

## Laparoscopic Treatment of Pelvic Congestion Syndrome by Anterior Ligamentopexy in a Case

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### **ABSTRACT:**

Chronic pelvic congestion syndrome is related to pelviperineal varices due to venous insufficiency, whether primary or secondary to venous obstruction. It manifests itself as chronic, non-cyclical, heaviness-type pelvic pain that is often disabling. We report the case of a patient previously treated by stent placement in the left ovarian vein managed laparoscopically by anterior ligamentopexy

### **INTRODUCTION:**

Chronic pelvic pain is divided into cyclical or non-cyclical pain and affects approximately one third of women [1]. Pelvic venous congestion syndrome is a common but underestimated etiology of chronic pelvic pain usually occurring in multiparous women. It is characterized by pain of varying intensity occurring at any time, but worsens during the premenstrual period and is exacerbated by walking, standing and fatigue. It combines dysmenorrhea, dyspareunia, bladder irritability and rectal discomfort.

### **Patient and observation:**

#### **Patient information:**

Patient aged 38 G4P4 who presents with pelvic congestion syndrome, notably pain when standing, dyspareunia and dysmenorrhea impacting the mental health of the patient with stress and anxiety having required anxiolytics, the symptoms appeared after the first childbirth and it is worsened with subsequent pregnancies

### **Therapeutic Intervention:**

The patient had benefited from a stent of the left ovarian vein but the symptoms having not diminished or only slightly, she was referred to us, the pelvic

ultrasound revealed a congestive retroverted uterus, we proposed a ligamentopexy which consists of the shortening of the round ligaments to allow correction of uterine retroversion. On exploration we find a hypervascularized congestive pelvis (figure 1), turgid ovarian veins, with the presence of the stent at the level of the left ovarian vein (figure 2), a large congestive and retroverted uterus (figure 3). We used the classic technique which consists of fixing the round ligament by its central portion (figure 4) at the level of the aponeurosis of the rectus abdominis muscles. 2 cm skin incision at the parietal insertion of the round ligament approximately 3 cm medial to the anterior superior iliac spine (figure 5), a Kocher forceps is introduced and grabs the round ligament in its middle, the latter will be pulled through the incision and fixed with non-absorbable suture to the aponeurosis. The same technique is reproduced for the contralateral ligament, we end with the infiltration of the round ligaments at their attachment points with lidocaine to reduce postoperative pain, in the end the uterus returns to a centropelvic position (figure 6).

## **Follow-up and Results:**

The patient was discharged from the hospital the next day and reported the persistence of the gain in pain reduction at one year of follow-up.

## **DISCUSSION:**

Chronic pelvic pain is defined as “pain symptoms perceived as originating from the pelvic organs and usually lasting more than 6 months.” Chronic pelvic pain is multifactorial DPC it can be caused by endometriosis, fibroids, musculoskeletal disorders, chronic pelvic inflammatory disease, irritable bowel syndrome, painful bladder, psychological factors and congestion syndrome pelvic vein as in our patient. Described for the first time in 1857 by Richet [2] who noted the association between chronic pelvic pain and the presence of varicose veins in the utero-ovarian plexus. Pelvic congestion syndrome is a little-known pathology which can be very disabling. It is the result of venous stasis affecting one or more pelvic compartments. It is the painful clinical expression of pelviperineal venous insufficiency. The causes are often multifactorial and the pathophysiology is poorly understood; a family history of varicose veins can be found. A hormonal component is also incriminated; we know that estrogens weaken the venous wall, and that symptoms decrease or even disappear with anti-estrogen treatments and in postmenopausal women,

### **Venous Compression is Also Responsible:**

retro-aortic left renal vein, Nutcracker syndrome and uterine malposition. The left ovarian vein is most often involved, due to its anatomical position. But sometimes constitutional anatomical anomalies can be involved, such as incontinence or the absence of ovarian vein valves [3].

### **On the Pathophysiology Level:**

During the fourth month of pregnancy there is compression of the iliac vessels. The ovarian veins take over to ensure part of the blood return. The uterine veins see their flow multiplied by 60 times and therefore increase their caliber. In a multiparous woman with a succession of pregnancies there is a risk of failure to return to a correct diameter, which results in uterine varicose veins. Clinically, it is often multiparous women who present with pelvic pain that develops after pregnancy and which tends to worsen with each subsequent pregnancy. These pains are of the gravity type, exacerbated when standing, in the evening, during the premenstrual period, and by anything that increases abdominal pressure, it is associated with dysmenorrhea and post-coital pain [4] [5]. These pains cause anxiety, depression and relationship problems in the couple. The clinical examination remains poor but we will look for:

perineal and lower limb varicose veins and a uterine cervix sensitive to mobilization. The diagnosis is based on an imaging examination, ultrasound has an excellent predictive value.

### **The diagnostic criteria for ultrasound are [6]:**

- Some have tortuous pelvic vein diameter > 6 mm
- Slow blood flow < 3 cm/sec or reversed caudal flow
- Dilated arcuate veins in the myometrium communicating between the pelvic varices
- Polycystic changes of the ovaries

Several therapeutic weapons can be used for the treatment of pelvic congestion syndrome: medical, psychological, surgical and endovascular. The medical component includes analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), progestins, gonadotropin-releasing hormone (GnRH) antagonists, but their effectiveness decreases over time with an escape effect. The surgical aspect ranges from correction of uterine malposition, laparoscopic ligation of the ovarian veins to hysterectomy [7]. But also vascular surgery with transposition of the left renal vein, the gonadal vein, the superior mesenteric artery or even nephropexy and renal auto-transplantation. For the endovascular component we can use the ovarian vein stent or embolization, our patient benefited from a venous stent and a ligamentopexy to correct her poor uterine position.

## **CONCLUSION:**

Pelvic congestion syndrome is a common and undervalued cause of chronic pelvic pain. Its diagnosis and management require consultation involving the gynecologist, the radiologist, the neurologist, the vascular surgeon but also psychologists and psychiatrists to try to provide relief. These women who suffer from this disabling pathology

## **Conflicts of Interest :**

The authors declare no conflicts of interest.

## **Authors' Contributions:**

Lounas BENGHANEM: data collection, bibliographic research and writing of the article.

Lydia FAÏD: proofreading and supervision of the writing of the article.

Mounir BISKER: proofreading and supervision of the writing of the article.

Kamel HAÏL: proofreading and supervision of the writing of the article.

Hamida GUENDOZ: proofreading and supervision of the writing of the article.

## **Figures:**



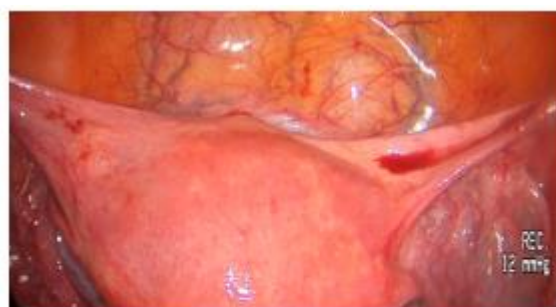
**Figure 1 :** Hypervascularised congestive pelvis



**Figure 2 :** Stent in the left ovarian vein



**Figure 5 :** Skin incision 2 to 3 cm medial to the anterior superior iliac spine



**Figure 6 :** The uterus returns to a centro-pelvic position

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