Fibrosis Retroperitoneal

Una revisión bibliográfica.

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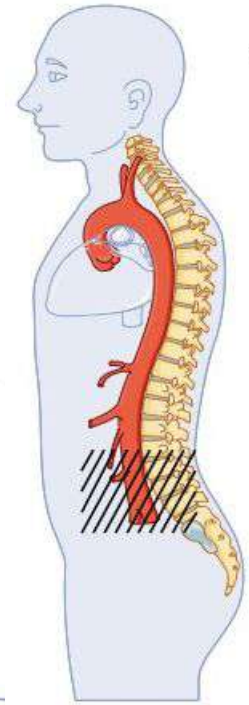
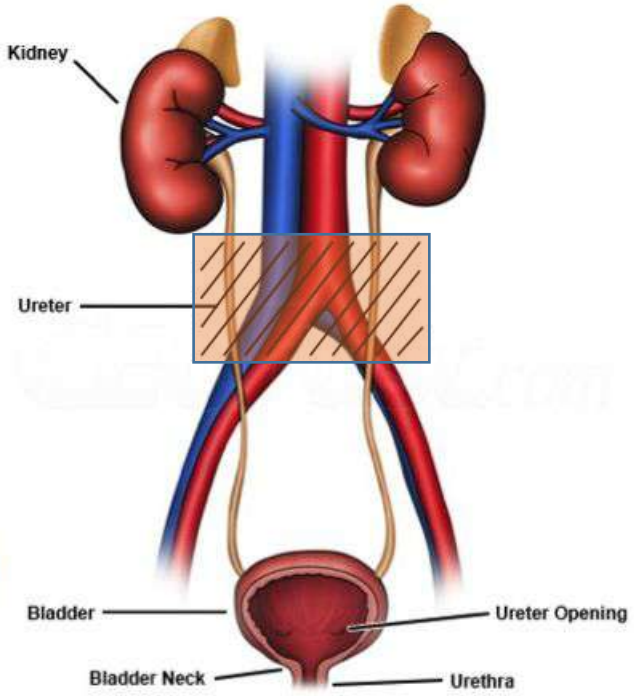
La **fibrosis retroperitoneal** es un proceso inflamatorio crónico poco frecuente, que conduce a la formación de una masa fibrótica retroperitoneal que puede llevar a una compresión ureteral y de estructuras vasculares (aorta abdominal, arterias iliacas).

Joaquín Albarran y Domínguez (1860 – 1912)





= site typically affected by RPF

Índice

- Etiopatogenia
- Manifestaciones clínicas y diagnóstico
- Tratamiento

Etiopatogenia

1. **Fibrosis retroperitoneal idiopática**: **70%** de los casos

   - **Incidencia anual**: 0.1 – 1.3 casos por 100.000 / hab.

   - Más frecuente en hombres: **2-3 H: 1 M**

   - Edad media al diagnóstico: **50 – 60 años**

Vaglio A, Salvarani C, Buzio C. Retroperitoneal fibrosis. *Lancet.* 2006; 367:241-251.

***Panel 2*: Main associations between retroperitoneal fibrosis and autoimmune or inflammatory diseases**

Autoimmune thyroid disease
Hashimoto's thyroiditis[11,12]
Riedel's thyroiditis[52,64–66]
Graves' disease[66]

Small and medium-sized vessel vasculitis
Wegener's granumolatosis[67,68]
Polyarteritis nodosa[44]
Microscopic polyangiitis[60]
Hepatitis C virus-related cryoglobulinaemia[69]

Ankylosing spondylitis[70,71]

Systemic lupus erythematosus[14,50,65]

Rheumatoid arthritis[11,14,72]

Glomerulonephritis
ANCA-positive rapidly progressive glomerulonephritis[11,60]
Membranous nephropathy[73]

Sclerosing cholangitis[74,75]

Primary biliary cirrhosis[76,77]

Sclerosing pancreatitis[30,78]

Uveitis[79]

ANCA: anti-neutrophil cytoplasmic antibodies.

Etiopatogenia

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Enfermedad relacionada con IgG4

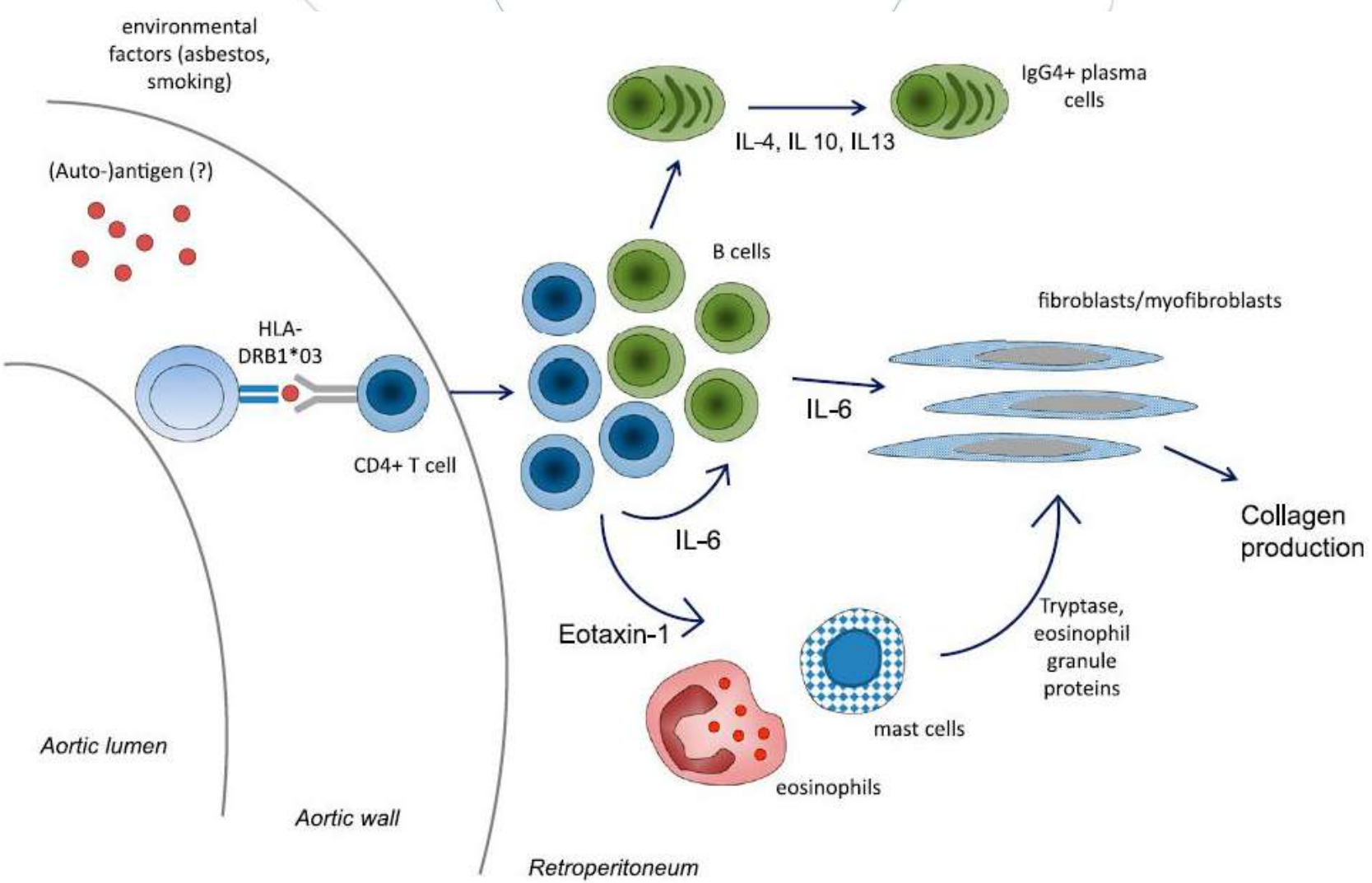
⇒ **47%** de los pacientes con diagnóstico inicial de FR idiopática se relaciona con IgG4-RD

Diagnóstico:

1. Clínico
2. Serológico (IgG4 > 135 mg/dL)
3. Histológico (>10 plasmocitos IgG4 / C)

Koo BS, Koh YW, Hong S et al. Clinicopathologic characteristics of IgG4-related retroperitoneal fibrosis among patients initially diagnosed as having idiopathic retroperitoneal fibrosis. *Mod Rheumatol.* 2015; 25(2):194-8

Fernández Regueiro R, Pérez García C, Fonseca Aizpuru EM et al. Fibrosis retroperitoneal relacionada con IgG4. *Arch Esp Urol.* 2015; 68(10):755-757



Vaglio A, Federica M. Idiophatic retroperitoneal fibrosis. *J Am Soc Nephrol.* 2016; 27:1880-1889.

Etiopatogenia

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2. **Fibrosis retroperitoneal secundaria**

Major causes of secondary retroperitoneal fibrosis

	Examples
Drugs	Methysergide, pergolide, bromocriptine, ergotamine, methyldopa, hydralazine, phenacetin, beta blockers
Malignant diseases	Carcinoid, Hodgkin and non-Hodgkin lymphomas, sarcomas, carcinomas of the colon, prostate, breast, stomach
Infections	Tuberculosis, histoplasmosis, actinomycosis
Radiotherapy	Testicular seminoma, colon carcinoma, pancreatic carcinoma
Surgery	Lymphadenectomy, colectomy, hysterectomy, aortic aneurysmectomy
Others	Histiocytoses, Erdheim-Chester disease, amyloidosis, trauma, barium enema

Modified from The Lancet, Vol. 367, Vaglio A, Salvarani C, Buzio C, Retroperitoneal Fibrosis, pp. 241-252, Copyright © 2006, with permission from Elsevier.

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Manifestaciones clínicas

- **Síntomas inespecíficos**
- **Dolor abdominal y lumbar**
- Fiebre, pérdida de peso, náuseas y vómitos
- HTA (50% de los casos) , edema en miembros inferiores, trombosis venosa profunda
- Oliguria, varicocele, dolor testicular

Table 1. Main demographic, clinical and laboratory findings of patients with idiopathic RPF in four different clinical series

	Mayo Clinic, Rochester (*n*=185)[4]	Johns Hopkins University, Baltimore (*n*=48)[19]	A. Schweitzer Hospital, Dordrecht (*n*=53)[2]	University Hospital, Parma (*n*=210)
Mean age at diagnosis, years	58	54	64	58
Male gender, %	61	54	77	70
Systemic symptoms, %[a]	27	60	92	66
Pain (flank, abdominal), %	38	94	92	81
Testicular manifestations (pain, varicocele, hydrocele), %	13	27	46	51
Constipation, %	12	NA	30	28
Lower extremity edema, %	13	23	8	15
Lower extremity claudication, %	2	NA	11	12
Hydronephrosis, %	57	67	55	72
Unilateral, %	25	21	40	29
Bilateral, %	32	46	15	43
Renal atrophy, %	8	NA	21	30
Impaired renal function, %[b]	42	NA	66	57
Mean ESR, mm/h	32	40	45	63
Mean CRP, mg/L	20.7	NA	23	32
Mean serum creatinine, mg/dL	1.3	NA	1.4	3.9[c]
Mean Hb, g/dL	12.6	11.6	12.4	12.5
Increased ESR, %	53	NA	74	85
Increased CRP, %	47	NA	62	78

NA, not available; ESR, erythrocyte sedimentation rate; CRP, C-reactive protein; Hb, hemoglobin. Normal CRP values are <5 mg/L.
The series included in this table were selected essentially on the basis of their sample size and the accuracy of data reporting.
In the first series (Mayo Clinic) data were collected retrospectively, whereas in the remaining series they were collected prospectively. Data included in the Parma series are unpublished.
For testicular manifestations, the percentage was calculated on male patients only.
[a]Systemic symptoms include: fatigue, anorexia, weight loss and low-grade fever.
[b]Impaired renal function indicates a serum creatinine level >1.2 mg/dL.
[c]In this series, the distribution of serum creatinine was not normal, therefore we also report median (range) serum creatinine levels, which are 1.4 (0.5–23) mg/dL.

Vaglio A, Federica M. Idiophatic retroperitoneal fibrosis. *J Am Soc Nephrol.* 2016; 27:1880-1889.

Diagnóstico

- **Alto índice de sospecha**
- **Datos de laboratorio**: elevación de VSG y PCR (80% de los casos), anemia normocítica-normocrómica, creatinina y urea sérica elevada, hipergammaglobulinemia.
- Pruebas de imagen → delimitar extensión de fibrosis; descartar presencia de adenopatias y / o implantes metastásicos
  - ECO abdominal
  - **TC abdominal (prueba de elección)**
  - RNM

⇒ 18F-FDG - PET : puede ser de utilidad para el seguimiento

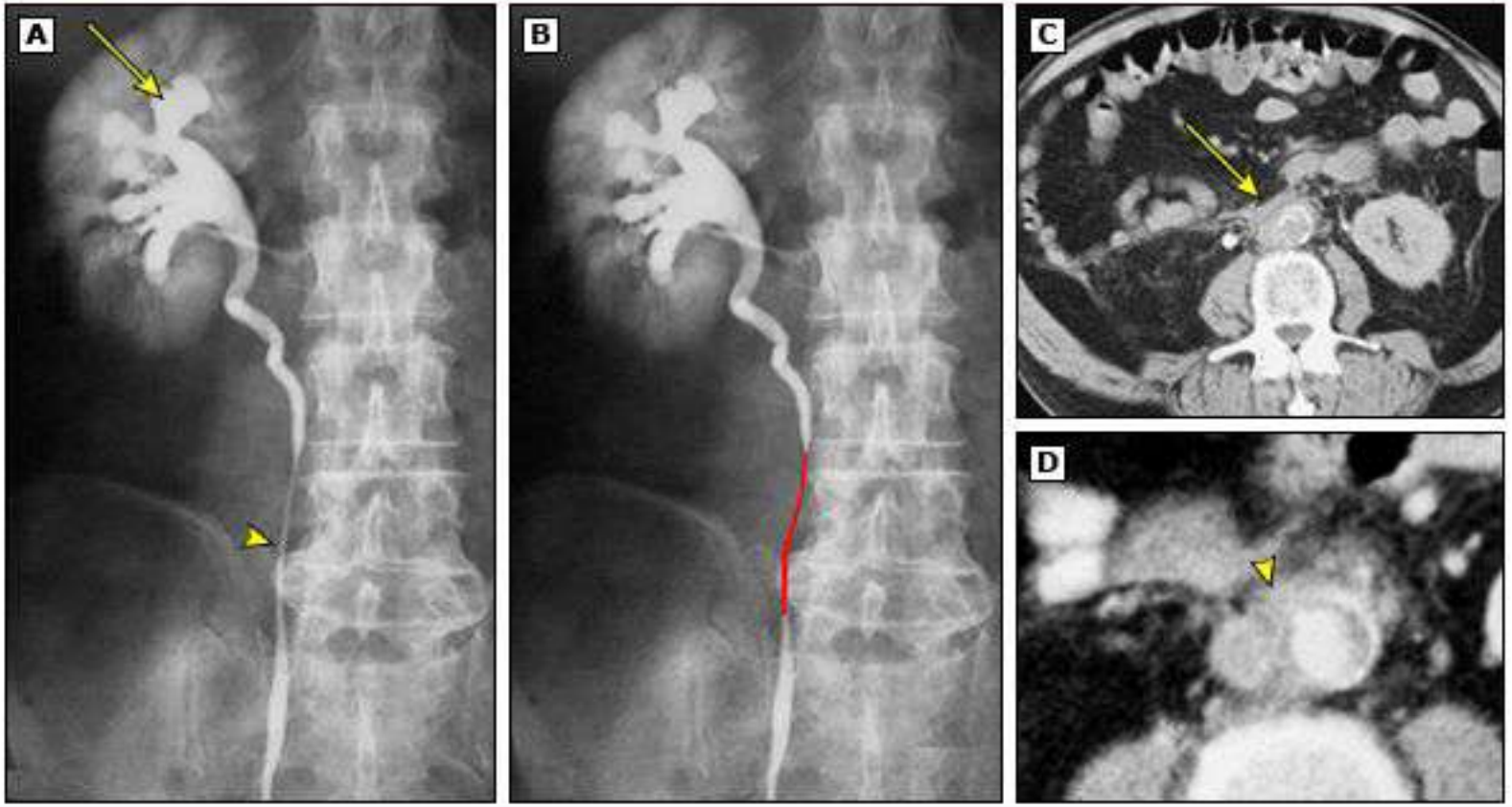
Biopsia

↓

Para confirmar diagnóstico

Vaglio A et al.. *J Am Soc Nephrol.* 2016
Cristian S et al. *Ther Adv Urol.* 2015
Jansen I et al. *Eur J Intern Med.* 2010

Retroperitoneal fibrosis causing hydronephrosis on imaging



A retrograde pyelogram (A) shows hydronephrosis (arrow) and a long stricture in the mid ureter (arrowhead) overlaid in red in image B. Image C shows signs of aortocaval retroperitoneal fibrosis (arrow) around the calcified atherosclerotic aorta. Image D is a magnified view and and shows retroperitoneal fibrosis (arrowhead).

CT: computed tomography.

Tratamiento médico

1º LÍNEA: GLUCOCORTICOIDES - PREDNISOLONA

2º LÍNEA:
- **AZATIOPRINA**
- **MICOFENOLATO**
- **METOTREXATO**
- **TAMOXIFENO**
- **CICLOFOSFAMIDA**

3º LÍNEA:
- **RITUXIMAB**
- **TOCILIZUMAB**

Vaglio A et al.. *J Am Soc Nephrol.* 2016
Cristian S et al. *Ther Adv Urol.* 2015
Fernández Regueiro R et al. *Arch Esp Urol.* 2015
Vaglio A et al.. *Lancet.* 2006
Monev S. *Cleveland Clinic Journal of Medicina.* 2002

Tratamiento quirúrgico

- **Descompresión inicial de via urinaria**

  Colocación de catéter ureteral doble J

  Nefrostomía

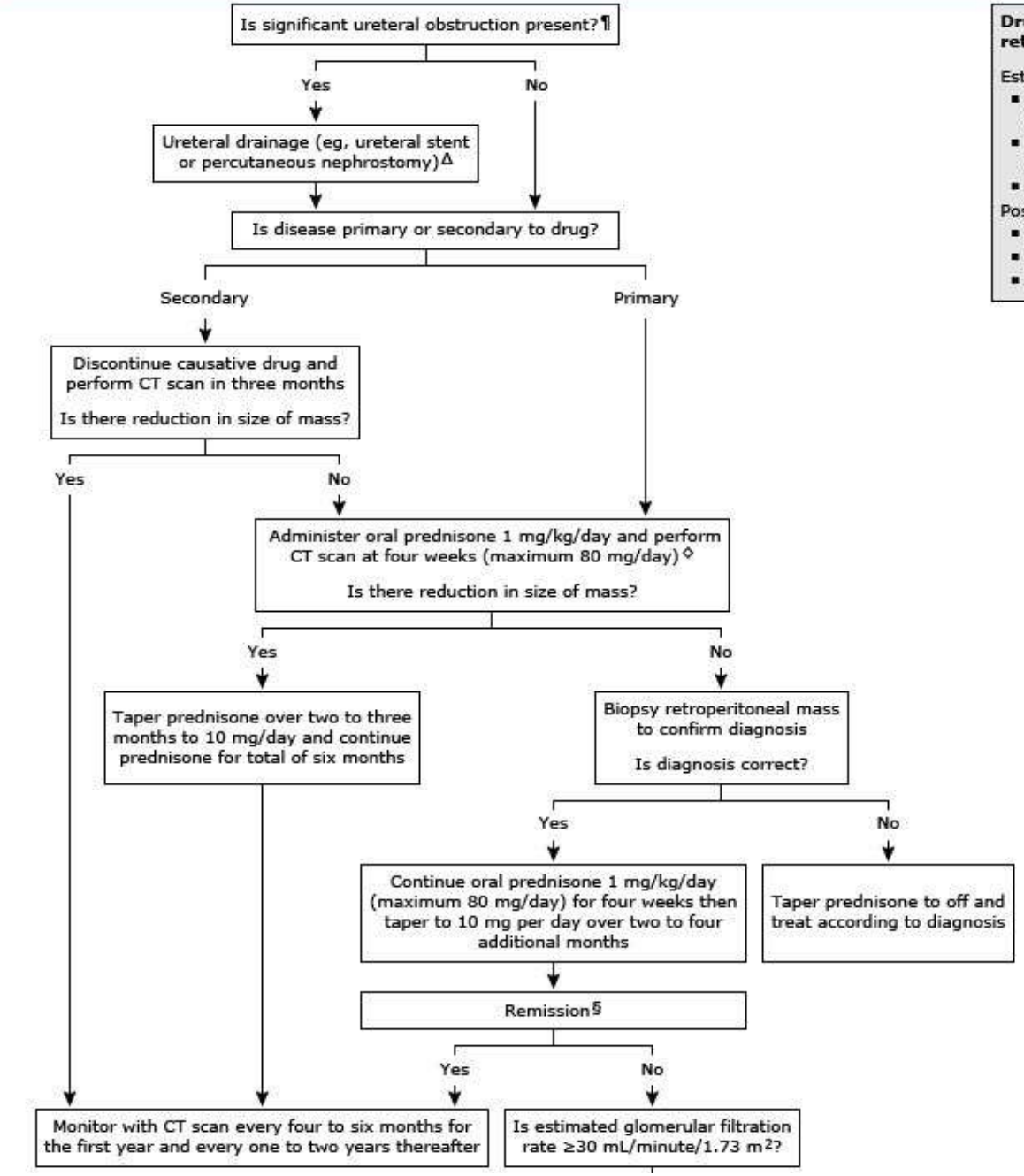
- **Mala o nula respuesta a tratamiento médico y / o persistencia de obstrucción urinaria**

  URETEROLISIS

Hernández Fernández C, Subirá Ríos D, Moralejo Gárate M et al. Tratamiento laparoscopico de la fibrosis retroperitoneal. *Arch Esp Urol.* 2017; 70:468-474.

O'Brien T, Fernando A. Contemporary role of ureterolysis in retroperitoneal fibrosis: treatment of last resort or first intent? *BJM Int.* 2017; 120:556-561.

Management of primary or drug-related secondary retroperitoneal fibrosis*



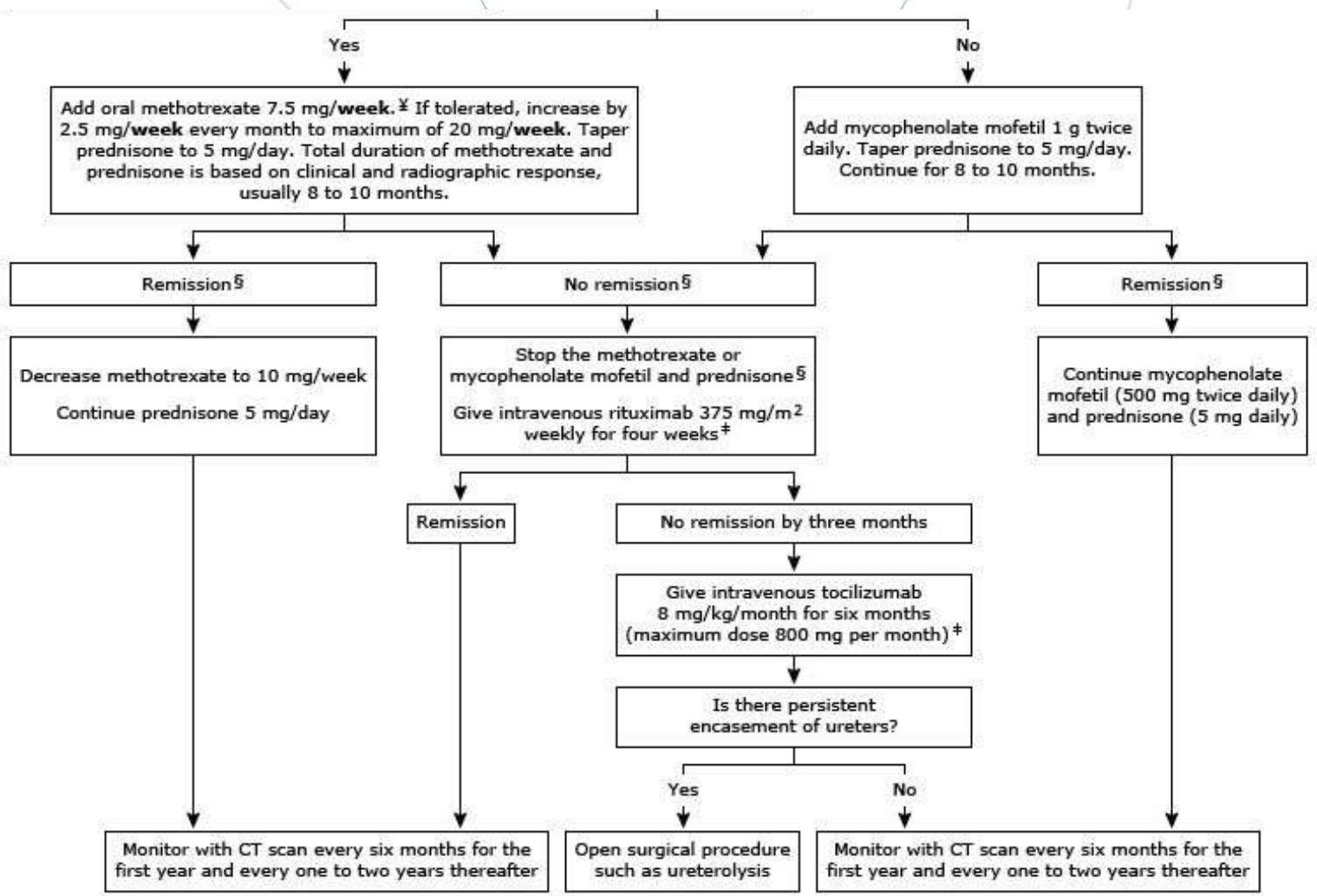
Drugs that cause secondary retroperitoneal fibrosis:

Established in chronic use:

- Ergot alkaloids (methysergide, ergotamine)
- Dopamine agonists (bromocriptine, pergolide)
- Methyldopa

Possible:

- Hydralazine
- Beta blockers
- Phenacetin†



Adapted from: Vaglio A, Maritati F. Idiopathic retroperitoneal fibrosis. J Am Soc Nephrol 2016; 27:1880.

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Upper Urinary Tract

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Contemporary role of ureterolysis in retroperitoneal fibrosis: treatment of last resort or first intent? An analysis of 50 cases

Tim O'Brien and Archie Fernando

Urology Centre, Guy's & St Thomas' NHS Foundation Trust, London, UK

Objective

To determine the outcomes of open ureterolysis in a contemporary cohort of patients presenting with ureteric obstruction secondary to retroperitoneal fibrosis (RPF).

Patients and methods

We conducted a prospective analysis of 50 patients undergoing open ureterolysis and omental wrap between January 2012 and January 2016 in a single centre, managed by a multi-disciplinary RPF team. Patients had a minimum follow-up of 1 year. Indications were: nephrostomy-dependent drainage ($n = 5$); stent failure as evidenced by persistent hydronephrosis ($n = 20$); severe stent symptoms ($n = 22$); and patient choice/pre-emptive ($n = 3$). Outcome measures were stent-free rate; change in renal function post-ureterolysis; operating variables (operating time, blood loss, complications, length of hospital stay); and need for further intervention.

Results

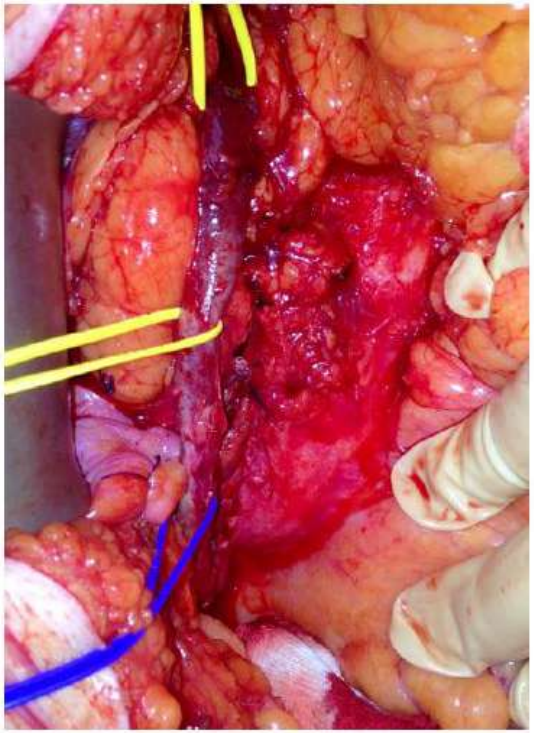
Of the 50 patients, 48 (96%) were stent-free at 3 months and 47/50 (94%) were stent-free at 12 months. The median (interquartile range [IQR]) changes in glomerular filtration rate, according to these indication groups, at 1 year were: overall +6 (−4 to +22)% ($P < 0.05$); stent failure +25 (+5 to +27)% ($P < 0.001$); stent symptoms +0 (−17 to +6)% ($P = 0.834$); nephrostomy-dependent drainage −10 (−19 to −2)% ($P = 0.731$); and pre-emptive 0 (0 to +8)% ($P = 0.5$). A total of 11/50 patients (22%) underwent additional procedures: nephrectomy, $n = 7$; uretero-ureterostomy, $n = 1$; aneurysm repair, $n = 1$; 1 Boari flap, $n = 1$; and ureteric re-implant, $n = 1$. Serious complications (Clavien III or IV) occurred in 12% of patients. The median (IQR) blood loss was 390 (20–1,200) mL and the median (IQR) length of hospital stay was 8 (3–21) days.

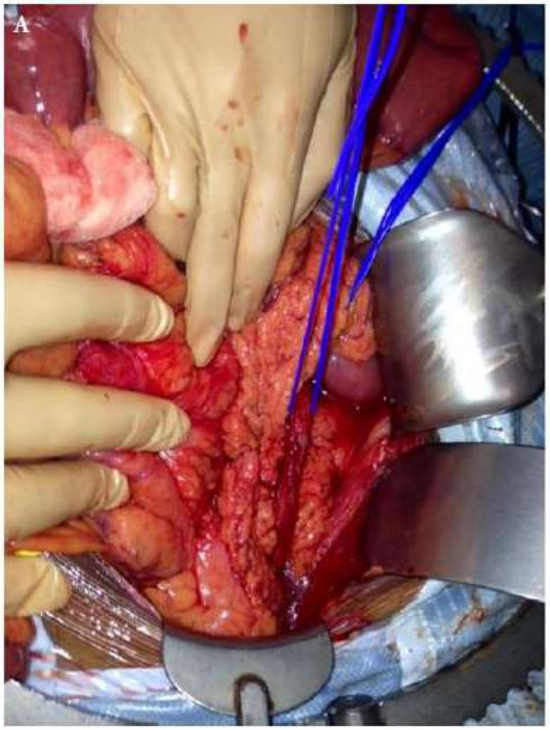
Conclusions

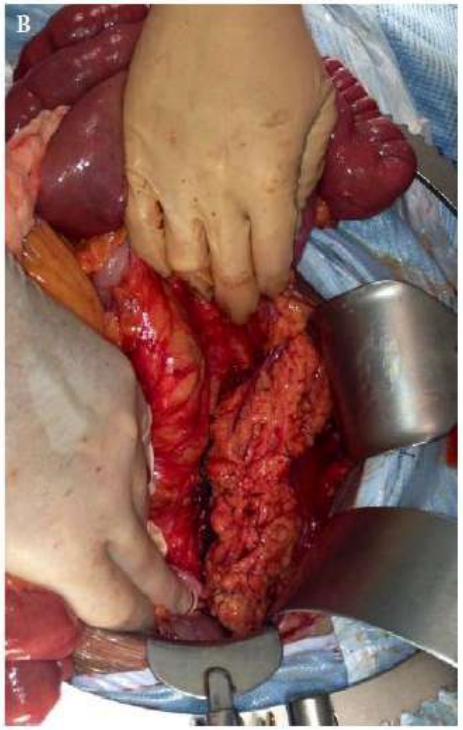
This study suggests that for patients with ureteric obstruction caused by RPF, contemporary ureterolysis performed by a high-volume specialist team can successfully render patients stent- or nephrostomy-free without compromising renal function. The results suggest that ureterolysis should be considered in all patients who present with ureteric obstruction caused by RPF that does not respond quickly to standard treatment.

Keywords

retroperitoneal fibrosis, ureterolysis, ureteric obstruction







O'Brien T, Fernando A. Contemporary role of ureterolysis in retroperitoneal fibrosis: treatment of last resort or first intent? *BJM Int.* 2017; 120:556-561.

Laparoscopic Ureterolysis and Omental Wrapping

Giuseppe Simone, Costantino Leonardo, Rocco Papalia, Salvatore Guaglianone, and Michele Gallucci

OBJECTIVES To describe our laparoscopic technique of ureterolysis and omental wrapping using the LigaSure device for the treatment of idiopathic retroperitoneal fibrosis.

METHODS Four bilateral laparoscopic ureterolyses (LUs) and two unilateral LUs were performed in 6 male patients (mean age 47 years). Of the 6 patients, 4 underwent LU without having undergone medical therapy before surgery and 2 underwent LU after medical therapy failure. All had had ureteral stents placed before surgery. The ureters were completely freed from the fibrotic tissue using an Overholt laparoscopic forceps and 10-mm LigaSure atlas. An omental wrap was passed behind the colonic flexure, placed around the ureter, and fixed to the psoas muscle.

RESULTS The mean operating time was 80 minutes (range 75 and 85) for the unilateral LUs and 200 minutes (range 180-225) for the bilateral procedures. The mean blood loss was 75 mL (range 50 and 100) during LUs and 150 mL (range 80-220) during bilateral LUs. The mean hospital stay was 3.33 days (range 2-5). All indwelling ureteral stents were removed at 4 weeks postoperatively. At a mean follow-up of 37.5 months (range 23-59), all patients were free of symptom and all renal units were unobstructed.

CONCLUSIONS In our experience of LUs and omental wrapping, the reproduction of each step of open surgery seems to offer excellent midterm outcomes. The use of the LigaSure simplified the laparoscopic procedure and made it feasible and safe. We believe that the minimally invasive nature and high effectiveness of LU suggest consideration of this procedure as first-line treatment of idiopathic retroperitoneal fibrosis. UROLOGY 72: 853–858, 2008.

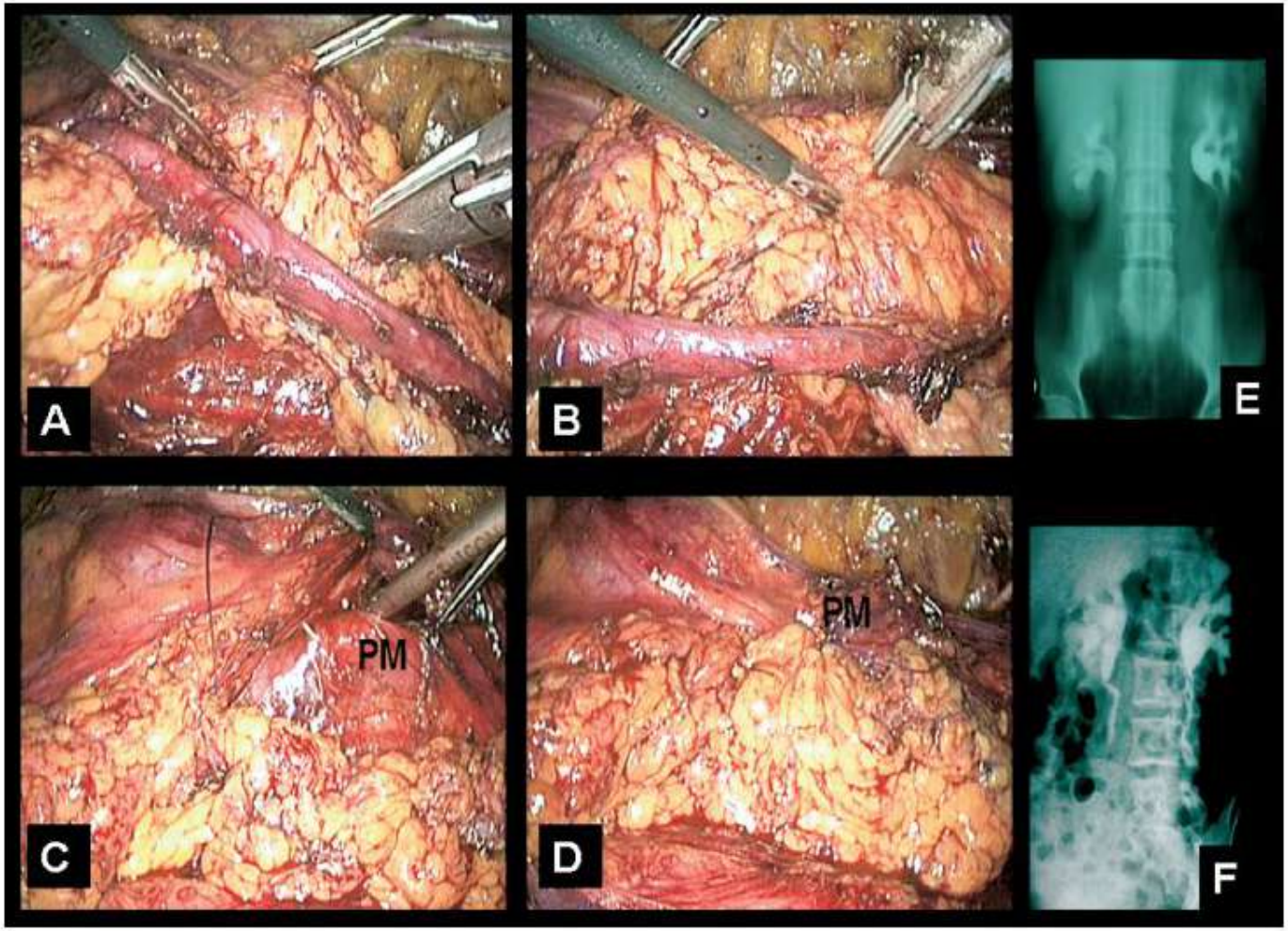


Figure 3. **(A,B)** Intraoperative view of accomplishment of omental wrap passed behind colonic flexure and closed around ureter. **(C)** Fixation of wrap to psoas muscle (PM). **(D)** Final aspect of wrap. **(E,F)** Postoperative urogram at 18 months of **(E)** patient who underwent unilateral left ureterolysis and **(F)** patient who underwent bilateral ureterolyses, showing no signs of obstruction and lateralization of treated ureter.

Conclusiones

- ★ La Fibrosis Retroperitoneal es una patología poco frecuente pero que puede condicionar una importante afectación del aparato urinario superior.
- ★ El tratamiento de primera línea es médico con corticoides y/o inmunosupresores, pudiendo necesitar al mismo tiempo colocación de catéteres doble J o nefrostomias.
- ★ Si no se consigue revertir la fibrosis está indicada la realización de ureterolisis.

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