Leydig cell tumor

Patient Information Series – What you should know, what you should ask.

What is it?

Leydig cell ovarian tumor is a rare sex cord-gonadal stromal tumor which constitutes less than 0.5% of ovarian tumors and 1 - 2% of pediatric ovarian cancers. Sex cord ovarian cancers usually occur in young women 20 to 30 years old, but the tumor can occur at any age. Tumors composed only of Leydig cells are observed most often in postmenopausal women.

Which are the symptoms?

Usually this condition is accompanied by androgen secretion, together with virilization (a deep voice, an enlarged clitoris, a loss in breast size, a stopping of menses, androgenetic alopecia) and hirsutism (increase in facial and body hair)

In young patients this tumor can determine the development of secondary sex characteristics at a younger age than in the general population (isosexual precocious pseudopuberty*).*

In some cases, the patients experience pain in the lower belly (pelvic area).

Sometimes patients are asymptomatic and the mass is diagnosed as an incidental finding.

How could it be diagnosed?

To diagnose this tumor, it's important to investigate patients' symptoms and perform a pelvic examination and a pelvic ultrasound. At ultrasound the tumor usually appears as a unilateral solid lesion.

Increased serum levels of free testosterone and DHEA are usually detected at blood tests.

A CT scan is mandatory to evaluate the disease dissemination.

How can this condition be treated?

In young women with an early-stage disease a conservative surgery (unilateral salpingo-oophorectomy) and appropriate surgical staging is a feasible and safe approach. If the patient is posmenopausal or doesn't wish to preserve fertility a bilateral fallopian tubes and ovarian removal (salpingo-oophorectomy) is recommended and possibly removal of the uterus (hysterectomy) along with standard surgical staging.

Depending on the tumor size and risk factors for recurrence (e.g. moderately and poorly differentiated tumors); you may also need platinum-based adjuvant chemotherapy.

Which is the prognosis?

Most of Sertoli-Leydig cell ovarian tumors are diagnosed at FIGO stage I (disease limited to the ovaries) with very good prognosis. Well differentiated Sertoli-Leydig cell tumors are essentially benign, while around 10% of moderately differentiated and poorly differentiated tumors have an aggressive behavior. Male characteristics resolve slowly after surgery.

Stage II or higher, the presence of heterologous elements and retiform pattern at histology, are adverse prognostic factors.

Which follow-up will I need?

Patient surveillance is crucial after the surgical treatment. Follow-up examinations along with pelvic and abdominal ultrasound (eventually a CT scan) and blood test are performed every 3 months for the first year after surgery, every 4 months for the second year and then every six months for five years after treatment.

What other questions should I ask?

- Are there problems for future fertility after conservative surgery?
- What is the likelihood a Leydig tumor can relapse after treatment?

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