

THE DIAGNOSIS AND OPERATIVE CONTROL OF
ACUTE PYOGENIC PHLEBITIS COMPLICATED
BY GENERAL SEPTIC INVASION*

BY HAROLD NEUHOF, M.D.
OF NEW YORK, N. Y.

Ann Surg 1933;97:808

FROM THE SURGICAL SERVICE OF MOUNT SINAI HOSPITAL

Septic thrombophlebitis was defined by the
following criteria:

*Presence of acute venous thrombosis, as
evidenced clinically and/or by means of
ultrasound or CT scan and

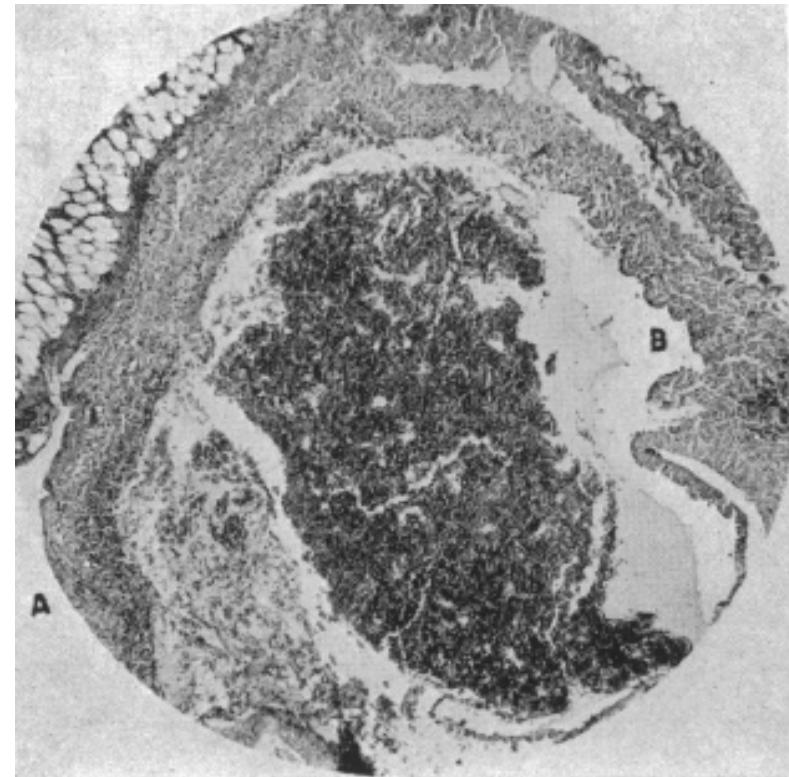
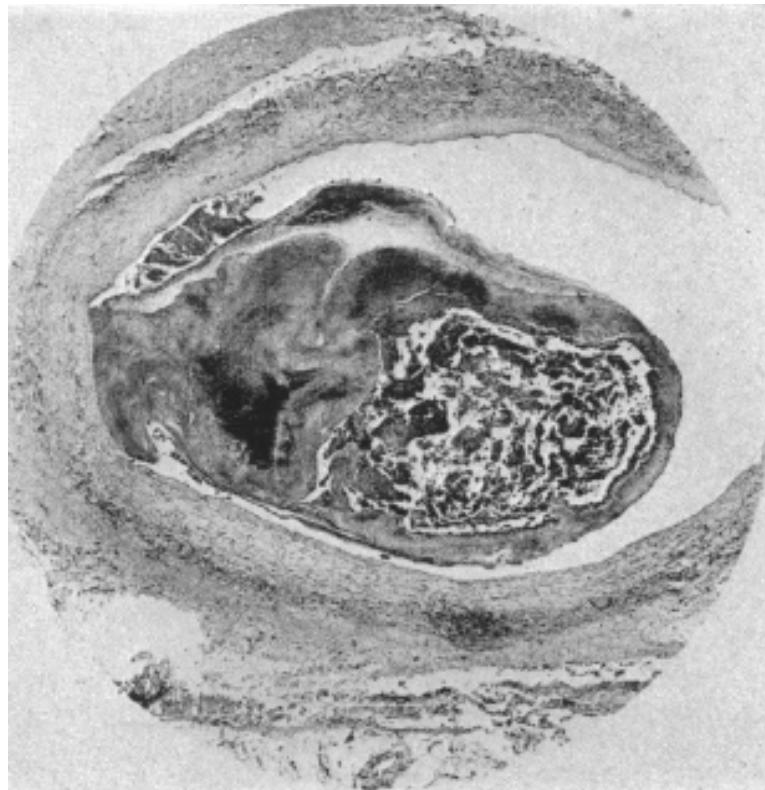
*Documented bacteremia.

The case definition of septic pulmonary embolism:

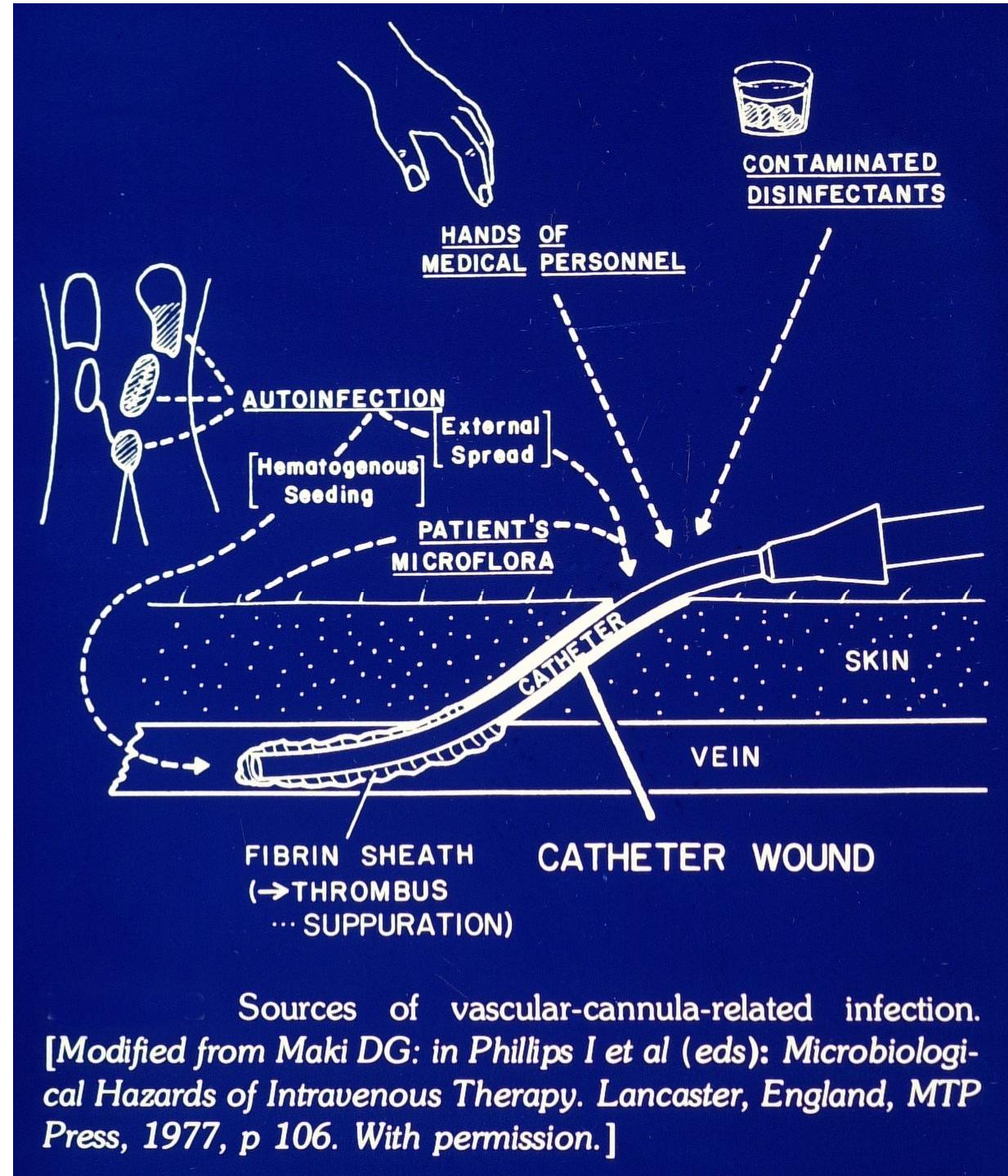
*Suggestive clinical presentation (eg. fever, chills,
pleuritic chest pain, dyspnea, hemoptysis, and/or
cough).

*Chest CT with multifocal peripheral nodules suggestive
of embolism.

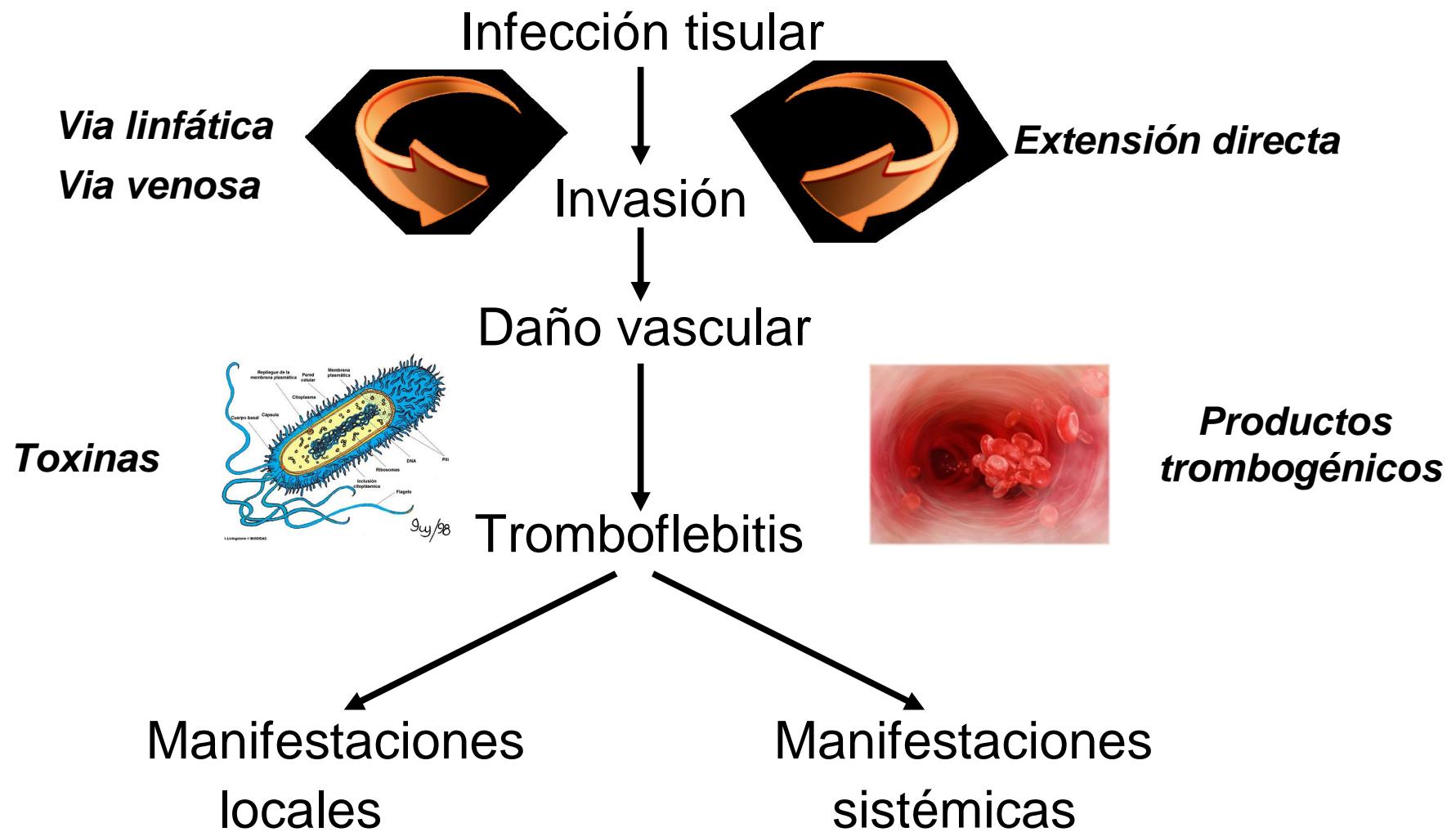
*An extrapulmonary infectious source for emboli.



Tromboflebitis séptica:
*La presencia de un catéter
venoso es el factor de riesgo
más frecuente e importante*



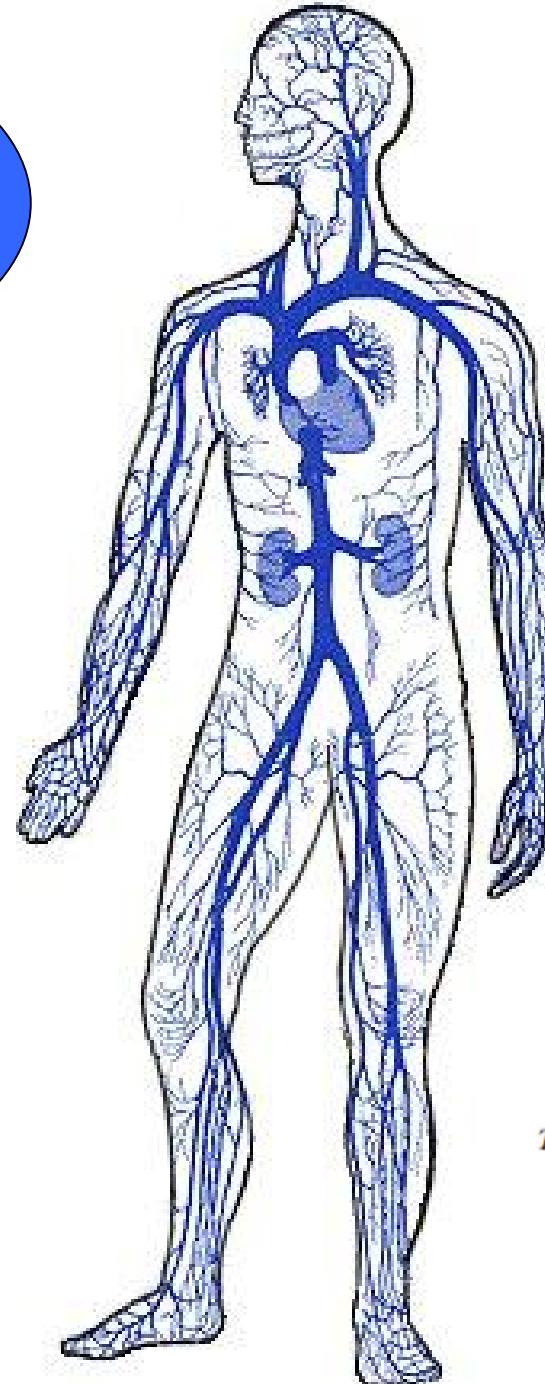
Una Propuesta sobre Patogénesis



Venas extremidades
Tromboflebitis supurativa

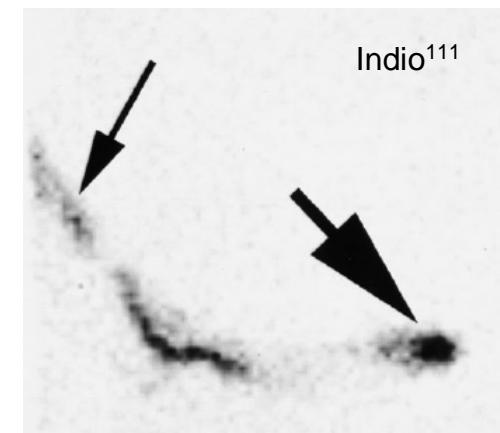
Catéteres endovenosos
Adicción a drogas
Infecciones piel y tejidos blandos
Quemaduras

Staphylococcus aureus
Pseudomonas aeruginosa
Streptococcus pyogenes
Anaerobios



Fiebre, escalofríos.
Hipotensión
Bacteriemia irruptiva
Sepsis.
Embolismo pulmonar

Cordón duro y doloroso
Tumefacción piel/TCS
“Milking”.



The British Journal of Radiology, 77 (2004), 679–680

Eco doppler

Grandes venas del cuello y el tórax

Catéteres venosos:
+Plásticos
- Silastic o teflon

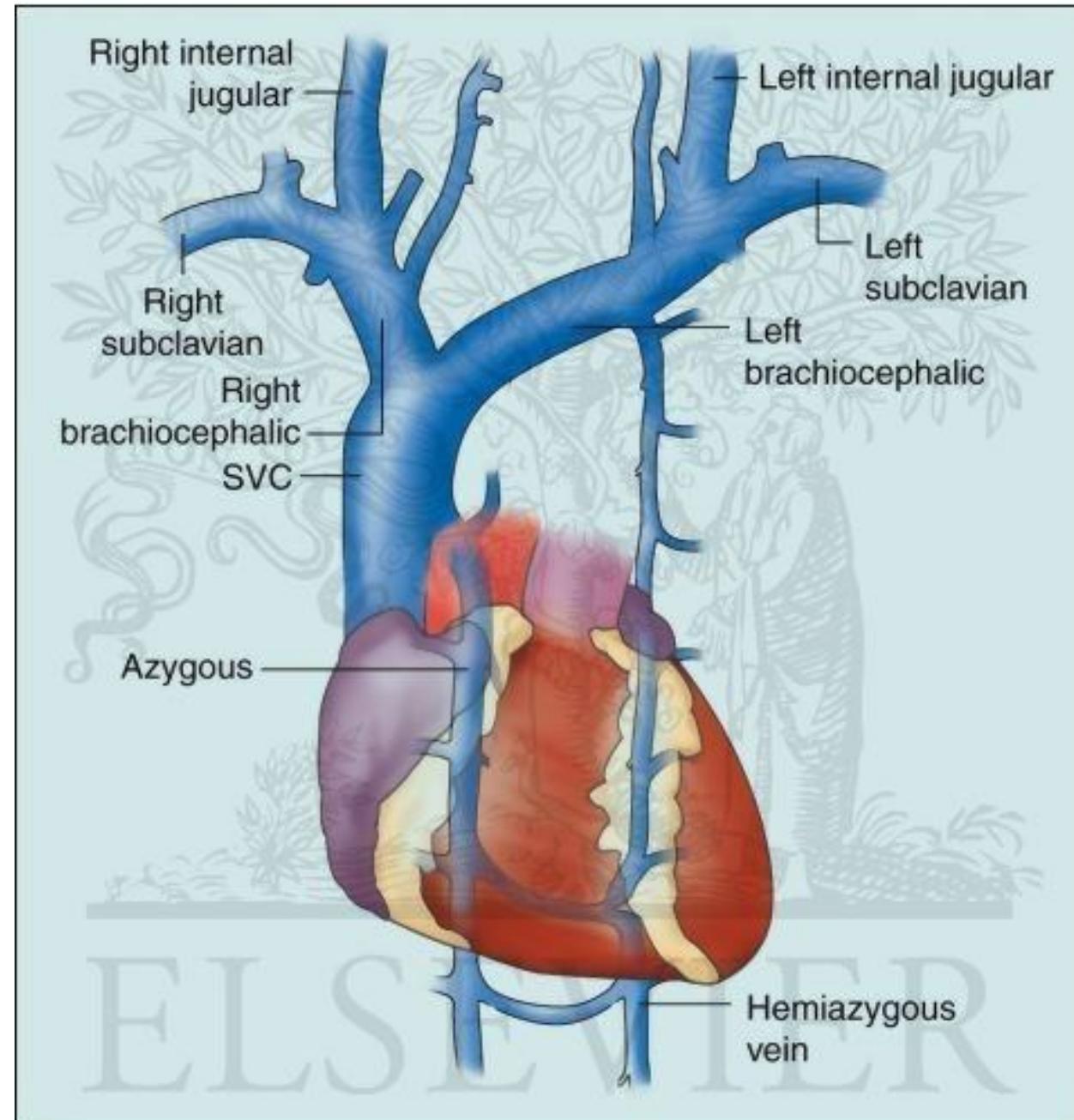
NPT

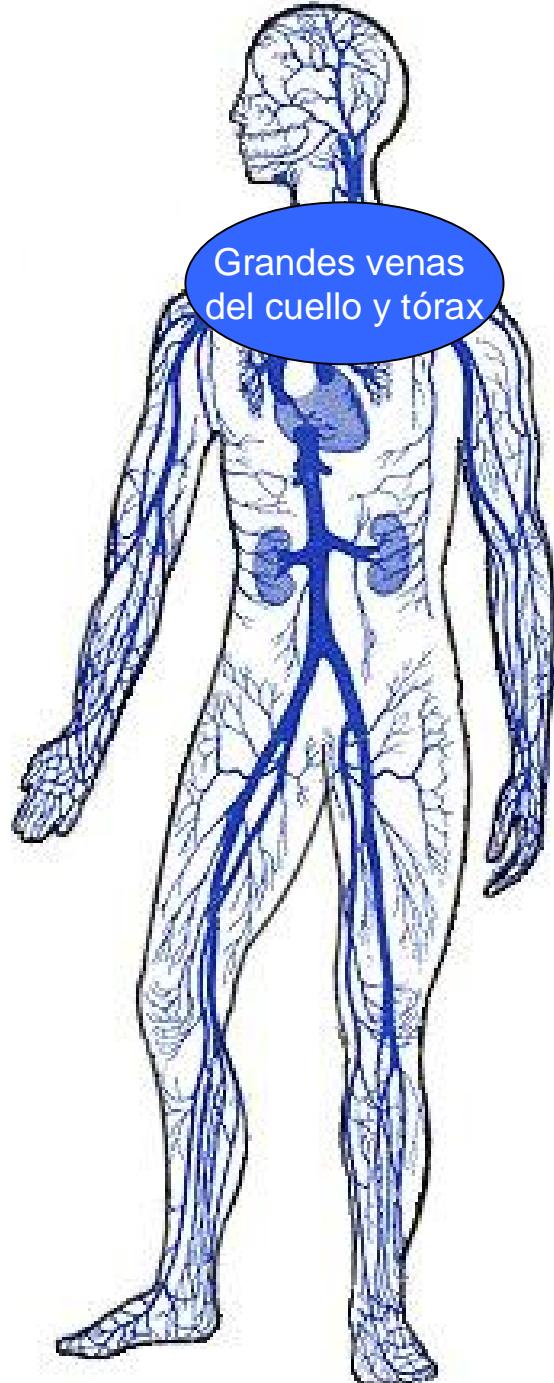
Celulitis del cuello

Infecciones axilares

Trombosis Primarias
Complicadas:

Hipercoagulabilidad
Budd-Chiari



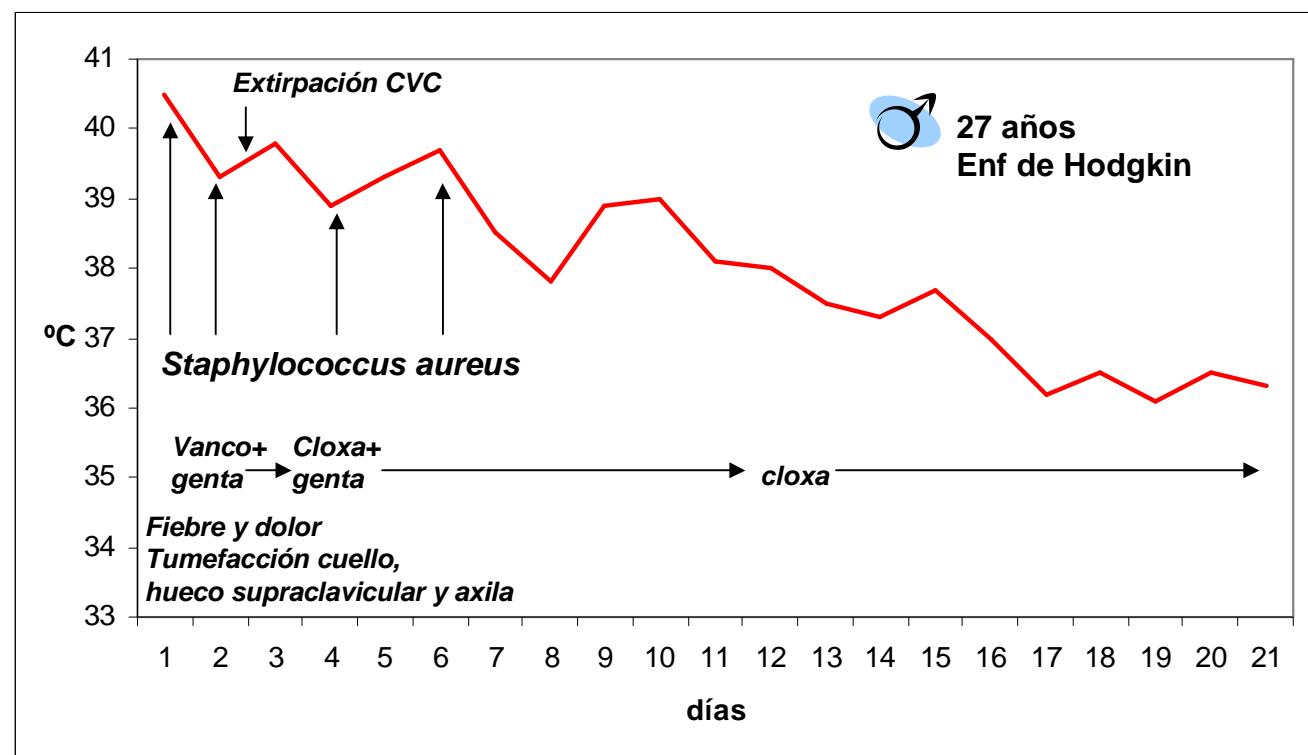


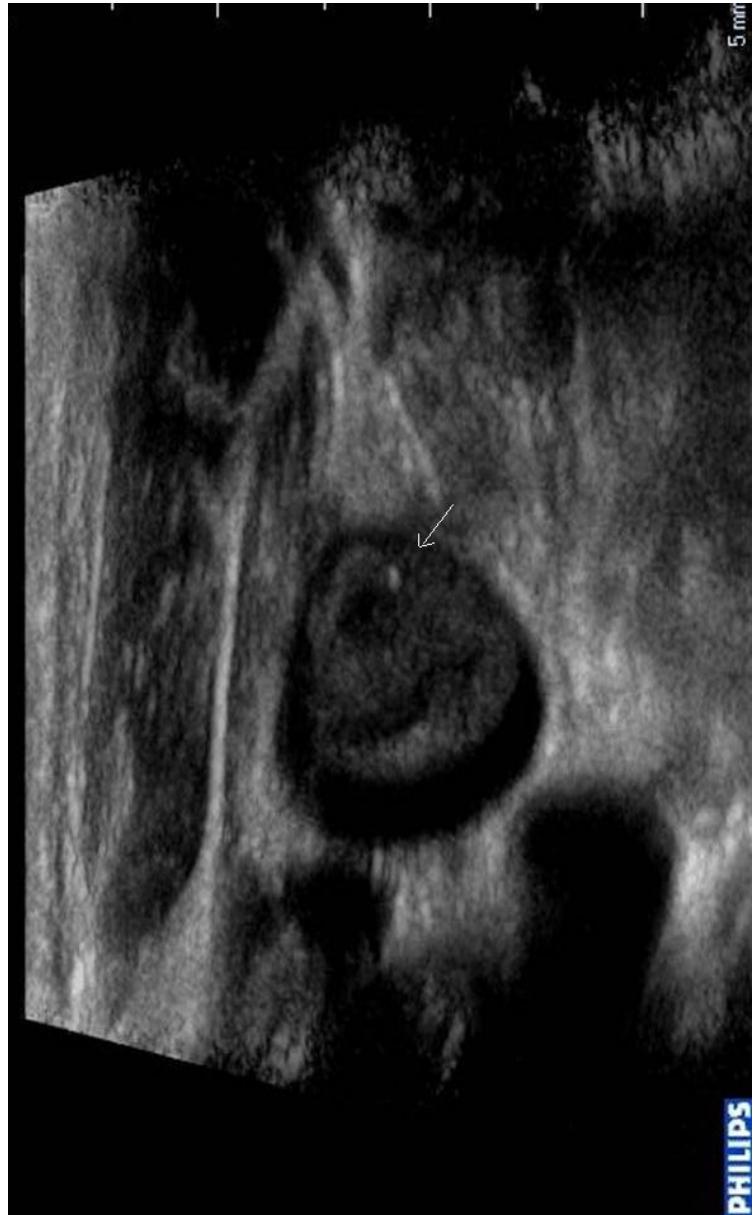
Tromboflebitis séptica de las grandes venas del cuello. Una complicación grave de los catéteres venosos centrales

M. de Górgolas, J. Azofra, C. Verdejo, R. Torres
y M.L. Fernández Guerrero

División de Enfermedades Infecciosas (Departamento de Medicina Interna).
Fundación Jiménez Díaz. Universidad Autónoma. Madrid.

Med Clin 1991;96:742-4



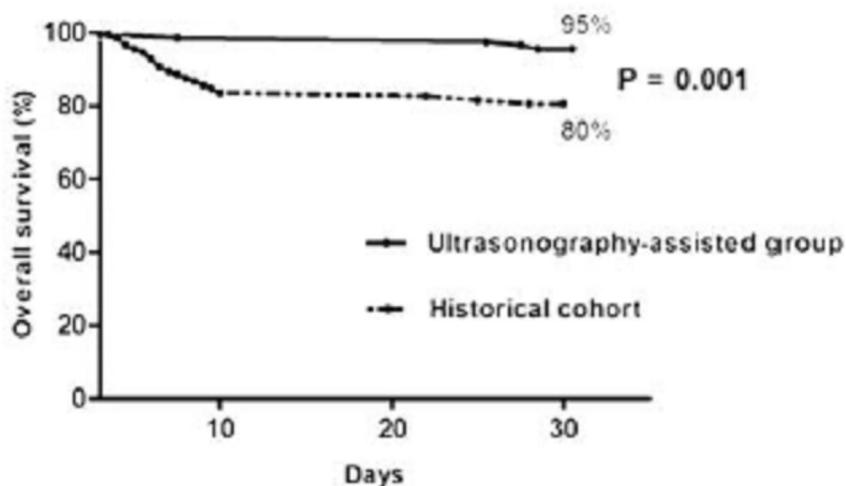


M. Picardi¹ et al.

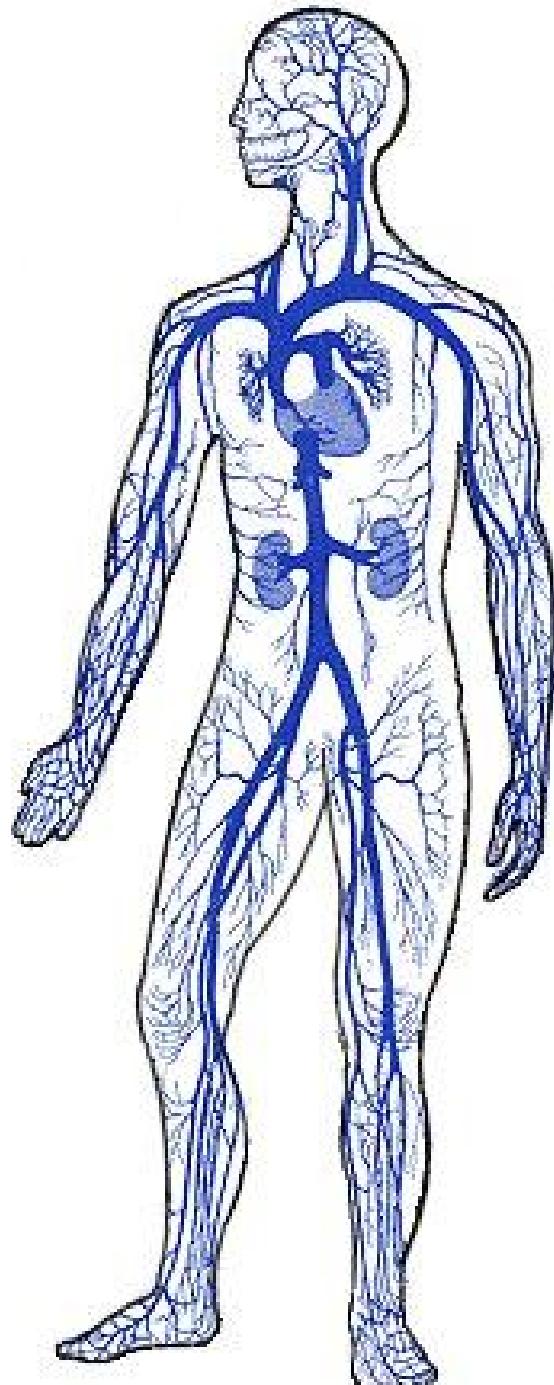
Annals of Oncology 23: 2122–2128, 2012
doi:10.1093/annonc/mdr588

Early ultrasonographic finding of septic thrombophlebitis is the main indicator of central venous catheter removal to reduce infection-related mortality in neutropenic patients with bloodstream infection

Variable	Ultrasonography-assisted group	Historical cohort	P
No. of CVC removed	30 /100	60/100	<0.01
Causative pathogens of bloodstream infections in patients removing CVC			NS*
Gram-positive	10	35	—
Gram-negative	15	20	—
Fungus	5	5	—
Time to CVC removal since bloodstream infection onset	1 (1–3)	8 (4–9)	<0.01
Median, days (range)			



US-assisted group	98	98	95
Historical cohort	83	83	80



Síndrome de Lemierre (sepsis postangina): una infección olvidada

J. A. Garrido, M. C. Ponte. y M.L. Fernández Guerrero

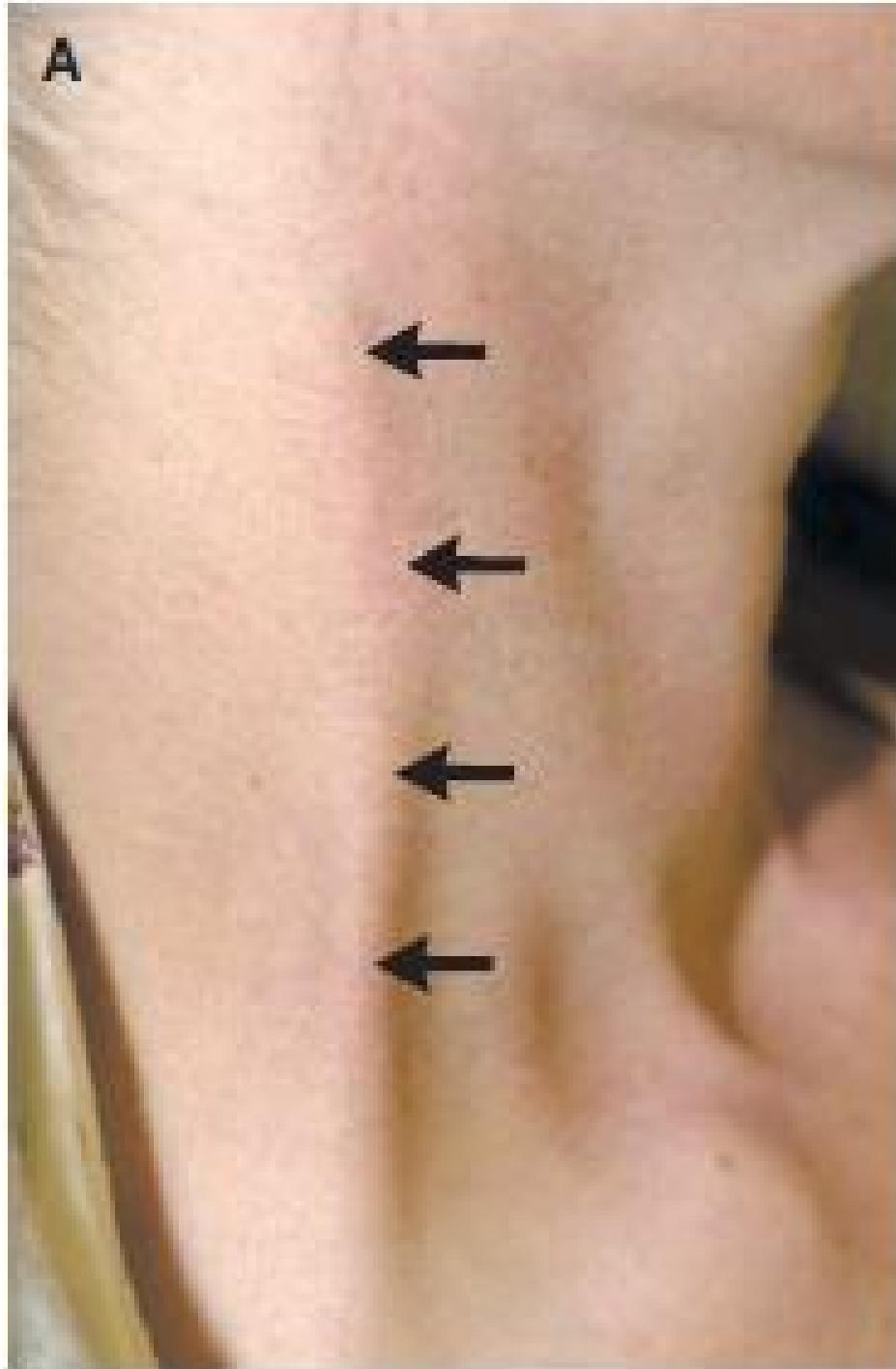
*División de Enfermedades Infecciosas. Departamento de Medicina Interna.
Fundación Jiménez Díaz. Universidad Autónoma de Madrid*

Med Clin 1989;93:660-2



**André Lemierre
1875-1956**

A



Box 2: Suggestive features of Lemierre's syndrome

- Previously fit adolescent or young adult.
- History of sore throat in preceding seven days.
- Onset of high fever and rigors.
- Signs of internal jugular venous thrombosis (30%–40%).
- Dry cough and pleuritic chest pains.
- Chest radiograph shows multiple nodular lesions.
- Bilateral pleural effusions.
- Other features of metastatic abscess—for example, empyema or septic arthritis or skin/soft tissue abscess.
- Release of foul smelling pus from abscess or empyema.

T Riordan, M Wilson

Postgrad Med J 2004;80:328–334.

**Otras formas 2^a: Otitis, mastoiditis,
Ca. boca y amígdala, otras.**

Fusobacterium necrophorum:

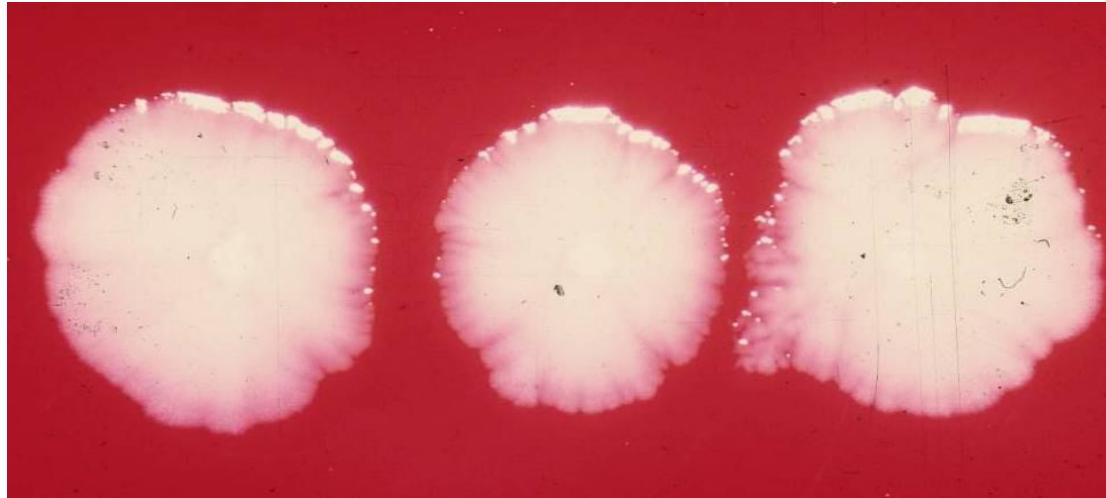
F necrophorum sub necrophorum (patógeno animal)

F necrophorum sub funduliforme (patógeno humano)

Virulencia: Abscesos, necrosis tisular, muerte en animales.

Leucotoxina, hemolisina, hemaglutinina, endotoxina.

Activación “sistema de contacto” (bradiquinina y FXI).



R a penicilina: de 0% a 23%; R eritromicina 22% a 66%.

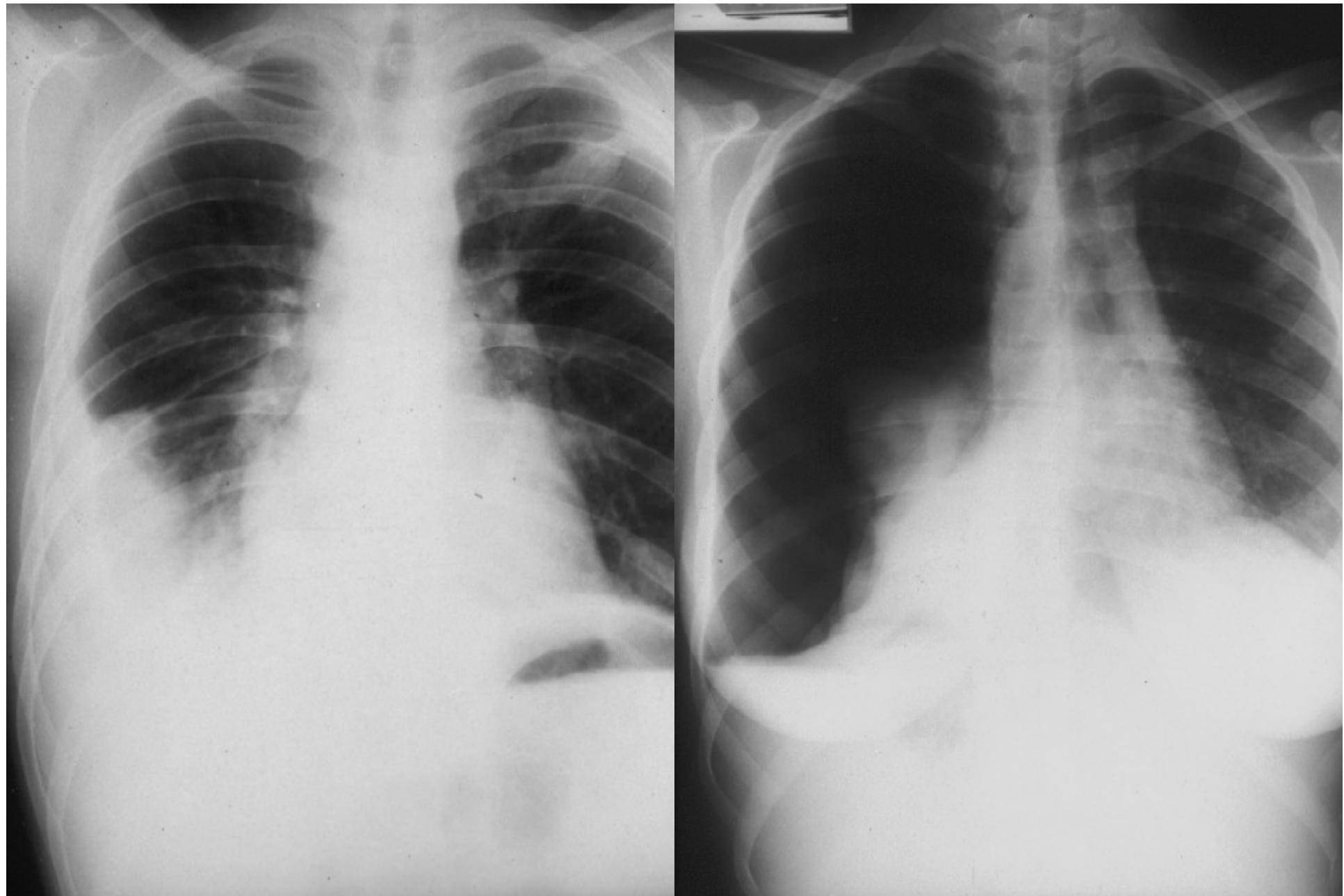
R a amoxi/clav, MTZ, Pip/tazo, IMP: 0%.

Riordan T. *Clin Microbiol Rev* 2007;20:622. Holm et al. *Infect Immun* 2011;79:3284.

Applebaum et al AAC 1990;34:1546. Brazier et al. *J Med Microbiol* 2002;51:269.

Baquero et al *Eur J Clin Microbiol Infect Dis* 1992;11:1016.





4030 PI 40y

19 Aug 2005 13:24:59.5

6037 - 87.50

170.95 mm

PHILIPS Brilliance TC

120kV, 161mAs

SC 366.0 mm

SW 9.00 mm

Z 1.20

R

18 cm

P

C1 40

W1 360



Panel: Complications of Lemierre's syndrome

- Lung lesions
 - Septic emboli
 - Infiltrates
 - Lung abscess
 - Pleural effusion
 - Empyema
- Septic arthritis
- Osteomyelitis
- Liver abscess
- CNS complications (eg, brain abscess, meningitis, cavernous sinus thrombosis)
- Soft tissue abscesses and cutaneous pustules
- Septic shock

Krutika Kuppalli, Daniel Livorsi, Naasha J Talati, Melissa Osborn

Lancet Infect Dis 2012;
12: 808-15

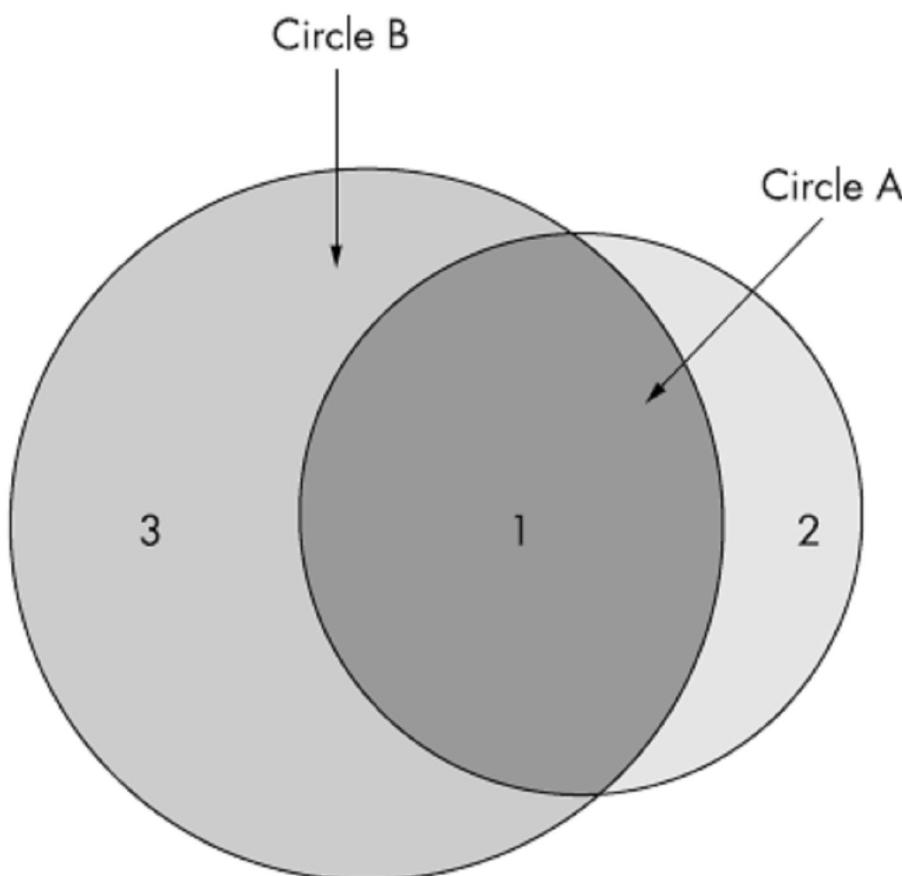
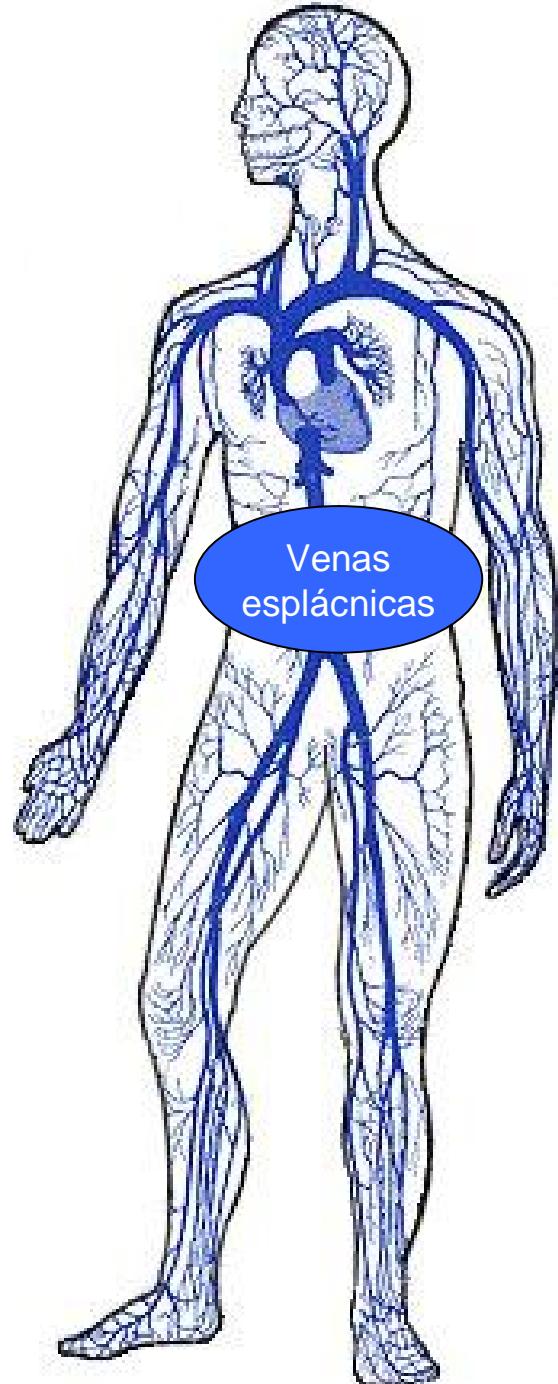
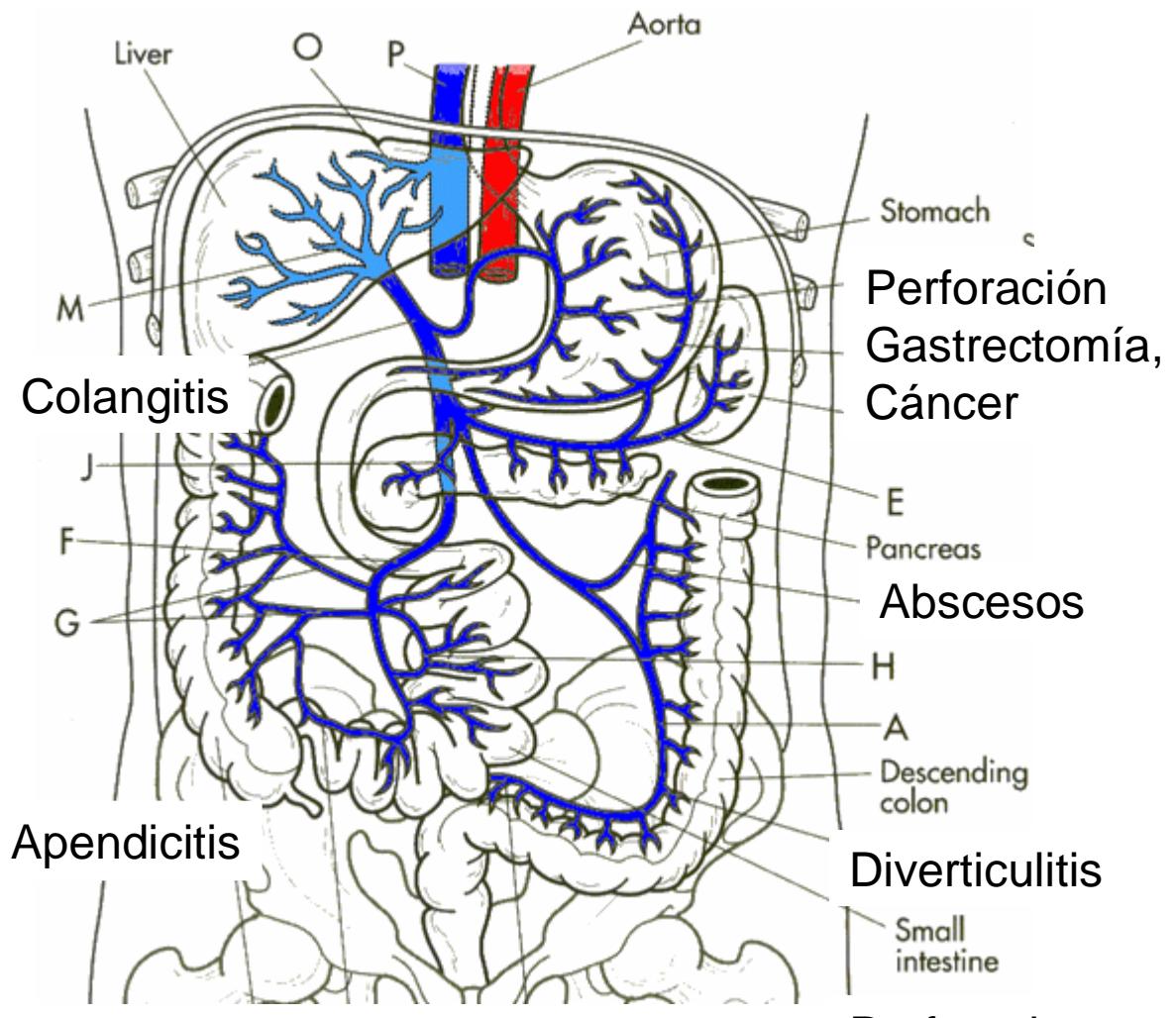


Figure 1 Patient groups: necrobacillosis and Lemierre's. Circle A = postanginal sepsis with internal jugular vein thrombosis and metastatic manifestations and circle B = necrobacillosis. 1 = classical Lemierre's postanginal sepsis, 2 = clinical Lemierre's but *F necrophorum* not detected, 3 = necrobacillosis from other source.



Etiología de la Pileflebitis



Enfermedad crónica inflamatoria

Cirugía

Jennifer T. Ames • Michael P. Federle

Dig Dis Sci (2011) 56:2179–2184

Pileflebitis. Una complicación grave de los abscesos intraabdominales

J.M. Aguado García*, M.L. Fernández Guerrero*, J.L. García Más*,
J. Cortés**, A. Payno*** y P. Arnal*

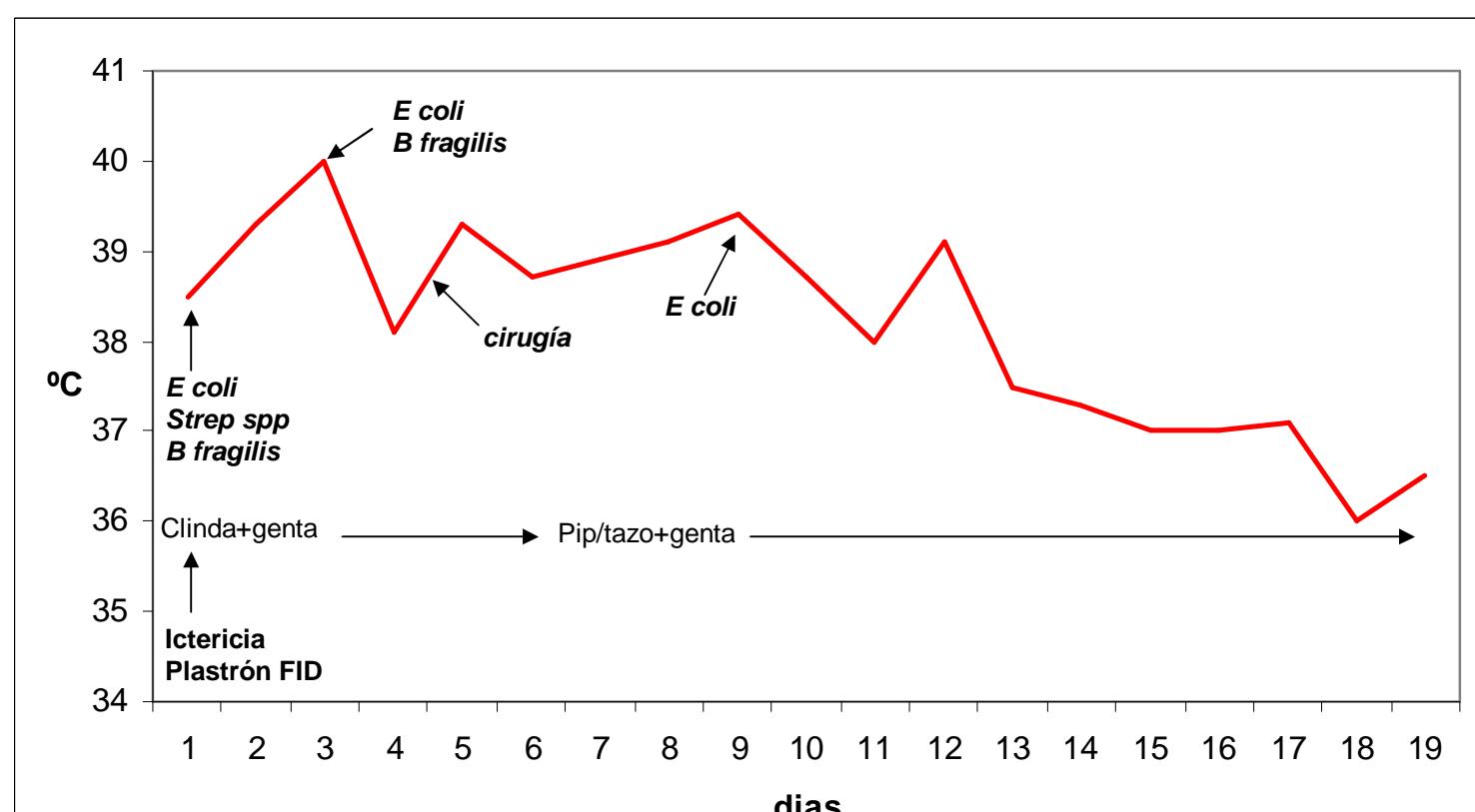
Servicio de * Medicina Interna, ** Anatomía Patológica y *** Cirugía de Digestivo.
Fundación Jiménez Díaz. Universidad Autónoma. Madrid.

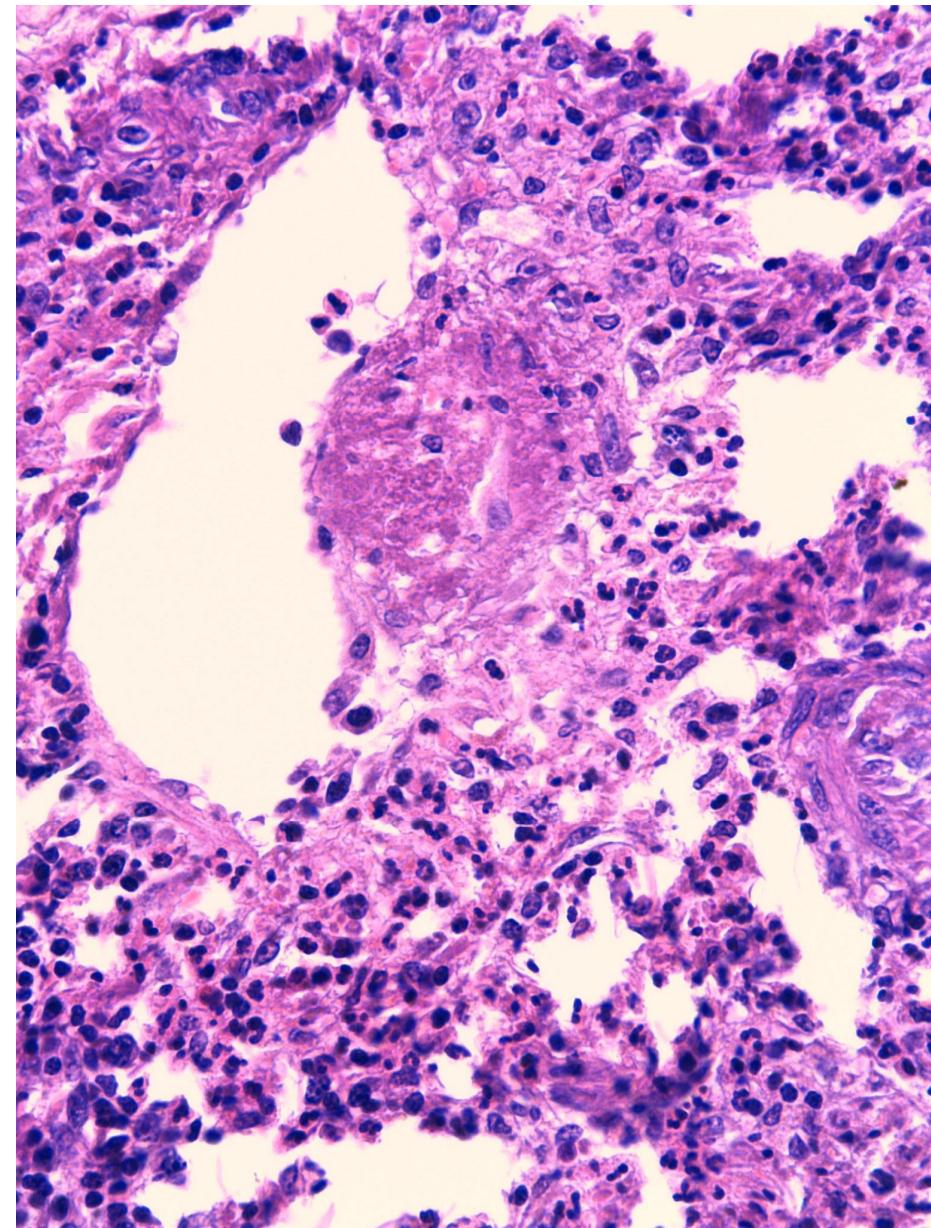
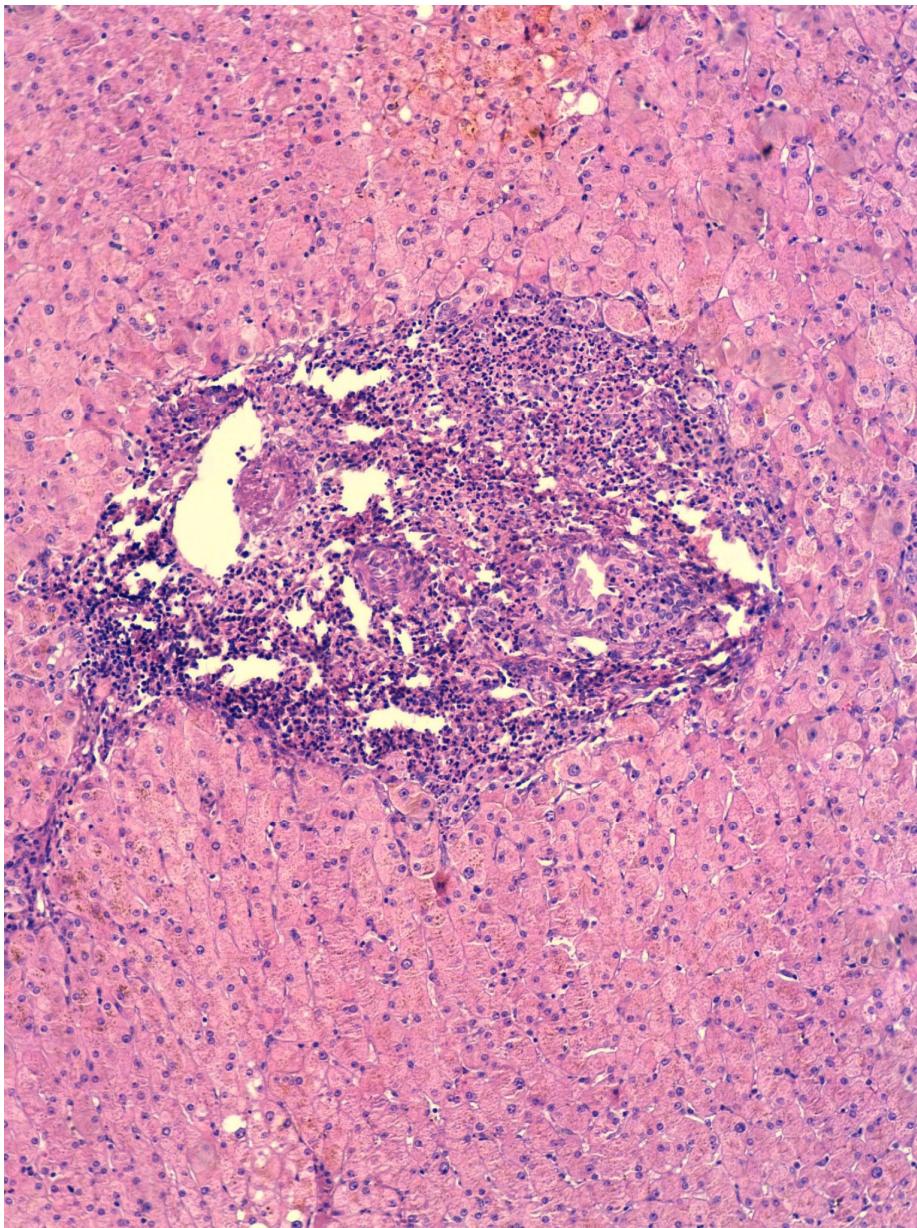
Rev Clin Esp 1985;177:231-4

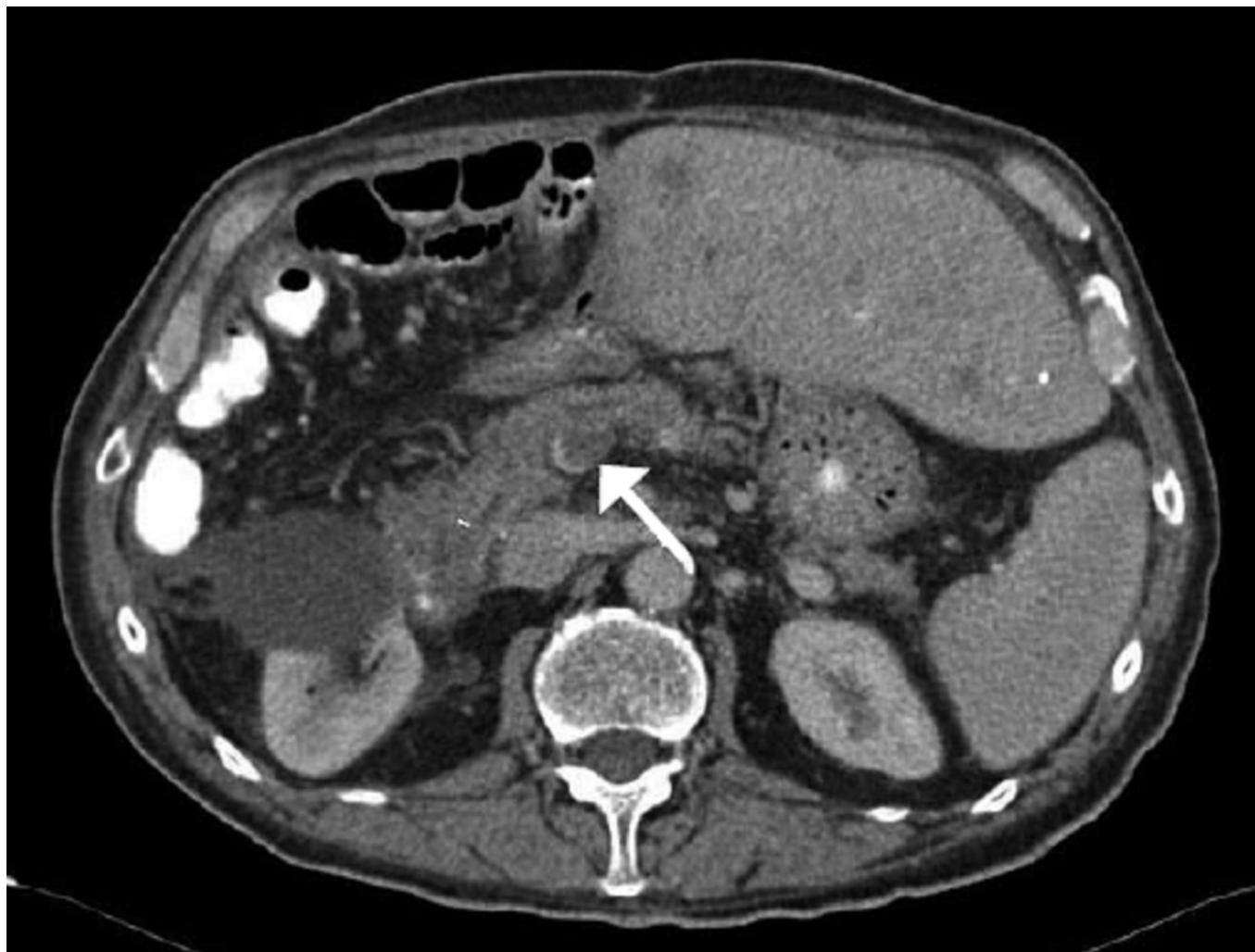


27 años

Día -7: dolor epigástrico
y FID, náuseas y vómitos.
6000 leucos







TN Chau 周泰年
Tony KL Loke 陸國倫

Hong Kong Med J 2007;13:69-72

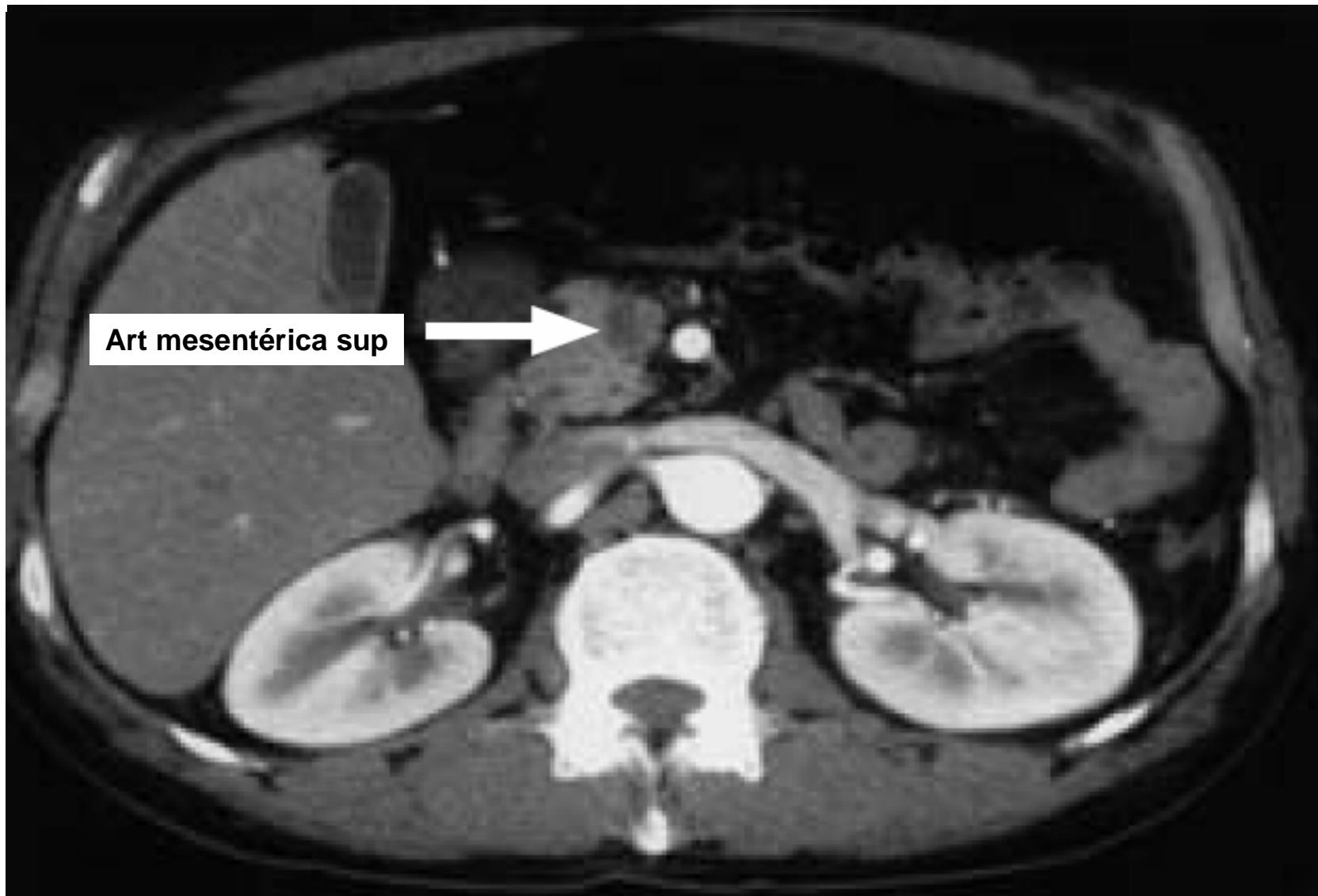




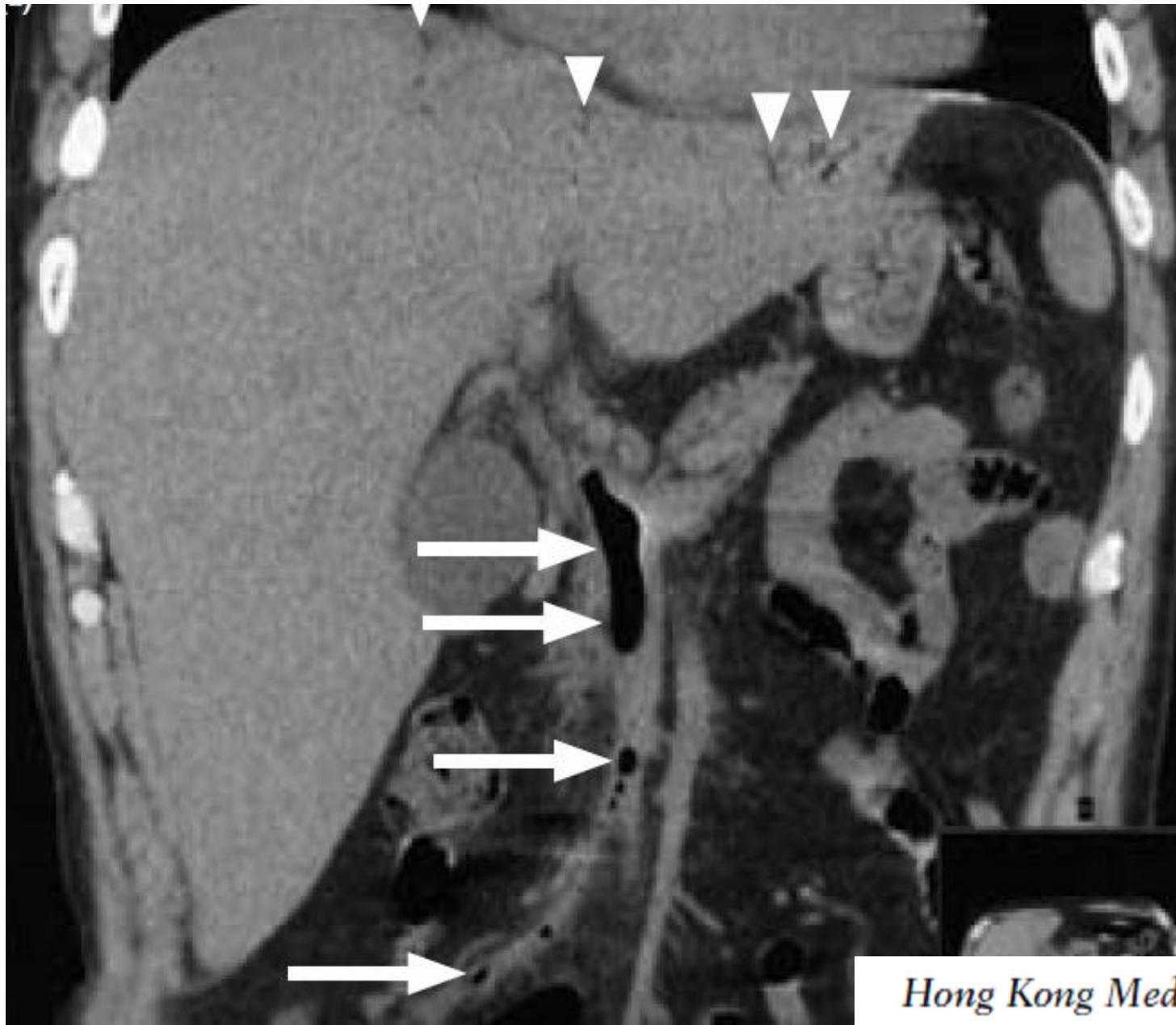
Fase venosa portal

TN Chau 周泰年
Tony KL Loke 陸國倫

Hong Kong Med J 2007;13:69-72

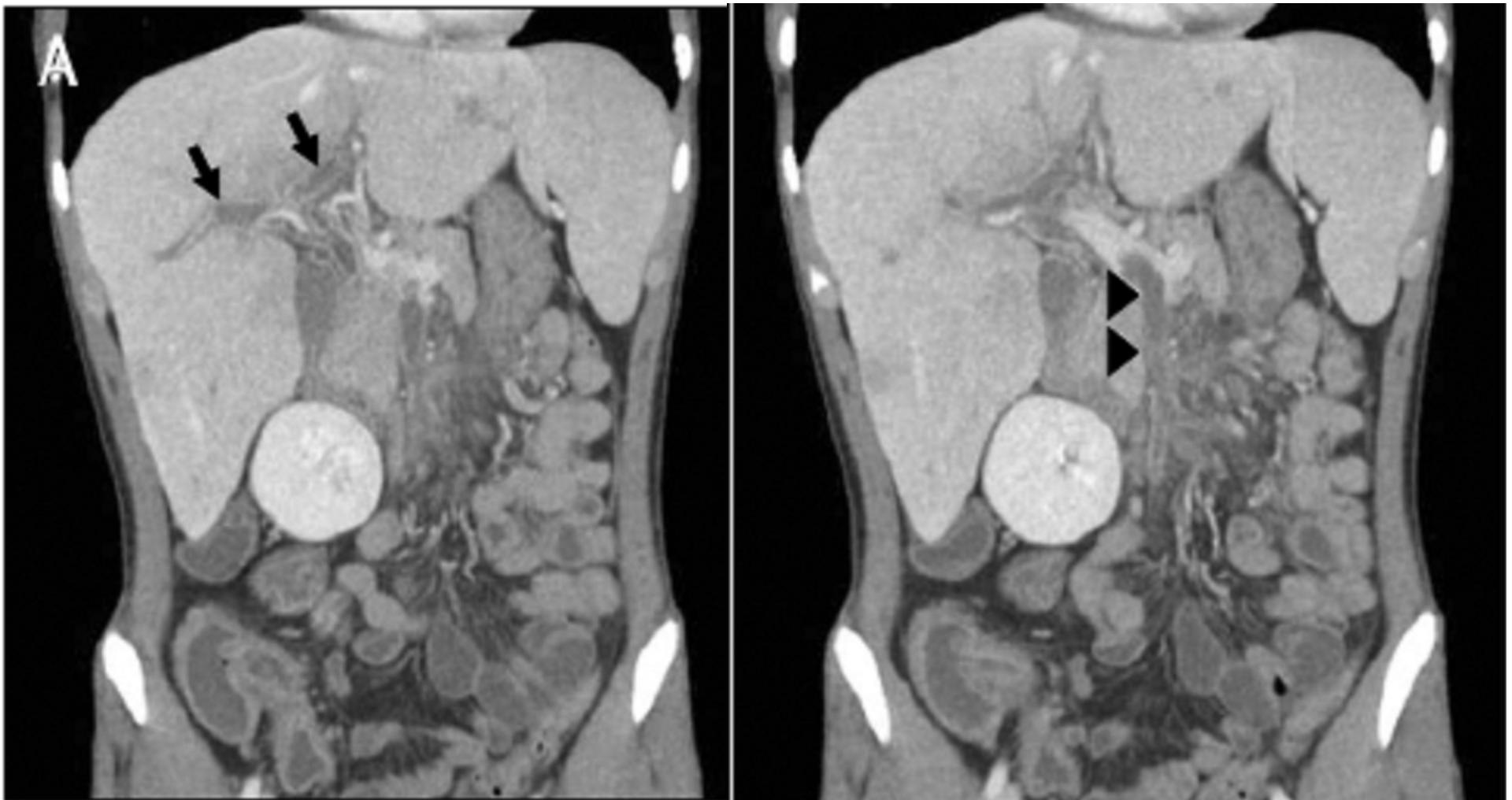


✿ Portal venous gas and thrombophlebitis ✿



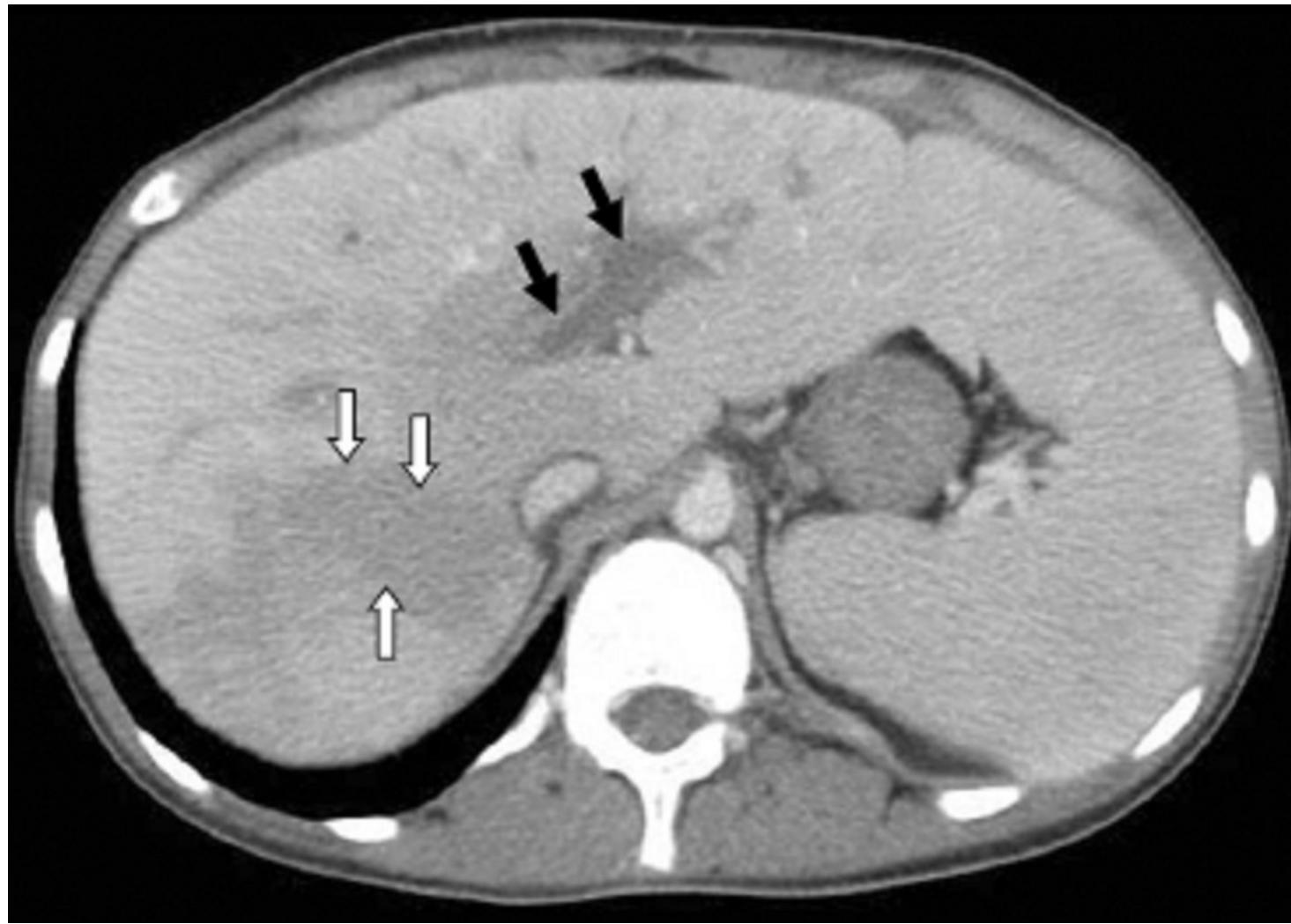
TN Chau 周泰年
Tony KL Loke 陸國倫

Hong Kong Med J 2007;13:69-72



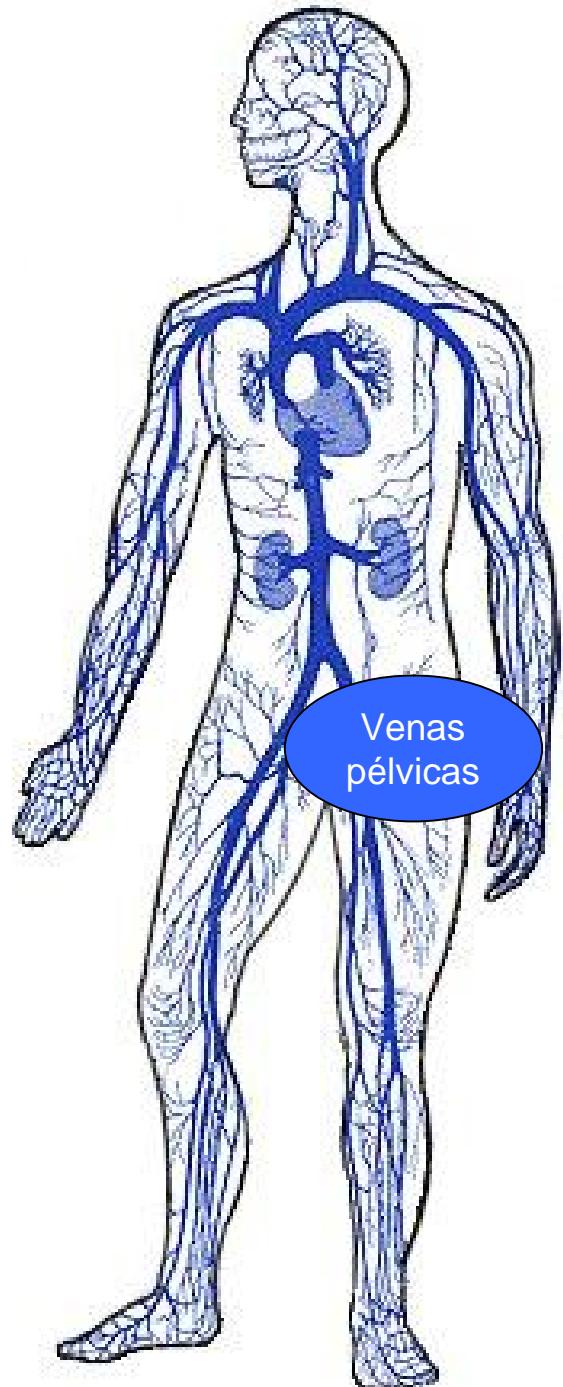
Trombosis portal

Trombosis mesentérica sup



Atenuación densidad hepática en la fase venosa portal debida a la disminución del flujo sanguíneo.



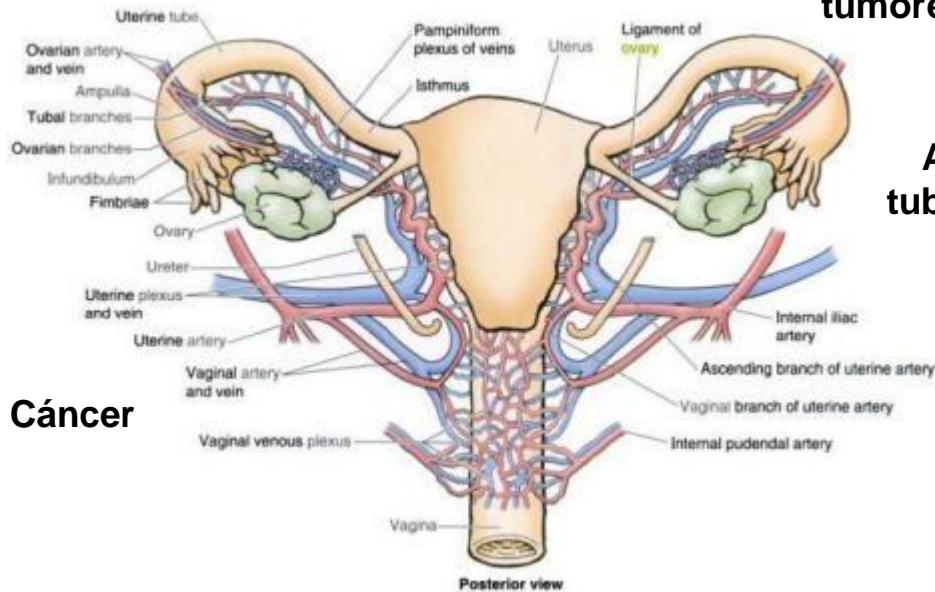


Tromboflebitis Séptica de las Venas Pélvicas Arterias y Venas del Aparato Genital Femenino Frecuencia y Causas

Aborto espontáneo o inducido Endometritis

Postop:
tumores, cesárea

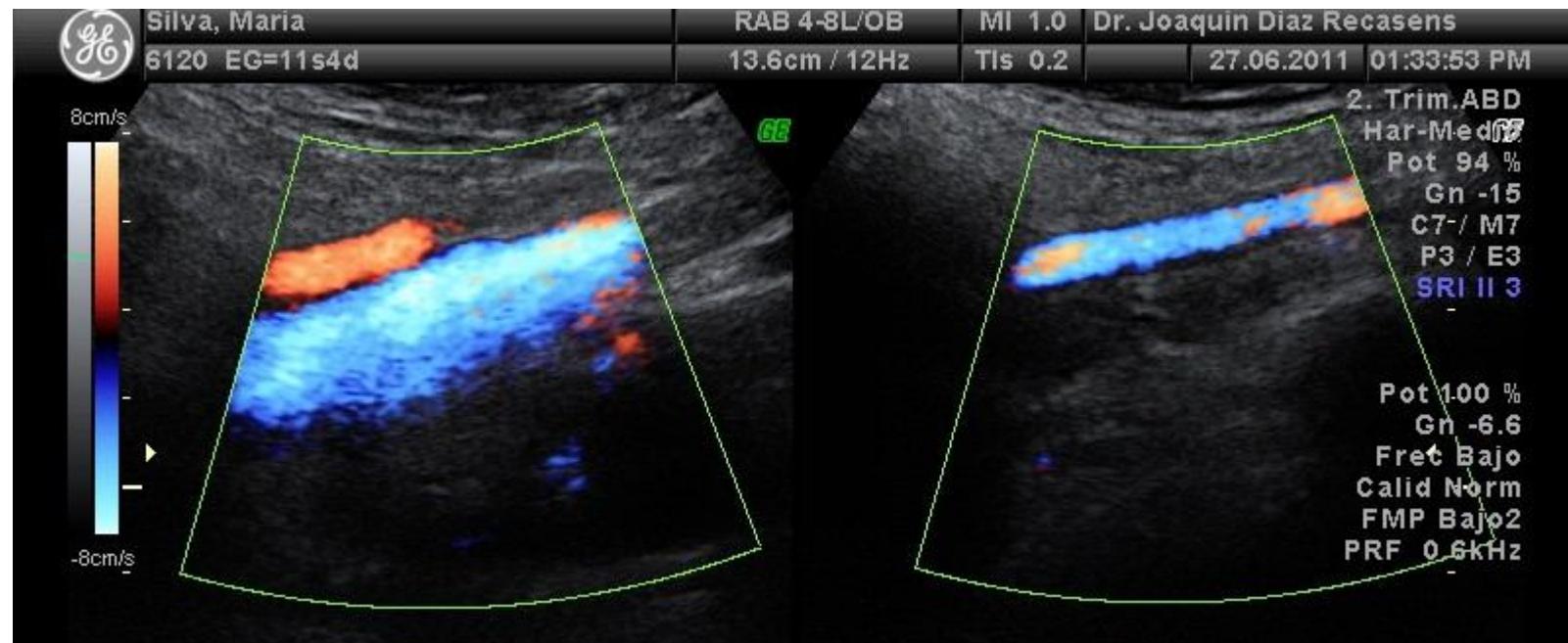
Abscesos
tubo-ováricos



Charity Hospital: 1941-1969: 202 casos; 1974-1981: 3 casos
Parkland Hospital 1/9000 partos 1/800 casáreas
Grady Memorial/Emory hospitals: 0.05% ingresos Ob&Gyn

Garcia et al. *Infect Dis Obs Gyn* 2006;15:614:1;Jaiyeoba *Clin Obs Gyn* 2012;55:904.
Brown et al. *Am J Obst Gyn* 1999;181:143.

31 años. Endometritis post-partum: Fiebre, escalofríos, dolor suprapúbico y fosas iliacas. Edema miembro inferior. Loquios malolientes. Leucocitosis. Bacteriemia: *B fragilis*, *Peptococcus spp*, *P mirabilis*.

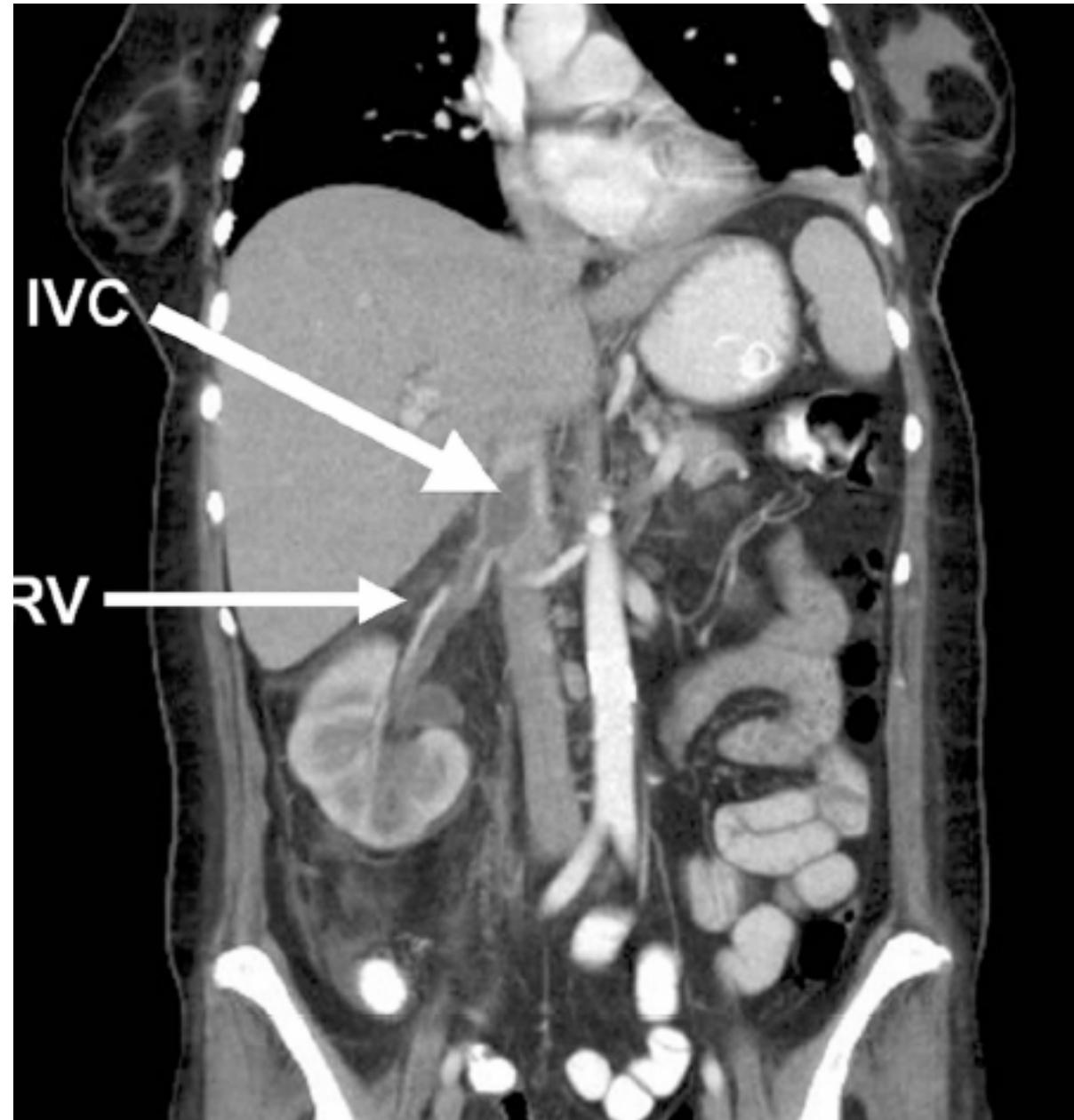


Dolor pleurítico. Rx tórax pequeño derrame pleural izqdo.
Resolución lenta con Pip/tazo + heparina

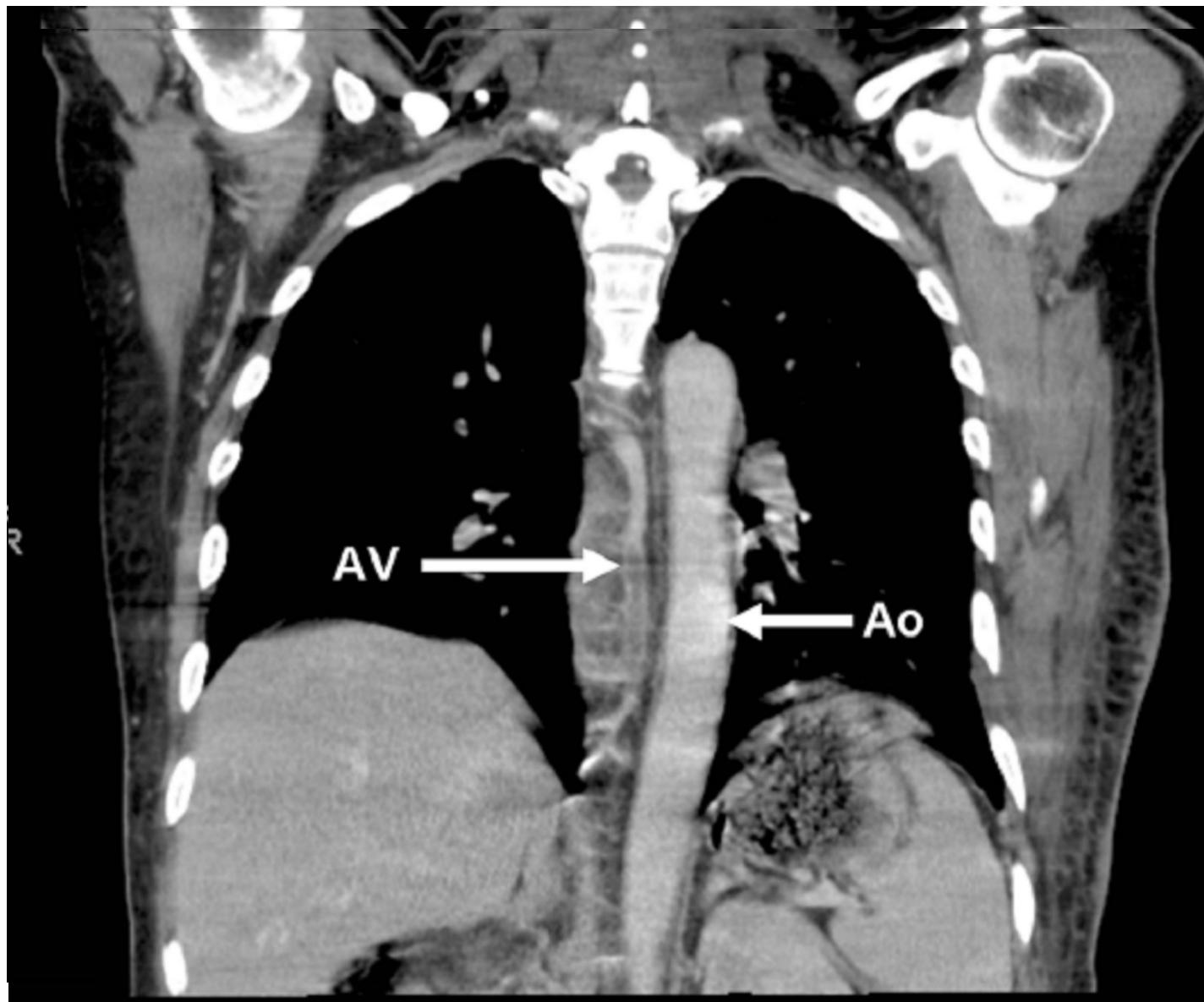
Table 1. Baseline Characteristics, Microbiology, Imaging and Outcomes of Patients with Septic Thrombophlebitis Complicated by Septic Pulmonary Embolism

	Case 1	Case 2	Case 3	Case 4	Case 5
Age (in years)	64	57	31	37	43
Gender	F	M	M	F	M
Comorbidities	Type 2 DM	Type 2 DM	Cocaine abuse	Heroin abuse	Heroin abuse
Clinical findings	Confusion, UTI Fever, chills, pleuritic pain	Fever, chest pain.	Fever, cough, Chest pain.	Fever, chest Pain.	Fever, chest pain.
Extrapulmonary Source	Pylonephritis	Vertebral OM, & abscesses	Pyomiositis	Thigh cellulitis	Thigh abscess
Pathogen (isolation sites)	MSSA (B,U)	MSSA (B,A)	Group B Streptococcus (B)	MRSA (B,A)	MSSA (B,A).
Thrombosis	Right renal v & inferior V cava	Azygous v	Left femoral v	Right femoral v	Left femoral v

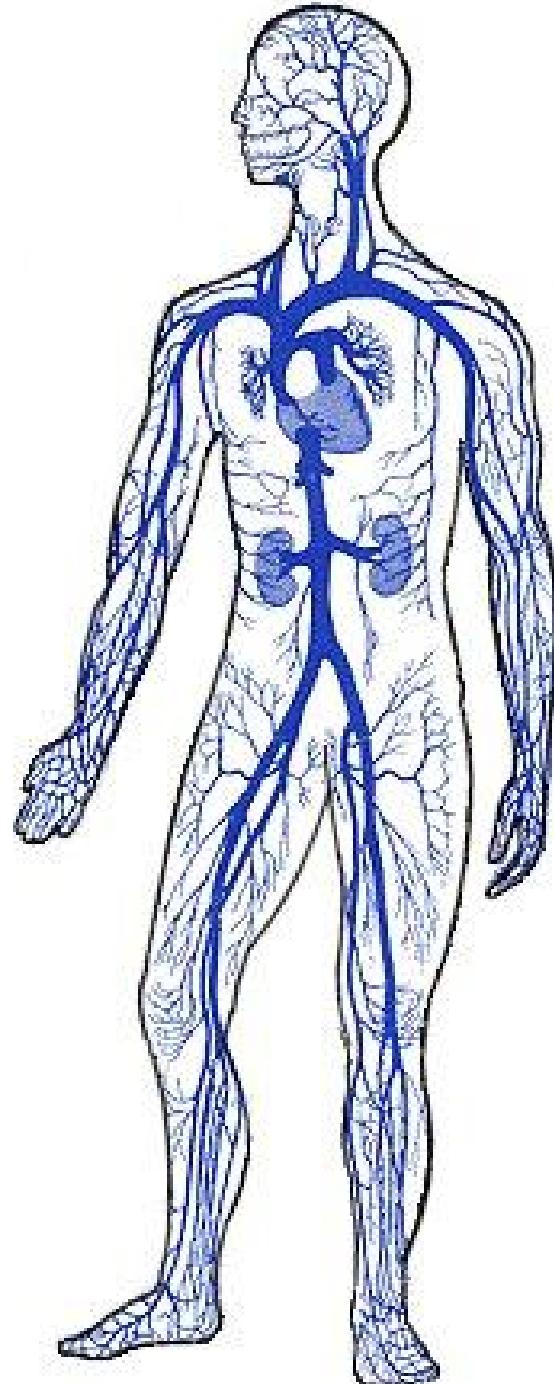
67 años, DM
Pielonefritis MSSA



57 años, DM. Osteomielitis vertebral y abscesos paraespinal, MSSA



Jorge A. Brenes* *The Open Respiratory Medicine Journal*, 2012, 6, 14-19



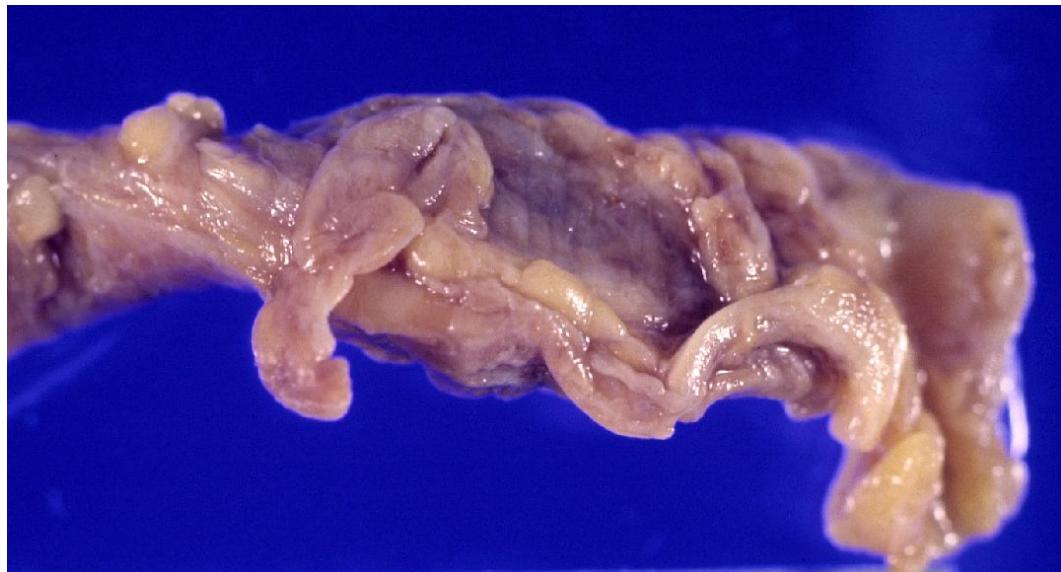
Tromboflebitis séptica. Tratamiento

Antibióticos

Cirugía drenaje focos supurativos

Corrección causas subyacentes

Extirpación, ligadura, extracción mecánica o disolución



Heparina

si

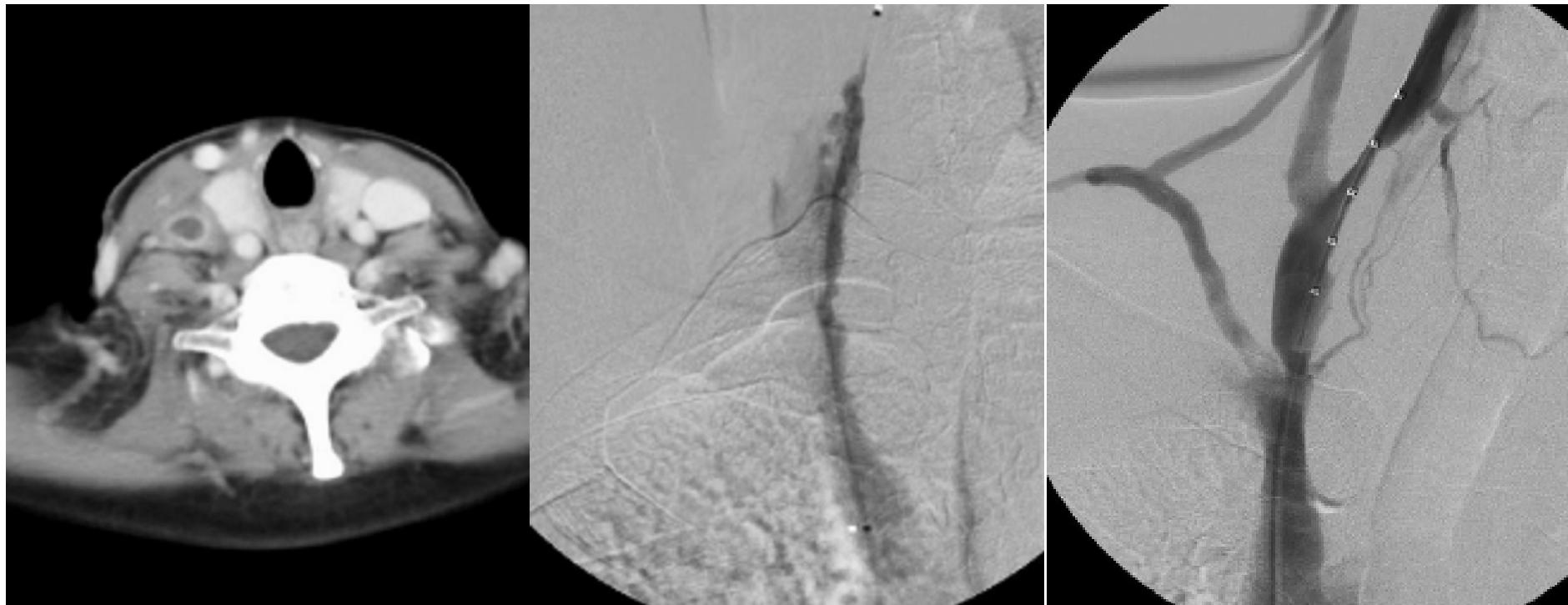
no

Duración fiebre: 134 ± 65 h 140 ± 39 h

Estancia media: 10.6 ± 1.9 d 11.3 ± 1.2 d

Brown et al. *Am J Obstet Gyn* A1999;181:143;
Falagas et al. *Eur J Pharmacol* 2007;557:93

Pulse-spray Treatment of Total Occlusive Jugular Venous Suppurative Thrombophlebitis



Tomomichi Kan'o, Hiroshi Nishimaki, Yuichi Kataoka and Kazui Soma

Intern Med 52: 819-822, 2013

