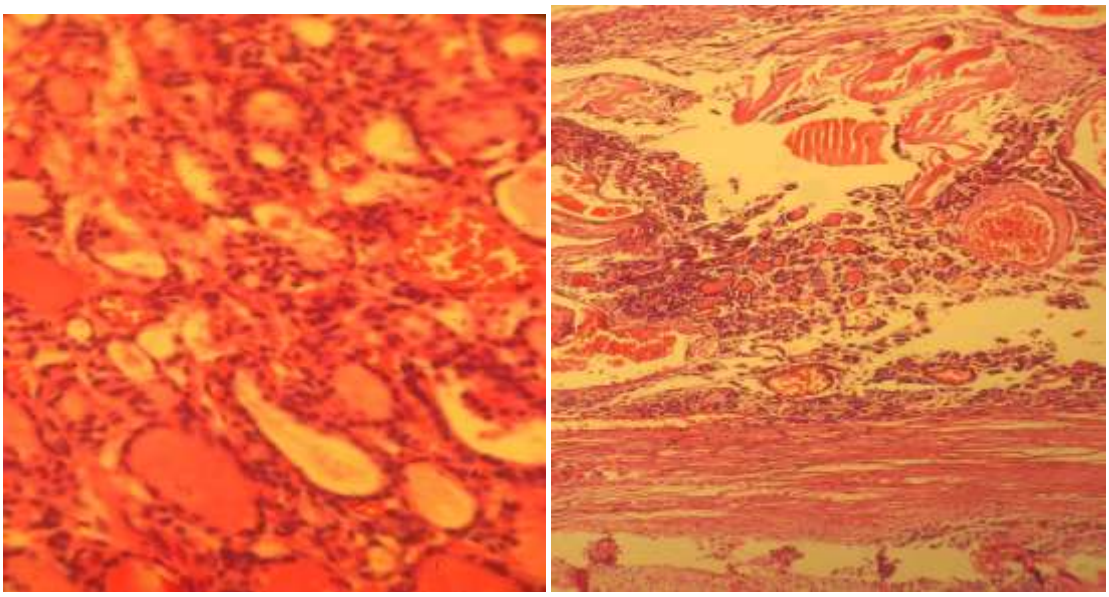


Figure 2: Right oophorectomy surgical specimen



Figures 3 and 4:- The pathological examination was in favor of a remodeled ovarian goiter.

Discussion:-

Teratomas are germ line tumors composed of cells derived from one or more of the three embryonic layers (meso-, endo- and ectoderm), which can be single or multi-tissue [4]. Struma ovarii is a rare monodermal mature ovarian teratoma comprising exclusively or predominantly thyroid tissue. It may undergo the usual alterations in thyroid tissue (adenoma, thyroiditis, carcinoma) and be complicated by thyrotoxicosis in approximately 5% of cases [5].

Struma ovarii affects women between 30 and 50 years old, it rarely occurs after menopause and exceptionally before puberty [3]. It is often unilateral affecting the left ovary in 63% of cases; it can be bilateral in 6% of cases [6].

The symptoms are most often less pronounced and non-specific, the diagnosis of ovarian mass is often fortuitous or made in the presence of pelvic pain, an abdominal mass or menstrual cycle disorders, acute severe abdominal pain may be caused by tumor rupture [7]. About 17% of the patients developed pseudo-Meigs' syndrome with pleural effusion and ascites [8] and nearly 5% of cases may present with hyperthyroidism [9]. Raised cancer antigen (CA)-125 levels can also be found in a few cases [10] which can lead to mis- diagnosis of malignant ovarian cancer in elderly patients leading to unnecessary extensive surgery.

On ultrasound, the struma ovarii most often presents as a mixed lesion, cystic and tissue, with septa and vegetations [11], Moderate hyper-vascularization is present on Doppler, related to a richer vascularization of the thyroid tissue than that of the tissue components of other teratomas [6]. MRI semiology is more specific, it presents as a heterogeneous, mixed, multiloculated lesion with polylobed contours. The loci appear with variable signal in relation to their content: pure liquid (hypersignal T2 and hyposignal T1) or colloid (hyposignal T1 and T2) [12,13]. The septa and the tissue portions take on contrast after injection of gadolinium, due to the rich vascularization of the thyroid tissue [6,12]. Apart from metastases, there are no radiological criteria for the malignancy of ovarian goiter. Only a preoperative pelvic scintigraphy with radioactive iodine (131I) could show active thyroid tissue [14].

The macroscopic appearance is that of a mixed-component tumor with mucous or gelatinous contents of brown-green color, associated with the other components of a mature teratoma in nearly half of the cases [6]. The microscopic appearance finds inclusions of thyroid follicles containing colloid which are either encapsulated or irregularly distributed among the other components of the teratoma [6]. Tissue architecture is just as varied as that of the thyroid gland. Cells may have eosinophilic or clear cytoplasm, sometimes vacuolated [4].

The criteria of malignancy of ovarian goiter have long been controversial; most authors have retained as criteria of malignancy of ovarian goiters the histopathological characteristics of primary carcinomas of the thyroid, apart from the concept of capsular rupture inapplicable to the ovary [15].

Malignant transformation of these tumors is extremely rare estimated at less than 1% [16]. Metastatic dissemination can occur in approximately 5% of malignant ovarian goiters [6,16]. This rate was estimated at 23% by Makani et al. [17], hence the need for long-term follow-up.

In the case of benign ovarian goiter, no additional treatment to unilateral oophorectomy or simple resection is necessary [15]. A possible initial hyperthyroidism may exist in 15% of struma ovarii, it disappears after tumor excision. Sometimes, a secreting ovarian goiter can inhibit the hypothalamic-pituitary axis with the risk of postoperative hypothyroidism. A few cases of ovarian goiter with autoimmune manifestations such as Hashimoto's disease or Graves' disease have been reported [15].

Conclusion:-

The majority presence of thyroid tissue within a teratoma of the ovary is traditionally called ovarian goiter and it represents a particular clinical form, most often benign and with an excellent prognosis, even if it can, exceptionally, present a malignant transformation whose treatment and follow-up are similar to those for thyroid carcinoma.

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