Lipoidic Cells Ovary Cancer, Clinic Case and Literature Review

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Abstract: *Objective*: Analyzed a case of woman with virilizan ovary tumor, where clinics manifestations made easy diagnosis of a anexial tumor producing masculine hormones with neoplastic thorax effusion and ascites. Specific tumoral serum marks for diagnosis, and posoperatory evolution. We made a medical prospective literature review.

Methods: We studied a female case 35 years old, with an androgenic malignity ovary tumor, Analysis was worked in a Regional General Hospital of a State of Mexico, Mexico last year. Prospective studying a tumor of the ovary, produces masculine hormones.

Discussion: Rare tumor, represents, almost 0.5% all ovarian tumors. It's secrets masculine hormones; with broaden voice, acne, facial and corporal hair increased, large clitoris, androgenic calvicie patter. Those tumors grow in all age's women groups, but usually in young women, almost is unilateral (95%). We show a clinical case of woman, 35 years old with androgenic dates, She carried out surgery for ovarian tumor. Histopathology report confirmed a malign ovary cordons sexual cells, with high malign grade compound, approximated 30 cm mayor diameter with integral capsule. Stage IC. Were used 6 cycles intravenous systemic chemotherapy. At present, her tumoral marks are negative and gradually have been disappeared androgenic clinical manifestations.

Conclusions: Rare malign ovary tumor, produces androgenic clinical manifestation. Grove up tumor marks like serum testosterone; cytorreductive surgery is cornerstone treatment. Prognosis disease is up to grade of cell differentiation and stage in surgical-pathological events. Five years survive in stage I, is approximate in 70 to 90% of cases.

Keywords: Lipoidic cells, virilizan, ovary cancer.

INTRODUCTION

Lipoidic cells ovary cancer is cordom sexual tumors neoplasms group. Frequency is almost 0.5% all female gonadal neoplasm, called virilizan tumor, steroid cell neoplasm; androgenic ovary tumor too. It has characteristic of produce masculine hormones, like testosterone or precursors: androstendione [1]. Therefore, diagnosis all cases begin with clinical characteristics of a usual young woman, fertility age, with virilitation: androgenic: alopecic, acne, mammalian hipotrofic, generalized hirsutism, thick voice, in back, masculine abdominal-pelvic hair distribution; clitoris grown. 90% of cases are benign ovaries tumor, malignity is showed with ascitic presence, fast growth. Metastatic disease is by sanguineous *via* at lungs, liver or brain too. Histological differentiation, with high cells grade, in a Sertoli Leydig cells compound or anaplastic tumor. Usually is present one ovary [2]. Androgenic tumors are only 0.1 % ovary tumors. They compound three varieties: stromal luteome, Leydig cells tumor and third group, with steroid cells or arrenoblastic tumors without specifications. Some of them are malign tumors, included in third classification, they are clinical ovary cancer, nevertheless, two of the beginnings, have benign evolution. Studies of lipoidic cells tumor is with Inmune-hystochemical tests, like: vimentine, alpha inhibin, EMA, chromogranin Ck7, Ck20, alpha fetoprotein; they're utility in some cases of malignity tumor (Table **1**), and tumoral marks: CA-125, CA-19.9 y carcinoembrionic antigen. High concentration of masculine hormones like testosterone, andostendione and Luteinizing hormones (LH) could be present bigger than 95% normal value of cases. All of them affect only a ovary and found relapse signs in patients. Auxiliary diagnosis studies using images are: abdominal and pelvic ultrasound, RX: tele-thorax, contrasted colon study, excretory urography, abdominal-pelvic computed axial tomography, TAC and magnetic nuclear resonance RMN. At least, computerized tomography through positrons (CT-PET) took an important paper. They're important complementary studies for physician, founded localizations, dimensions, grew invader sites or distance metastatic and recurrence disease (3).

CLINICAL CASE

35 years old married woman, background: one gestation one delivered, irregularities menstrual cycles. She presented illness, enlarged voice, oligomenorreic cycles, grown livitum, generalized hirsutism, growing a back shoulder nevus, with hair in it; present since childhood (Figure **1**), androgenic hair distribution; in

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ISSN: 1927-7210 / E-ISSN: 1927-7229/14

Table 1: Androgenic Tumors, Differential Diagnosis

	STROMAL LUTHEOME	LEYDIG CELL TUMOR	LIPOIDIC CEL TUMOR (Arrhenoblastome)
Behavior	Benign	Benign	Benign or malign
Inmune hystochemical test	Alpha fetus protein LH	Chromogranin CK7, CK20	Vimentine Alpha Inhibine
Masculine hormones	Negative	Negative or Positive	Positive

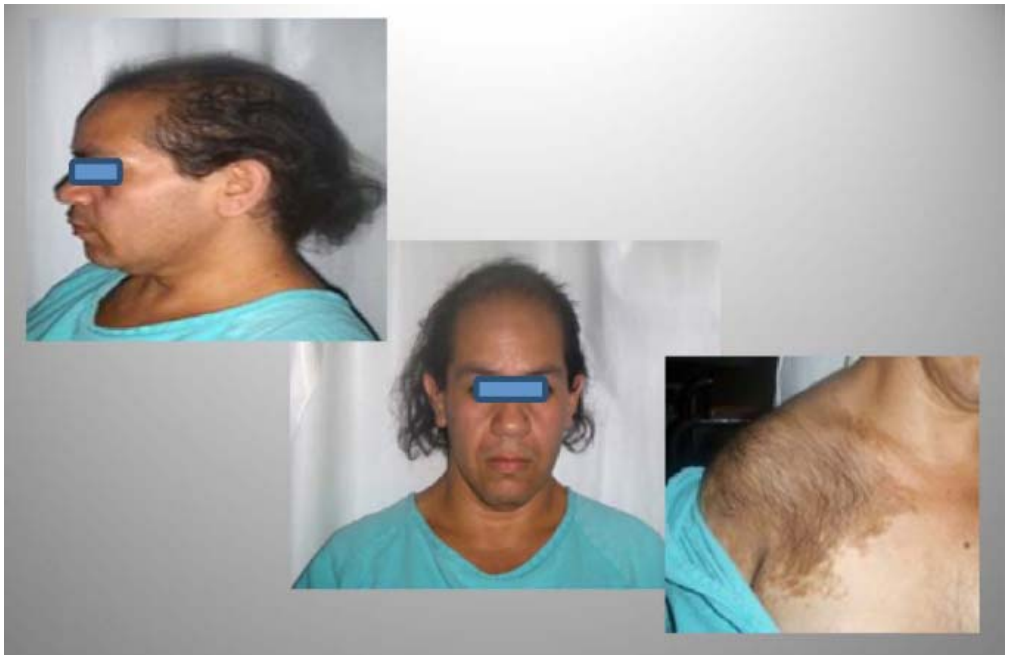
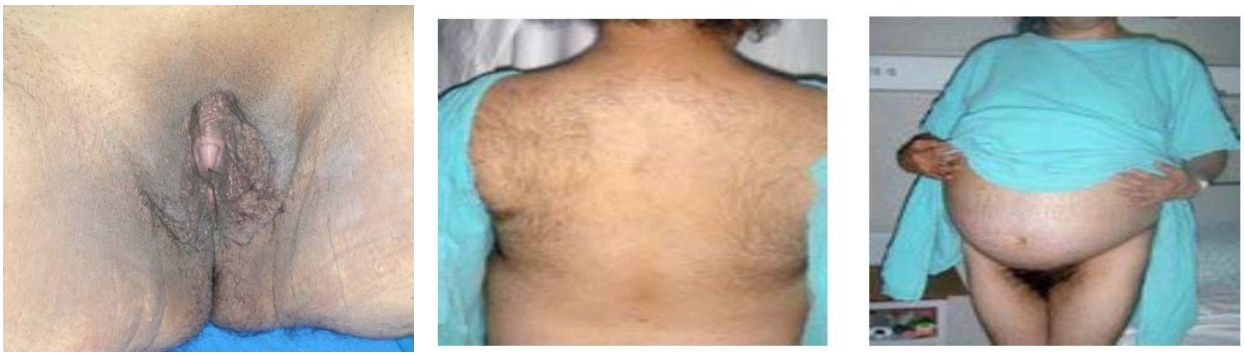


Figure 1: Androgenic hair distribution.

face, back and abdominal space. Androgenic alopecic of head, clitorismegaly (Figures **2**, **3**). Auxiliary laboratory studies confirm high cortisol, serum testosterone, androstendione y lutheotrophic hormone. Inmunehistochemical studies were rises to: CA-125 y CA-19.9; alpha-fetoprotein and carcinoembrionary antigen. Images studies, tele thorax radiography with pleural effusion, ultrasound with color Doppler and TAC showed ascitic disease, produced by right solid-cystic left ovary, with high perfusion. Tumor with complete capsule, no near structures invasion neither enlarged lymphatic's nodes (Figure **4**). We carried out surgery with intravenous general aenestesic process, protocoled laparotomy, aspired of abdominal cavity 7 liters of setrine ascitic, tokened diaphragmatic biopsies, realized extra facial abdominal hysterectomy, Piver III, with right ovary trans operatory study (Figure **5**); retroperitoneal lymphadenectomy biopsies para-aortic and iliac nodes; omentectomy and appendectomy. Cytological report of pleural effusion without malignity



Figures 2, 3: Clitorismegaly, back hair distribution, ascitis.

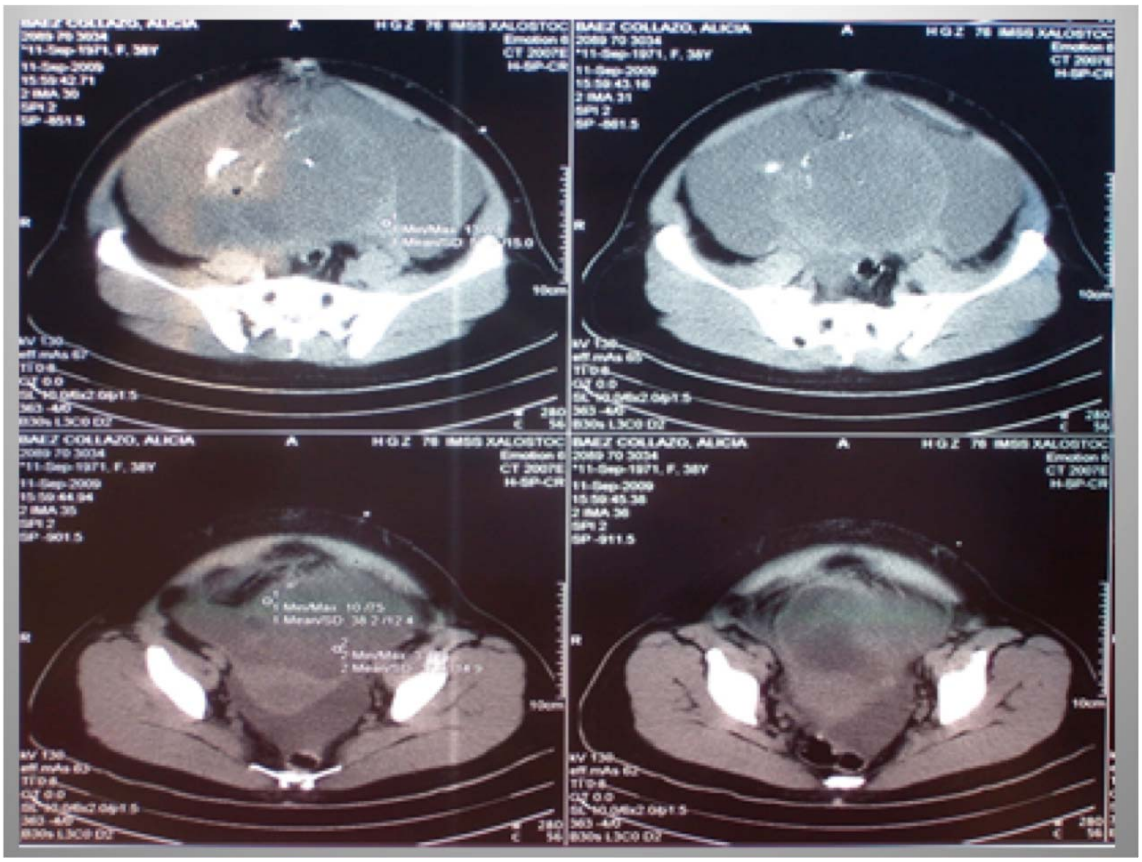


Figure 4: Abdominal TAC, shows abdominal malign ovary tumor, no structures invasion and ascites.

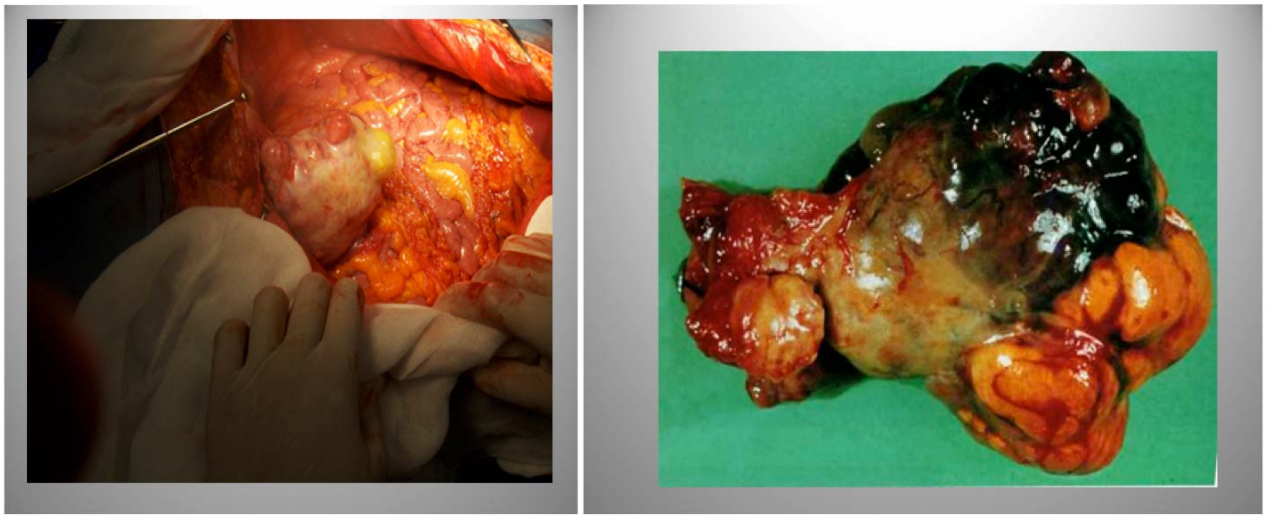
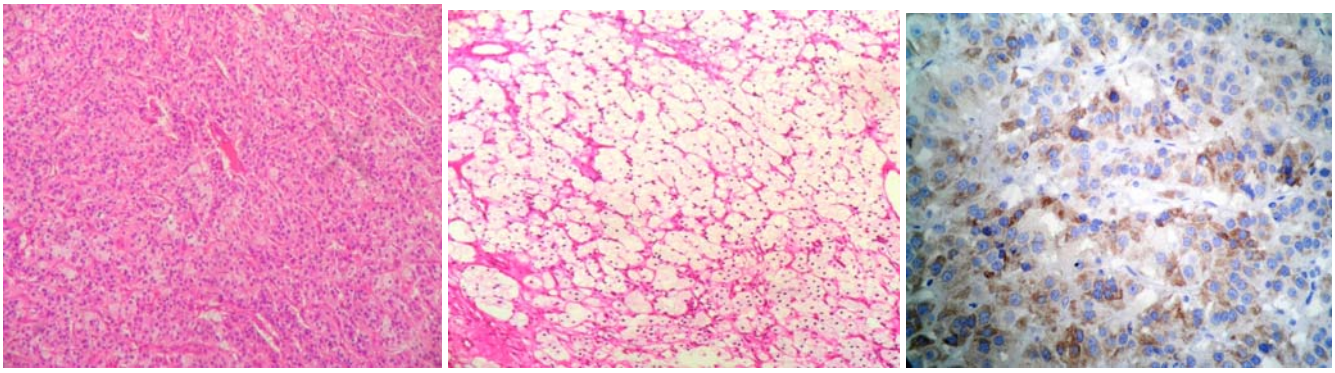


Figure 5: Malign right ovary tumor with integrities capsule.

cells, just only mesothelium cells, inflammatory disease. Pleural effusion disappeared two weeks after surgery; ascites was reported with malignity cells stromal borne. Right ovary tumor, 30 cm x 28 cm size, with integrities capsule, without near organs invasion (Figure **5**). Histological study showed malign neoplasm of sexual cordons or steroid cells, high grade differentiation (G-III), positive inmunohistochemical for vimentin and alpha inhibin (Figure **6A**, **B**, and **C**). Patient was staged in Federal International Gynecology and Obstetrics (FIGO) as IC stage. Posoperatory evolution was excellent, gave up hospital 3 days after surgery. Post-chirurgical controls tumoral marks, wrote up, decrease almost normality one month ago of surgery. She showed falling of face (beard) hair, on shoulders and back, acute voice was showed two



(**A**) (**B**) (**C**)

Figure 6: Microscopic studies with malignity lipoidic cells (**A**), high differentiation grade G-III (**B**), positive inmunohistochemical for: vimentin and alpha-inhibin (**C**).

months ago of surgery. Six month ago, testosterone levels and androstendione levels were reported high (Table **2**) and tumoral marks values were founded positive (Table **3**); therefore she received six cycles of intravenous systemic chemotherapy, with: Docetaxel, 80 mg and carboplatin 120 mg. Last tomography was made six months ago after surgery, this study was normal, without ascites, X-Ray: thorax radiography without pleural effusion. At present, tumoral marks were negative. Patient is happy, without tumoral activity and few hair in face and body.

DISCUSSION

Ovary cancer didn't have adequate methods for early for diagnostic in the beginning stages of disease. Last mexican epidemiological report about ovary cancer in 2000 year, were more of new nine thousand cases (4). Almost 30% of health cases, Stages I of FIGO, tumor localized in an ovary. In the case of lipoidic cells tumor, neoplasm produces masculine hormones, like our case, clinical manifestations with virilization, abdominal grown and ascitic by pelvic tumor we have think in an ovary neoplasm. Regarded sexual

Table 2: Laboratory Studies in Serum

	Before surgery	After surgery
Cortisol (normal: 4.2-38.4 ng/ml)	65	4
Testosterone (normal: <0.73 ng/ml)	14.5	5 *
Androstendione (normal: 11-56 ng/ml)	>70	20*

Table 3: Tumoral Marks

	Before surgery	After surgery
CA-125 (normal: <35 U/mL)	1,500	1000 *
CA 19.9 (normal: 37 U/mL)	250	<10
Alphafetus protein (normal: <10.5 ng/mL)	17	6
Ag Carcinoembrionary (normal: <5.5 ng/dl)	15	5

***After surgery**, those persisted elevate values; therefore, we used IV chemotherapy.

cordons as Sertoli-Leydig or steroid cells tumor; almost 0.1 % some of them, made up masculine hormones; benign almost cases (5,6). Therefore rare our case of lipoidic cells, with malign ovary tumor. It had a low differentiation grade cell. Surgery no doubt, is cornerstone treatment in ovarian tumors; in protocol laparotomy, optimal cytorreduction surgery was made in this report. Before surgery was quantificated: testosterone, androstendione, CA-125, CA-19.9; all of them in very high concentrations. Inmunehistochemical studies and masculine hormones after surgery were negatives, Before treatment they could confirm health cure. Genetic studies: BRCA-1 o BRCA-2, are useful and consider a familiar-genetic factor (7). Pleural effusion, with great ascitic volume, it has bad survive prognosis and frequent recurrence disease. Our patient had 7 liters of ascites in abdominal cavity, no malign cells. Positive tumoral marks and imunehistochemical studies too, after optimal cytorreductive, surgery has though in persisted malignity disease. Pathology report showed: malign lipoidic cell right ovary tumor; we done precise diagnosis with inmunehistochemical studies: vimentine and alpha inhibine testes, those supported diagnosis of androgenic malign ovary tumor. Adyuvant systemic chemotherapy was indispensable in this case, because six month ago of surgery, she showed elevation of tumoral marks and androgenic hormones in serum. By the time, in malignity ovary tumors are necessary combined reatments with taxanes and metals; like docetaxel and carboplatin. We used in patient 6 cycles per month. Patient follow was with lab serum studies: testosterone, luteinizing hormone, cortisol and serum concentration of CA-125, CA-19.9, alpha fetus protein, carcinoembrionary antigen in blood; until now after chemotherapy, they're negatives; no clinical evidence of tumoral activity by TAC image. At present, CT-PET is reported election study for diagnosis and following in patients with ovary tumor. Second look surgery is useful in malignity epithelial ovaries tumors and confirms healthy state of them. At present, isn't confirm useful "seconds looks" surgery in lipoidic ovary tumor. Probably, few cases had been reported and poor surgical experience in the world.

CONCLUSIONS

- Malignity lipoidic cell tumor is very rare neoplasm of ovary, It has classic clinical signs with a triade: androgenic dates, pleural effusion and ascites.
- Surgery is cornerstone treatment, optimal results is in beginning stages of disease.
- Prognosis is in relation of clinical stage and histological grade of tumoral differentiation.
- Serum Inmunehistochemical tests and tumoral marks, included masculine hormones useful in diagnosis, clinic evolution and persistence or recurrence disease after treatment with optimus cytorreduction surgery and systemic chemotherapy.

REFERENCES

[1] Bulun SE, Adashi EY. The physiology and pathology of the female reproductive axis. In: Kronenberg HM, Melmed S, Polonsky KS, Larsen PR, Eds. Williams Textbook of Endocrinology. 11th ed. Philadelphia, Pa: Saunders Elsevier 2008; chap 16.

[2] Coleman RL, Gershenson DM. Neoplastic diseases of the ovary: screening, benign and malignant epithelial and germ cell neoplasms, sex-cord stromal tumors. In: Katz VL, Lentz GM, Lobo RA, Gershenson DM, Eds. Comprehensive Gynecology. 5th ed. Philadelphia, Pa: Mosby Elsevier 2007; chap 33. http://dx.doi.org/10.1016/B978-0-323-02951-3.50036-4

[3] Thrall MM, De Loia JA, Gallion H, Avril N. Clinical use of combined positron emission tomography and computed tomography (FDG-PET/CT) in recurrent ovarian carcinoma. Gynecol Oncol 2007; 105: 17-22. http://dx.doi.org/10.1016/j.ygyno.2006.10.060

[4] Registro Histopatológico de Neoplasias en México 2000. Dirección General de Epidemiología. Secretaría de Salud. www.dgepi.salud.gob.mx/divent/DIVEENT-INDEX.htm

[5] Arrenoblastoma (tumor de Sertoli-Leydig, células lipoídicas) reporte de un caso y revisión de la literatura. Jorge E. Fuentes Aguilar, Adriana Santos Lartigue, Mayra E. Pérez Rosas, Amparo Lomas Flores, Antonio César Escobar Moreno. Patología Revista latinoamericana Volumen 47, núm. 2, abril-junio, 2009.

[6] Rosai J. Female reproductive system. In Ackerman's Surgical Pathology. Eight edition. Vol. 2. Chap. 19:1513-8. Mosby-Year book. St. Louis. Young RH; Scully RE. Sex cord-stromal, Steroid cell, and other ovaries tumors with endocrine, paraendocrine and paraneoplastic manifestations. In Blaustein's pathology of the female genital tract. Fourth edition. RJ. Kurmann. Spingler Verlag. New York. 803-14.

[7] Young RH, Clement PB, Scully RE. The ovary. In Diagnostic Surgical Pathology. Sternberg, Philadelphia. Third edition. Vol. Chap. 54: 2351-4.

Received on 05-01-2014 Accepted on 26-01-2014 Published on 31-01-2014

http://dx.doi.org/10.6000/1927-7229.2014.03.01.6