



Open Access Full Text Article

## CASE REPORT

# The surgery of a giant liposarcoma with general anesthesia in patient with normal lung function: A case study at Thanh Nhan hospital

## *Chirurgie d'une géante liposarcome avec l'anesthésie générale chez le patient ayant la fonction respiratoire normale: Etude de cas à l'hôpital de Thanh Nhan*

M. Dao Quang Minh, C. Vu Thanh

*Thanh Nhan Hospital. Hanoi, Vietnam*

### ABSTRACT

**Introduction.** A giant retroperitoneal liposarcoma was operated on; a literature review of clinical, subclinical, orientation towards treatment and management of giant tumor during surgery was discussed.

**Research methodology.** Describe clinical cases

**Results.** Malignant lipoma retroperitoneal is a rare disease; symptoms represent only evident at a later stage by the "symptoms borrow" pain calcination is most common; CT plays a decisive role in diagnose, assess and surgical orientation. Surgery is a mainly technical role, as surgery is difficult; the rate cut 44% of other organs. Radio-therapy and chemotherapy less effective; the recurrence rate of 80%; metastatic of 27%.

**Conclusion.** Surgery is an important role in deciding the outcome of therapy, the principle: cutting whole tumor and invaded organization, take the whole layer retroperitoneal of fat. Accessing patients' health condition after surgery through tests ultrasound and computerized tomography.

**KEYWORDS:** Liposarcoma; Malignant lipoma; Retroperitoneal.

### RÉSUMÉ

**Introduction.** Un liposarcome géant rétropéritonéal a été opéré. Il s'agit d'une revue de la littérature clinique, subclinique, orientée vers le traitement et la gestion d'une tumeur géante pendant la chirurgie.

**Méthodologie de recherche.** Décrire les cas cliniques

**Résultats.** Le lipome rétropéritonéal malin est une maladie rare; les symptômes ne sont manifestes qu'à un stade ultérieur par les "pseudo-symptômes", plus courante; la TDM joue un rôle déterminant dans le diagnostic; l'évaluation et l'orientation chirurgicale. La chirurgie est un rôle principalement technique, car la chirurgie est difficile; le taux réduit de 44% d'autres organes [4]. Radio-therapy et chimiothérapie moins efficaces. Taux de récurrence de 80%; métastatiques de 27%.

**Conclusion.** La chirurgie est un rôle important dans le choix du résultat du traitement, dont le principe est le suivant: couper toute la tumeur et organisation envahissante; prendre toute la couche rétropéritonéale de la graisse. Accéder à l'état de santé des patients après une intervention chirurgicale par des moyen d'examen échographiques et de tomographie.

**MOTS CLÉS:** Liposarcome; Lipome maline; Rétropéritonéal.

*Corresponding author:*

**Dr. DAO QUANG Minh**  
Thanh Nhan Hospital. Hanoi - Vietnam  
E-mail: prof.minhdao@gmail.com

## INTRODUCTION

Retroperitoneal liposarcoma primary: As the tumor grows in the retroperitoneal cavity, do not originate really from retroperitoneal organs. This is a rare disease, accounting for only 0.5% of the total number of malignant tumors and 0.16% of all types of tumors [1].

Liposarcoma cancer or malignant lipoma has a origin of mesenchymal cells, collection of immature fat cells grow single line, and malignant nature. According to Pack [2] malignant fat tissue cancer accounted for 14.6% of total soft tissues and cancer accounted for only 0.1% of all cancer types. Until 1987, the medical literature only recorded about 250 these types tumor. Among that, liposarcoma develops from the retroperitoneal cavity of fat layer only 15% [3], less in the genus and more in the abdomen. The retroperitoneal liposarcoma is located in retroperitoneal liposarcoma diseases with a diverse clinical symptom, an ambiguous symptom, many "borrowing symptoms", a symptom of abdomen pain is the most common [3]. Treatment of difficulties with surgery is a method of holding a decisive role. Complex surgery, extended requirements, take up the maximum organization of tumor and the retroperitoneal fat organization, especially when the tumor is large, invasive of the surrounding organs [1]. Radio-therapy and chemotherapy have not yet resulted in high results, recurrence and metastasis are high.

We are pleased to present a case of giant retroperitoneal liposarcoma developed from the retroperitoneal cavity invasive duodenum – the small intestine, a tumour removed surgically with general anesthesia in patient having normal lung function.

## OBSERVATION

Patient (male) who was 61 years old, hospital admission 04/09/2018 – hospital discharge 21/9/2018, because abdominal pain lasted for a week, touch of large size of abdominal wall tumor 01 year ago but it is not be treated. Previous history: he was operated on 02 times at Viet Duc Hospital with the diagnosis of retroperitoneal liposarcoma. Histologic diagnosis: liposarcoma with high differentiation. The size of tumor is 30x20cm, density, less movable, the lobes are divided clearly, and occupying the most abdominal cavity.

There is 01 old surgical scar which is 10cm on the right waist. Tumor markers includes CEA: 1.2 ng/mL, CA19-9:20.56 U/mL, CA 72-4 1.3 U/L, AFP: 2.59 ng/mL.

*Abdominal ultrasound results:* tumor is large size which occupies the entire abdominal cavity, in consistent, pushes the pancreatic liver structures and

intestinal straps.

*CT scan of abdominal Cavity:* The picture of the tumor is 262x180 mm, the main component is fat density, with clear walls. There is a little bit of abdominal fluid, mainly concentrated area on the liver.

*Gastroscopy:* gastritis; taking CT scan with laparoscopic virtual colonoscopy has not yet detected damage. The patient was diagnosed with: Progressive retroperitoneal Liposarcoma, which was operated on, taken retroperitoneal fat organization on September 7<sup>th</sup> 2018.

## SURGERY

Lay the patient on operating table, endotrachea anesthesia. Incise the linea alba between upper and lower umbilical area.

**Control.** Tumor size is 30x20 cm, occupying the entire abdominal cavity, the tumor is divided into zones clearly, stick with the surrounding organs, invasive D2 duodenum, encroachment of many small intestine location, tumors arising from the renal layer (right).

Peritoneum on the liver and corneal peritoneum have not seen lesions. The liver is even, the gallbladder is enlarged; the grip without gravel; main bile tract does not stretch; the clamp without gravel; the abdominal cavity has less freedom fluid to concentrate under the liver. Observation of other organs in abdominal cavity, there is no foci of damage.

**Diagnostics.** Retroperitoneal liposarcoma metastasizes duodenum and small intestine. Open the tumor, open through the fibrous crust, cut and stop bleeding in each lobe, stop bleeding in cutting area by ligation; take the whole tumor, cover and take up the layer fat after the right peritoneum; stop bleeding in the tumor area with ligation and bipolar electric knife. Atypical cutting of invasive locations in the duodenum and small intestine; stitch duodenum with small intestine; gall bladder conduction. Set 01 conductor under the liver. Abdominal cavity has to suture under anatomical layers.

The duration of surgery is 300 minutes, the amount of blood lost 200ml. *Postoperative.* Patient who withdraws internal gas tube on the first day. Gas at day 3; withdrawal of abdominal cavity. On 6<sup>th</sup> day after surgery, the patient eats food through the oral.

**Pathology.** Highly specific liposarcoma. The patient is discharge on the 17<sup>th</sup> day, withdrawal of gallbladder conduction on the 30<sup>th</sup> day. There was no respiratory complication during surgery.

## DISCUSSION

Retroperitoneal cavity: the cavity is limited by the diaphragm and contour over the sub-frame limit, the front is the retroperitoneal posterior, behind is the muscular side which is located beside the spine column.

Retroperitoneal cavity consists of true peritoneal organs: kidneys, adrenal glands, ureters and large vessels: abdominal arteries, lower master veins, lateral branches and its end branches, in addition, retroperitoneal cavity is also associated with sticky organs and the posterior abdominal wall, which has a partial peritoneal and sub-frame.

In relation to retroperitoneal neoplasms, it is noteworthy that the retroperitoneal fatty layer, which is divided into two compartments by the renal muco-sa's Gerote: the cavity around the kidneys and the adjacent cavity (before and after kidney).

On the world, there have been several studies on retroperitoneal liposarcoma and the liposarcome.

In 1971, Pemberron and Whitlock described the first case; 1897, Douglass reported first research,  $n = 20$ ; 1915, Lecene announced 135 retroperitoneal liposarcoma cases, thereby making the definitions retroperitoneal liposarcoma.

In Vietnam, author Trinh Hong Son et al. studied "Diagnostic and clinical research studies of retroperitoneal liposarcoma at Viet Duc hospital stage 1991-1999" with  $n = 119$ , including 1 patient (0.8%) with liposarcoma [1].

**Classification.** According to WHO, liposarcoma is categorized into 04 groups:

*Group 1:* a malignant melanoma that includes mature cells are rich in biosubstance, multiply is sometimes inhomogeneity; the simplicity is a little bit unnormal.

*Group 2:* mucous body (myxoid) composed by the star cells which swim in the mucus essence, captures blue Alcian and mucicarmin.

*Group 3:* circular cells, small size, special distribution, less multiply, not rich in biosubstance. The presence of cell excuse 02 shore shaped oval is pointed at tumor's fat origin.

*Group 4:* multi-morphological, large cell sizes, monstrous shapes, irregular shores, irregular simplicity, biosubstance is sometimes agglomeration. The two oval shape is characterized by the fat of a tumor.

A micro-group is also one of the factors of the prognosis.

**Epidemiological.** According to the authors: retroperitoneal liposarcoma, the average age of the patients are 55 [3].

According to Trinh Hong Son [4], he studies on 37 patients, the average age of patients was 50.67, The lowest age is 12 years and the highest age is 76 years old.

The rate of female patients is (59.5%) more than men (40.5%) [4], medical literature showed that tumor launches on the left more than on the right a little.

**Symptoms.** Located in the Retroperitoneal liposarcoma disease, clinical manifestations often appear slowly, when the tumor is large enough, especially the tumor can develop enlarged in the abdominal cavity without manifestations of symptoms.

Clinical signs are mostly borrowed symptoms due to the insertion of the adjacent organs: gastrointestinal disorders, jaundice, urination disorders.

However, Laqbaqui et al. presented the clinical notice, there are 02 cases which were taken into the hospital with symptoms of abdominal pain, fever. Of which 01 patient appointed emergency surgery with the diagnosis of acute appendicitis [3].

When the tumor is late, it may appear systemic symptoms: fatigue, skinny... Clinical examination can detect abdominal tumor, lumbar tension, sure, less portable.

### **Laboratory testing**

Taking abdominal X-rays with less preparation, we can see a shaded image that is distinguished from the kidney shadow.

Abdominal ultrasound sees clear tumor, the shore is even with clear casing, bold in the center and negative in the periphery.

However, in some cases it is possible to see tumors of mixed density, corresponding to necrotic or bleeding. Ultrasound also identifies the size, tumor encroachment, especially with a large-vein artery.

This is a good method to monitor postoperative. However, this method is limited when abdominal distension, small size.

Taking UIV indicates kidney function, distinguish tumor at renal ureters and retroperitoneal liposarcoma, shown indirect signs retroperitoneal liposarcoma: renal push - ureters.

Computer tomography (CT) is the best method of pre-surgery. CT is easy to distinguish from retroperitoneal liposarcoma with soft tissue density (+ 10 to + 70 HU) and Liposarcoma-cancer-malignant (-10 to - 70 HU).

CT is well rated for its surgical capability due to the accurate evaluation of tumor size, related tumors to neighboring organs and blood vessels.

Magnetic resonance imaging has good value, but the price is still high. Cancer maker is less valid for liposarcoma. Anatomic-pathology remains the most accurate diagnosis.

**Diagnostic.** We must incorporate diagnostic means: clinical symptoms, laboratories, and imageries. However with our patients, tumor size is gigantic so the diagnosis is not difficult, based on clinical examination, imagery, and pathology can accurately diagnose and assess the ability and expected surgical direction.

With small tumors, it should be differential diagnosis: other retroperitoneal liposarcoma (retroperitoneal liposarcoma of mesenchymal origin, nerve origin, germ cell origin...), retroperitoneal abscess, hematoma after peritoneal and tumors of the true organ of the retroperitoneal.

**Treatment.** Surgery: so far, surgery still plays the decisive role in the treatment of liposarcoma. The general principle is wide operating lines for favorable tumors, taking a nearby fatty organization, in addition may be required to use vascular surgery, kidney cutting, colitis cutting, semi-mechanical cutting... When the organ is infiltrated by tumors, even to dredge ganglion.

In generally, liposarcoma is a well-cortical tumor, dividing many lobes. So, with the huge of liposarcoma, especially the cases of giant tumors, we apply the lobe-cutting method, hemostasis with a ligasure knife, removing the entire tumor, the casing, and the surgery to retrieve the maximum layer of retroperitoneal fatty cavity.

With our case, patient's tumor invaded duodenal and small intestine. Patient who has been surgical excision of the duodenum and small intestine, gall bladder conduction and protection duodenum-cutting area.

Author Trinh Hong Son studied on 37 cases of retroperitoneal liposarcoma with 50 operations. 11 times uncut out of tumor (22%). 39 times cut out tumor but have to cut the other organs to 17 times and the number of cuts in other organs, although cutting the whole tumor or half the tumor is 22 times (44%) [4]. It shows the difficulties and complications during surgery.

**Radiotherapy.** Little effect on malignant fatty tumors. The documents presented that radiation therapy is less effective, surgeons must be combined with surgical removal of tumor. Apply radiation therapy at the liposarcoma Group 2 (myxoides or a vascular-rich intermediate tissues).

Radiation therapy can be carried out in the operation and postoperative with the unallocated area of the tumor. 50 Gy radiation dose lasts 5-6 weeks, which can increase the dose when do not to remove the tumor completely during surgery.

**Chemical treatment.** According to the authors, the outcome of chemical treatment (chemotherapy) is also not possible. Indications are noticed when tumors develop a wide invasion. There is no longer surgical ability or has distant metastases.

Some chemical treatment formulas  
Cytotoxic formula: combines Cyclophosphamide, Vincristine, Doxorubicine and Dacarbazine.

MAID formula: Mesna, Doxorubicine, Ifosfamide and Dacarbazine [6].

### Prognosis

According to the authors, the retroperitoneal liposarcoma has a bad prognosis. Author Laqbaqi. A demonstrates that the recurrence rate is more than 50% in the first year, the average life time is less than 8 months [3]. Author Eninger has a better prognosis: the survival rate after 5 years for liposarcoma has in the abdominal cavity is 83% with Group 1, 77% with Group 2, 18% with Group 3 and 23% with Group 4.

Metastatic. metastatic liposarcoma—cancer—malignant orders. lungs, pleural, liver and lymph nodes. The metastasis rate changed to 48% according to Hubert, 27% according to Lechevalier [7]. Because of the incidence of recurrence and high metastasis. The authors recommend regular monitoring of postoperative by ultrasound and CT scan. The author advised the operation to review "second look" in a systematic manner after 5 months [3].

## CONCLUSION

Retroperitoneal liposarcoma is tumor of medium-origin, a rare disease; the rate of recurrence and metastasis are high after surgical removal; ultrasound plays an important role in the diagnosis, especially monitoring of postoperative. Computer tomography plays an important role in pre-surgical diagnostics, evaluation of ability and expected surgery. The surgical removal of the entire tumor and the neighboring fatty organization play a decisive role in treatment in patient with normal lung function for general anesthesia. With a huge tumor, which invades the organ, the method of tumor removal in the lobes, removes the entire tumor and retroperitoneal fat. Maximum cutting of invasive lesions and tumor metastasis and stopping bleeding in cutting area. Radiotherapy is also laid out in the absence of all tumor-organizations during surgery or with distant metastasis.

---

## CONFLIT OF INTEREST

The authors declare no conflict of interest.

## REFERENCES

1. Trinh Hong Son, Hoang Duong Vuong, Do Duc Van, Nguyen Phuc Cuong. Diagnosis and results of surgical treatment of retroperitoneal tumors at Viet Duc hospital in the period 1991-1999. *Journal of Medical Information, special issue on Cancer 1999*; 95-101.
2. Pack.G.T, Pierson.J.C. Liposarcoma. A study of 105 cases. *Surgery*,1954,36: 688-712.
3. Laqbaqbi.A, Lehn.E, Levasseur.J.C, Fontaine.P, Mourad.H, Roche.J.Y Liposarcomes rétro-péritonéaux. Aspect clinique, pronostique et thérapeutique à propos de 4 cas. *J. Chir.* 1987,124, 5: 446 - 456.
4. Trinh Hong Son, Nguyen Thanh Tung. Results of retroperitoneal adenocarcinoma surgery at Viet Duc Hospital. *Journal of Practical Medicine*, 2012; 42-45.
5. Frank.F, Batzenschlager.A, Schaeffer.F et Irrmann.M. Problèmes thérapeutiques posés par les liposarcomes intra - abdominaux. *Chirurgie*,1989,115: 446-456.
6. Bui Nguyen Binh, Stockle.E, Coindre.J.M, Lagarde.P, Thomas.L, Kind.M. Sarcomes des tissus mous de l'adulte: nouvelles et tendances *Bull. Cancer*,1998: 59-62.
7. Lechevalier.T, Rouse.J, Contesso.G, Pejovic.M.M, Genin.J, Sarrazin.D. Liposarcomes rétro-péritonéaux *Nouv. Presse. Mé d*, 1981,10: 3625-3626.