MÁSTER EN HEPATOLOGÍA

Universidad Autónoma de Madrid

Universidad de Alcalá

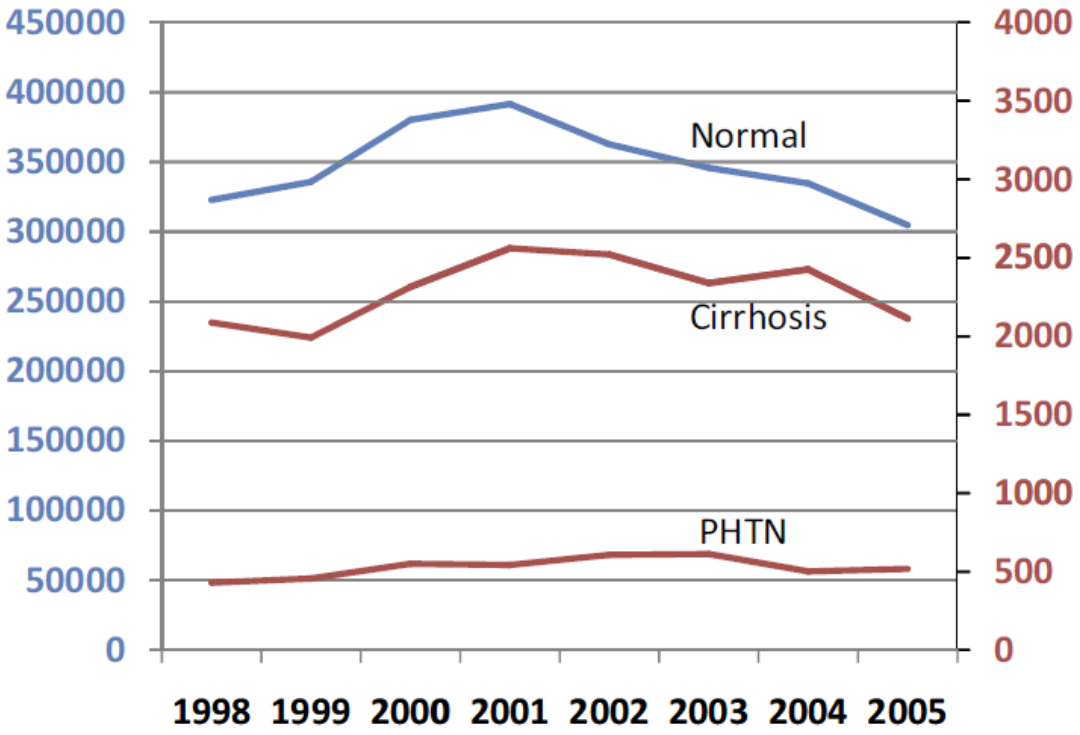
Asignatura: Cirrosis I

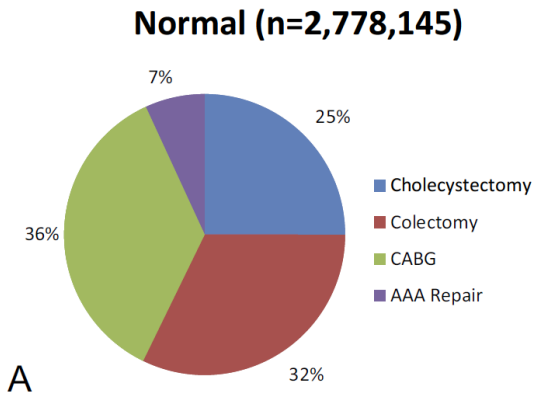
“Cirugía en la cirrosis. Valor del TIPS”

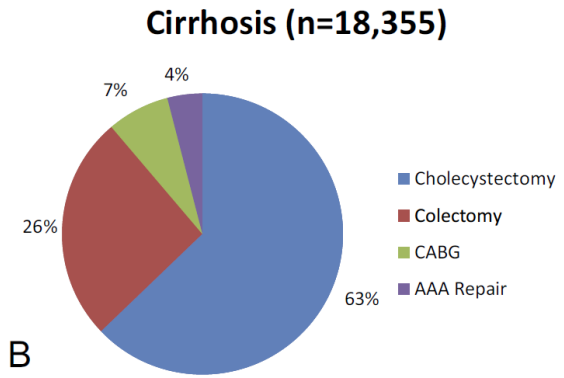
Miguel Ángel Rodríguez Gandía

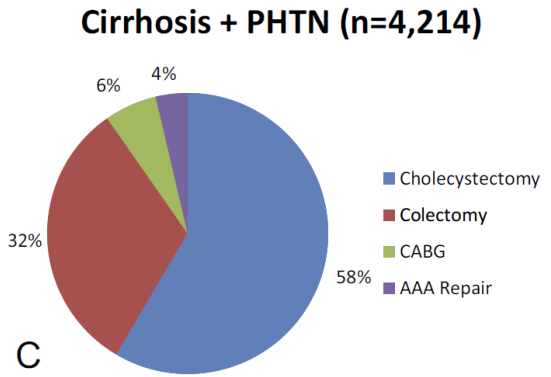
Hospital Universitario Ramón y Cajal, IRYCIS, Madrid

INTRODUCCIÓN

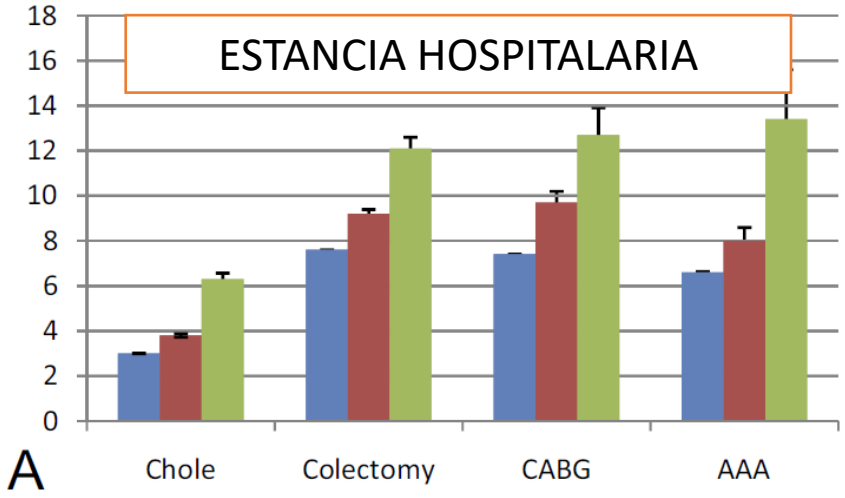


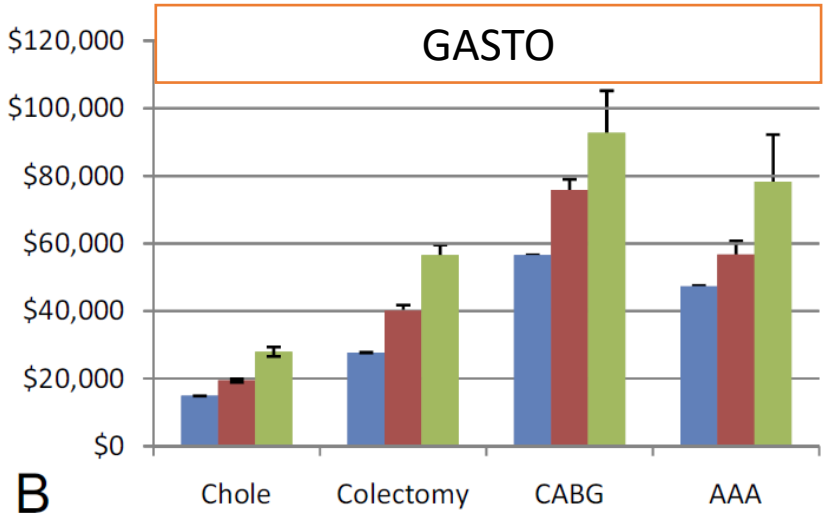


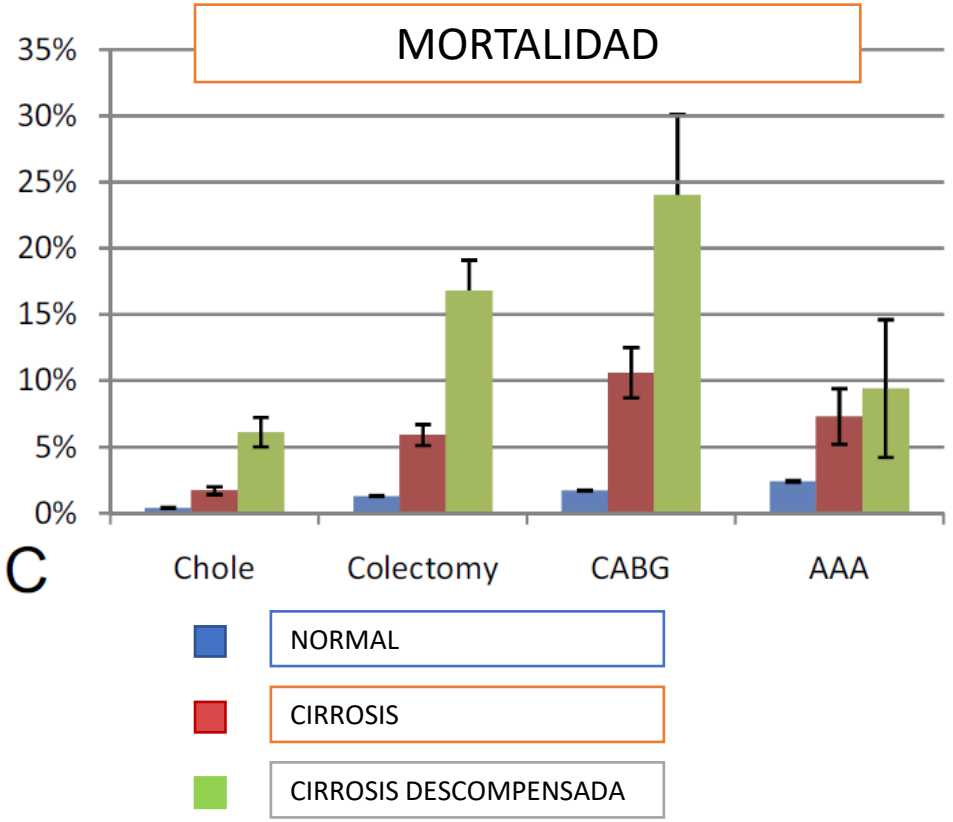




INTRODUCCIÓN



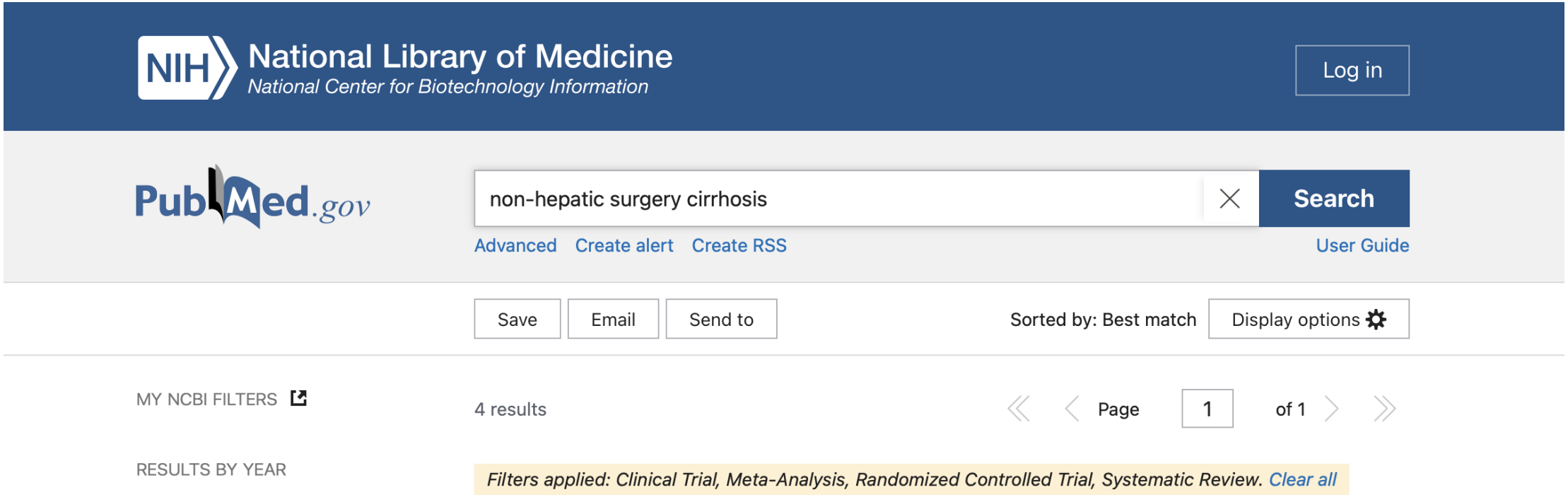




RIESGO QUIRÚRGICO ESTIMADO

ESTIMACIÓN DEL RIESGO QUIRÚRGICO

DIGESTIVO
RAMON Y CAJAL
MADRID



Clinical Gastroenterology and Hepatology 2019;17:595–606

AGA CLINICAL PRACTICE UPDATE

AGA Clinical Practice Update on Surgical Risk Assessment and Perioperative Management in Cirrhosis: Expert Review

Patrick G. Northup,* Lawrence S. Friedman,‡,§ and Patrick S. Kamath¶

ESTIMACIÓN DEL RIESGO QUIRÚRGICO

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BPA 2: In patients considered for surgery, use the CTP score (Child-Pugh class), MELD score, Mayo Postoperative Mortality Risk Score, or another validated risk stratification system. There is no single definitive risk stratification system to determine operative risk in all patients with cirrhosis and we recommend using multiple methods.

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Mortality Rates Associated With Specific Types of Surgery in Patients With Cirrhosis

Type of Surgery	Mortality				
	Overall	Child Class			MELD Score
		A	B	C	
Appendectomy	9%	NA	NA	NA	NA
Cardiac	16–17%	0–3%	42–50%	100%	NA
Cholecystectomy	1–3%	0.5%	3%	NA	<8 = 0% ≥8 = 6%
Colorectal cancer surgery	12.5%	6%	13%	27%	NA
Esophagectomy	17%	NA	NA	NA	NA
Hepatic resection	9%	9%	NA*	NA	<9 = 0% ≥9 = 29%
Major abdominal surgery	26–30%	10%	30–31%	76–82%	NA
Total knee arthroplasty	0%	0%	NA	NA	NA
Treatment of hepatic hydrothorax with talc	39%	NA	NA	NA	NA

ESTIMACIÓN DEL RIESGO QUIRÚRGICO

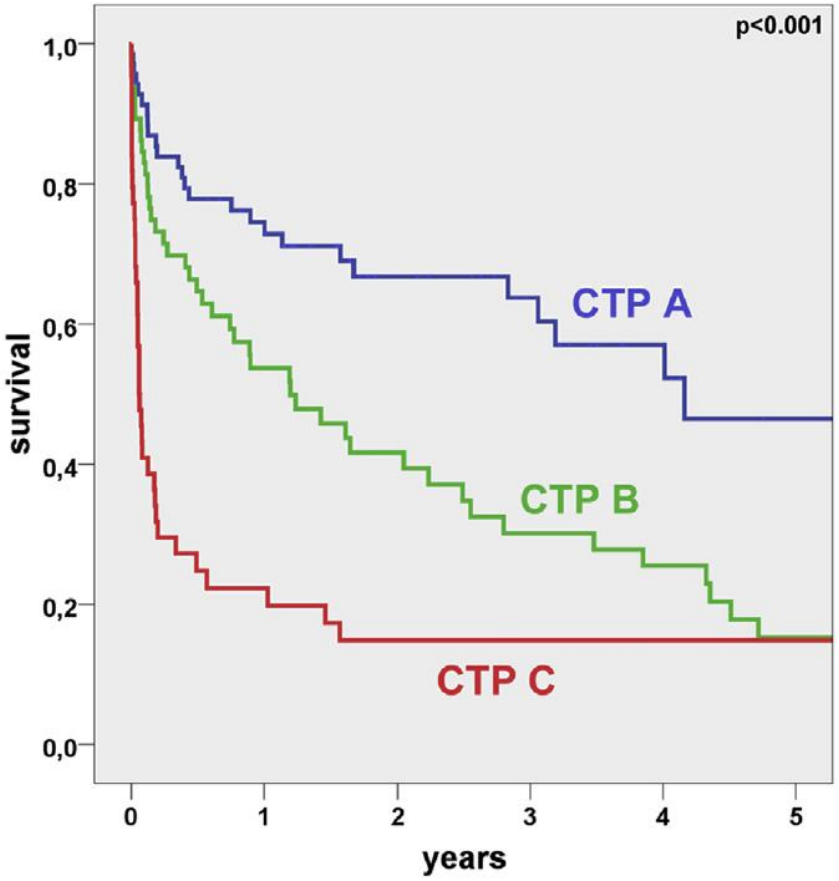

Fig 1. Actuarial survival after general surgery in 180 patients with liver cirrhosis by preoperative CTP classification.

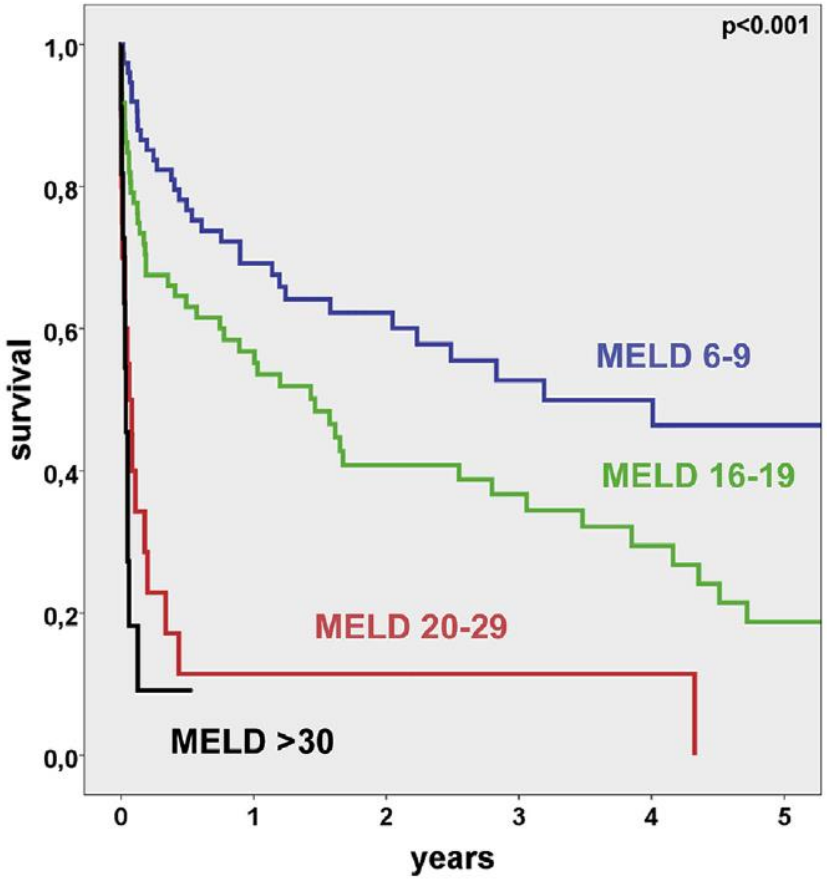

Fig 2. Actuarial survival after general surgery in 180 patients with liver cirrhosis by preoperative MELD classification.

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Post-operative Mortality Risk in Patients with Cirrhosis

To determine the risk of post-operative mortality for all types of major surgery, especially gastro-intestinal, orthopedic and cardiac surgery (includes open-heart procedures), please enter the following variables:

What is the age? [ ]

What is the ASA score? [ ] Enter 3 for compensated cirrhosis
Enter 4 for decompensated cirrhosis

What is the bilirubin? [ ] (mg/dl)

What is the creatinine? [ ] (mg/dl)

What is the INR? [ ]

What is the etiology of cirrhosis? ○ Alcoholic or Cholestatic ○ Viral/Other

Compute

Reset

Mayo Postoperative
Surgical Risk Score;
https://www.mayoclinic.org/medicalprofessionals/model-end-stage-liver-disease/postoperativemortality-risk-patients-cirrhosis

Probability of Mortality

7 days	30 days	90 days	1 year	5 years

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BPA 4: Surgical risk is continuous and there are no absolute cutoff values for excluding patients with cirrhosis from surgical procedures. The patient and the surgical and medical teams caring for the patient must weigh the potential benefits and risks collaboratively. Patients should be referred to a surgical team with experience in the care of patients with cirrhosis and portal hypertension whenever possible. Patients with Child-Pugh class C (CTP score >10) or a MELD score >20 pose a high risk of postoperative decompensation and death. Avoid or delay until after liver transplantation, if possible, all but the most urgent and life-saving procedures in this population.

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Check for updates

ESTIMACIÓN DEL RIESGO QUIRÚRGICO

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Research Article
Cirrhosis

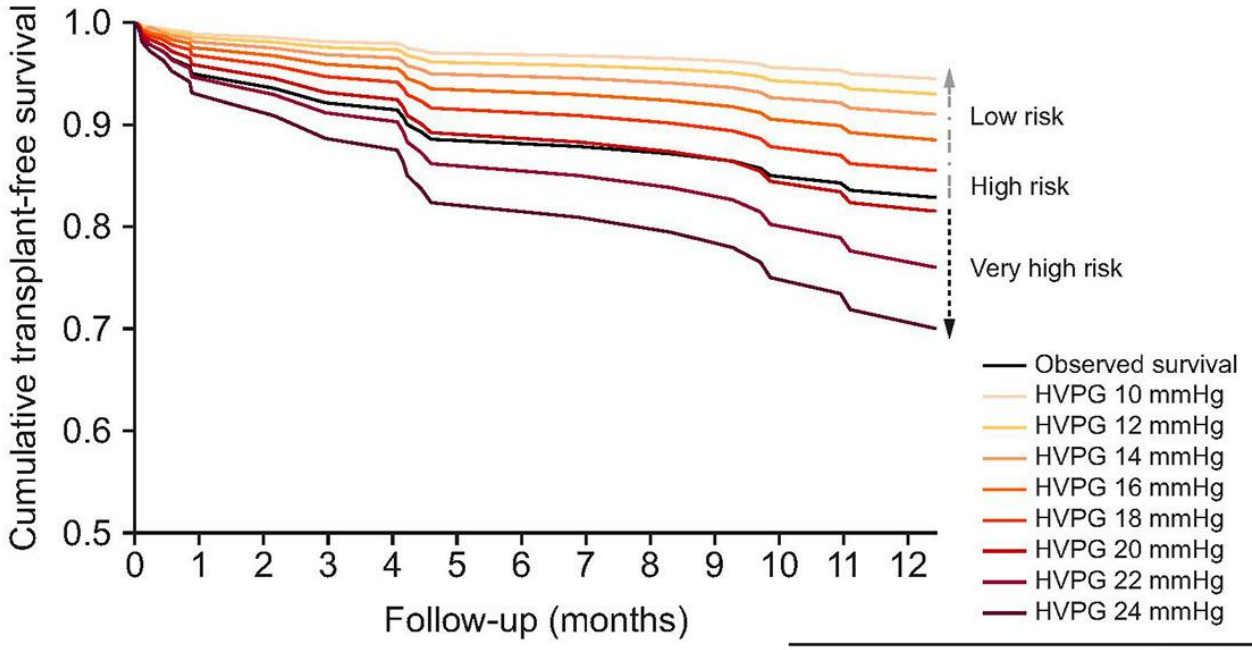
JOURNAL
OF HEPATOLOGY

The prognostic role of hepatic venous pressure gradient in cirrhotic patients undergoing elective extrahepatic surgery

Enric Reverter[1,6], Isabel Cirera[2], Agustín Albillos[3,6], Wilma Debernardi-Venon[4], Juan G. Abraldes[1,6], Elba Llop[1,6], Alexandra Flores[1,6], Graciela Martínez-Palli[5], Annabel Blasi[5], Javier Martínez[3,6], Fanny Turon[1,6], Juan Carlos García-Valdecasas[8], Annalisa Berzigotti[1,6], Antoni M. de Lacy[7], Josep Fuster[8], Virginia Hernández-Gea[1,6], Jaume Bosch[1,6], Joan Carles García-Pagán[1,6,*]

[1]*Barcelona Hepatic Hemodynamic Laboratory, Liver Unit, Hospital Clínic, Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), University of Barcelona, Spain;* [2]*Gastroenterology and Hepatology, Hospital del Mar, Barcelona, Spain;* [3]*Gastroenterology and Hepatology, Hospital Universitario Ramón y Cajal, Instituto Ramón y Cajal de Investigación Sanitaria (IRYCIS), University of Alcalá, Madrid, Spain;* [4]*Department of Gastroenterology, Molinette Hospital, Torino, Italy;* [5]*Anesthesiology Department, Hospital Clínic, IDIBAPS, University of Barcelona, Spain;* [6]*Centro de Investigaciones Biomédicas en Red de Enfermedades Hepáticas y Digestivas (CIBERehd), Spain;* [7]*Gastrointestinal Surgery Department, Hospital Clínic, IDIBAPS, University of Barcelona, Spain;* [8]*Hepatobiliary and Pancreatic Surgery Department, Hospital Clínic. IDIBAPS, University of Barcelona, Spain*

Modifying effects of HVPG on post-surgical mortality (ASA & surgery adjusted)



- Prospective study on elective surgery in cirrhosis
- HVPG measurement prior to surgery, n = 140
- 1-year follow-up → 17% (n = 24) mortality or Tx

Prognostic variables

	HR (95% CI)
ASA class	**III: 2.98** (0.7-13.2)
	IV: 9.97 (2.0-50.4)
High-risk surgery (CV & open Abd)	**3.65** (1.4-9.3)
HPVG (mmHg)	**1.14** (1.05-1.25)

¿DE QUÉ?

¿CUÁNDO?

¿A QUIÉN?

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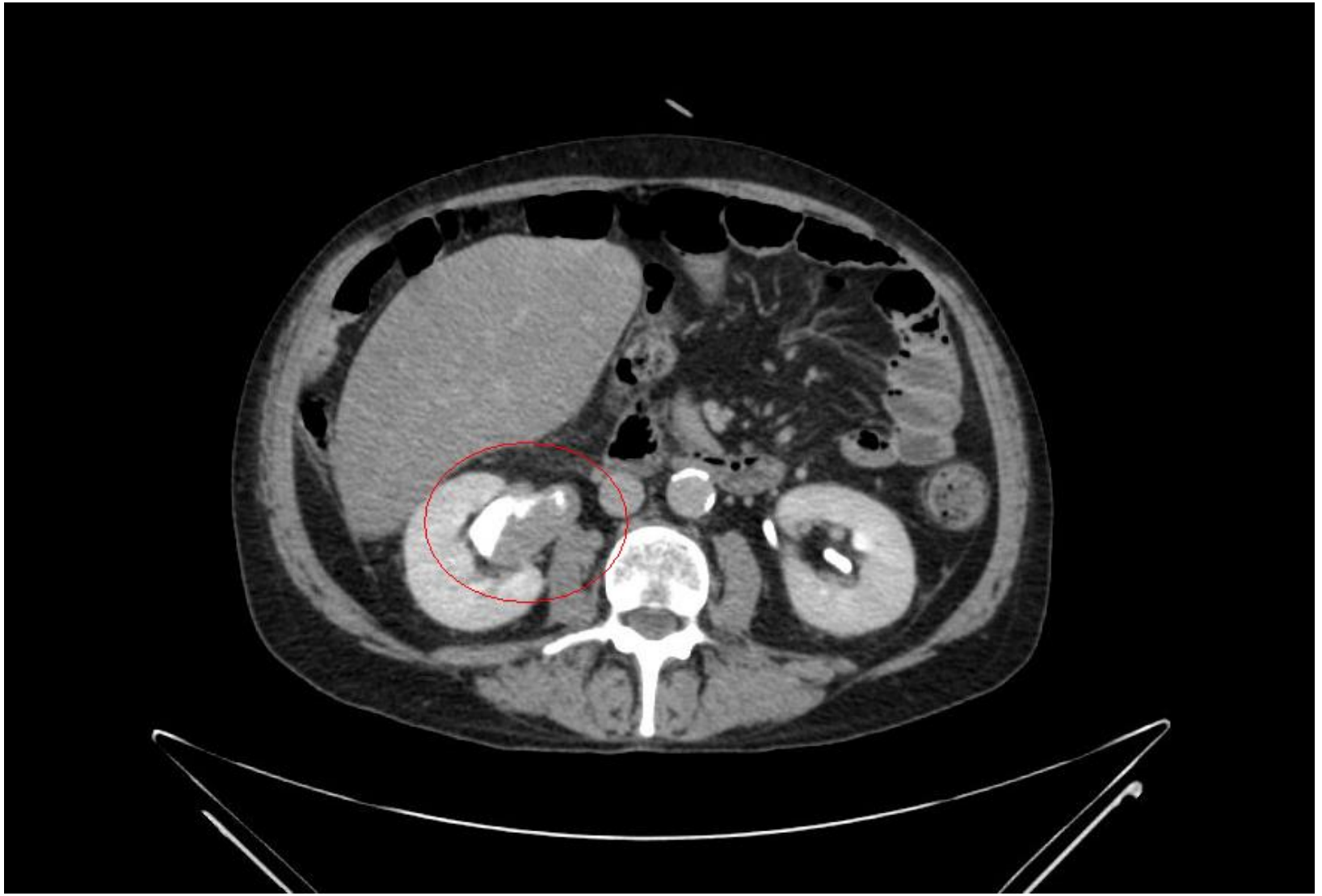
Caso 1.

Varón de 61 años con cirrosis de origen enólico diagnosticada en 2016 con signos de HTP. Como descompensaciones:

1. Ascitis controlada con diuréticos. Última descompensación hidrópica en marzo de 2016.
2. No hemorragia por varices esofágicas.
3. No encefalopatía hepática.
4. No PBE.

Analítica:

Creatinina 0.65 Na 137 K 4.3 BT: 1.36 GOT: 33 GPT: 16 GGT: 150
Alb: 2.7 ProtT: 6.2
Hb 12.6 VCM: 110; Plaq: 154.000 Leucos: 7590 N 5000
AP 57.9% INR 1.37



CASO CLÍNICO

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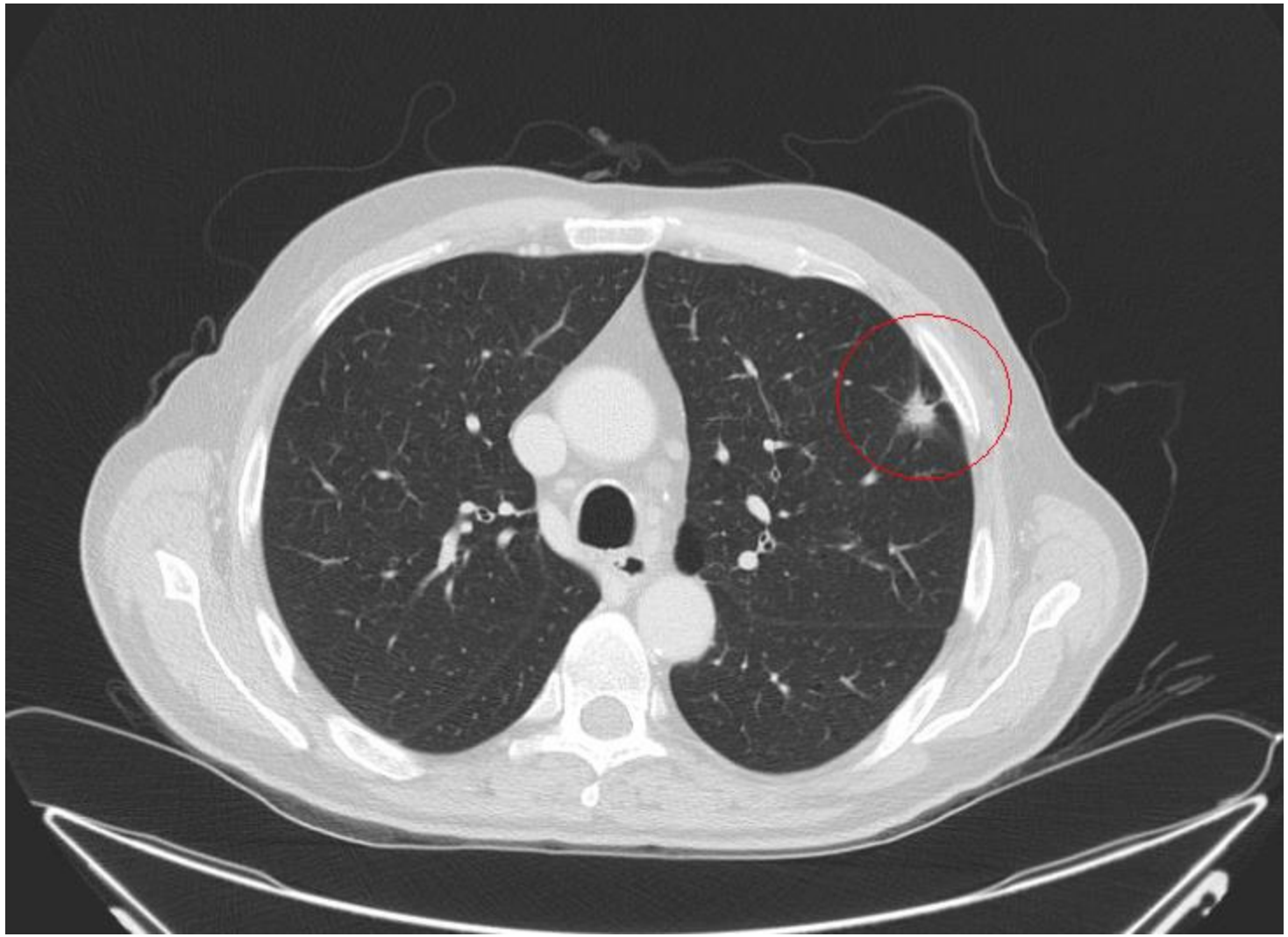

Caso 1.

El paciente es presentado en Comité de Tumores (Urología y Oncología Médica).

Es desestimado para cirugía y quimioterapia.

Se recomienda tratamiento paliativo.

El paciente ingresa en el servicio de Gastroenterología y Hepatología por absceso rectal y descompensación hidrópica.

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Caso 2.

Varón de 67 años con cirrosis de origen enólico diagnosticada en 2016 con signos de HTP. Como descompensaciones:

1. Ascitis que requiere paracentesis evacuadora en 2017.
2. No varices esofágicas.
3. No encefalopatía hepática.
4. No PBE.

Analítica:

Creatinina 0.65 Na 132 K 4.3 BT: 0.53 GOT: 22 GPT: 16 GGT: 150
Alb: 3.1 ProtT: 7.2
Hb 11.6 VCM: 78; Plaq: 89.000 Leucos: 6290 N 4000
AP 81.0% INR 1.17

CASO CLÍNICO

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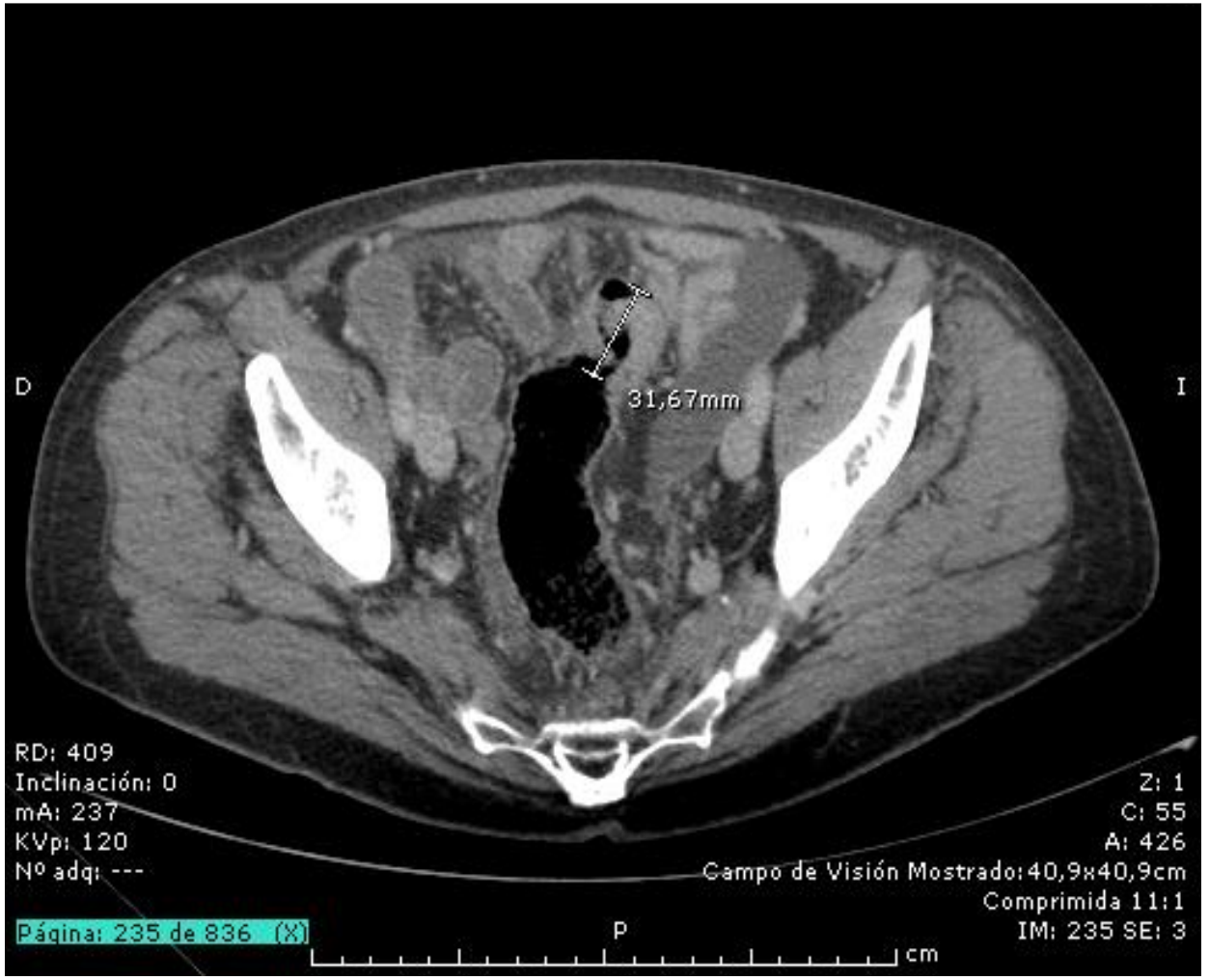

“Cirugía en la cirrosis e hipertensión portal”

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Caso 3

Mujer de 74 años. Cirrosis descompensada Child C10. Ascitis de difícil control, ingresa por HDA por varices esofágicas.

Dolor abdominal + Murphy: colecistitis aguda.

Mala evolución clínica y analítica con tratamiento antibiótico.

CASO CLÍNICO

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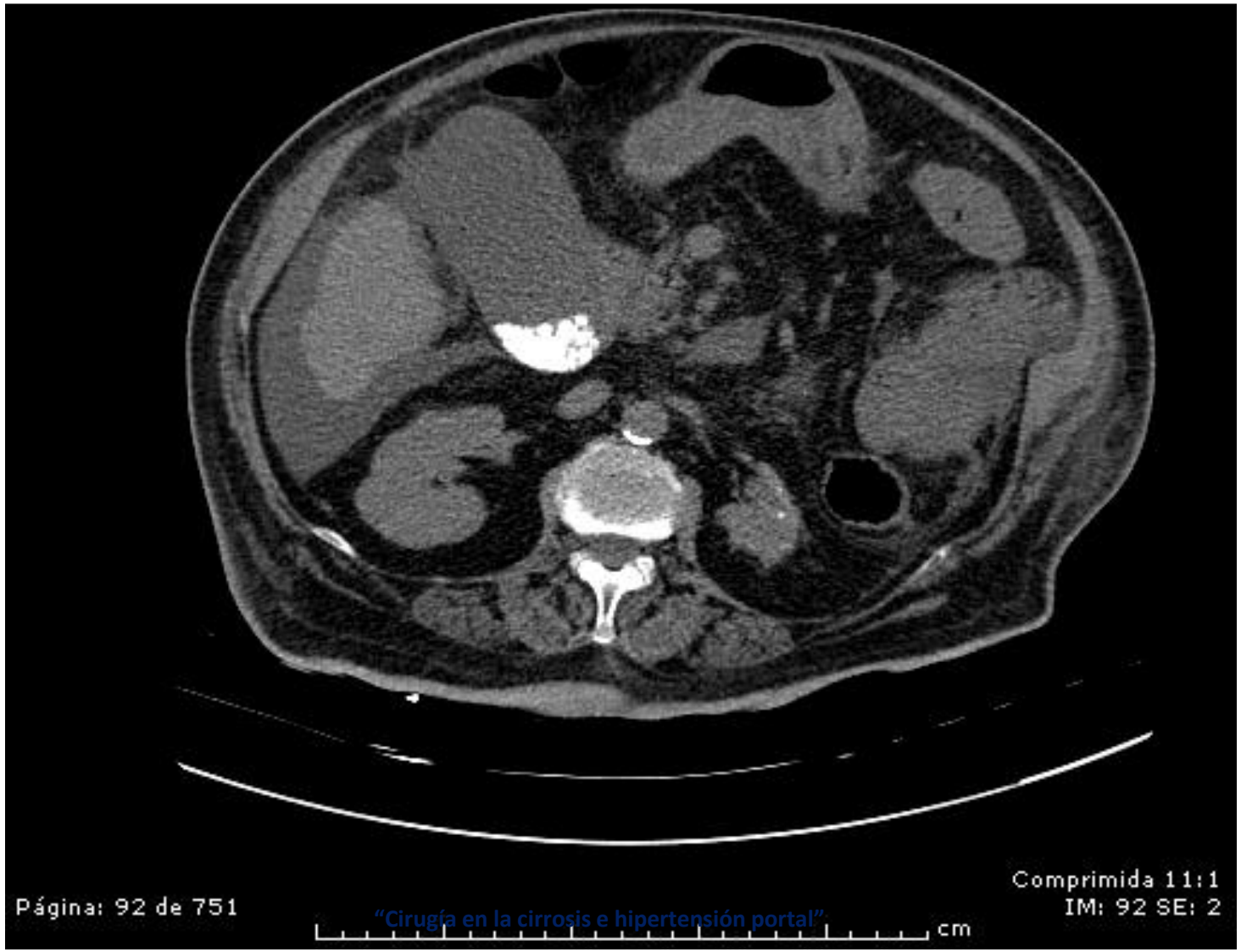

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Caso 4.

Varón de 57 años con cirrosis de origen enólico.Como descompensaciones:

1. Hepatitis alcohólica grave (Maddrey>32) Oct 2017
2. Encefalopatía hepática grado IV con ingreso en UVI e IOT
3. Neumonía nosocomial en Nov 2017
4. Celulitis infecciosa en Dic 2017

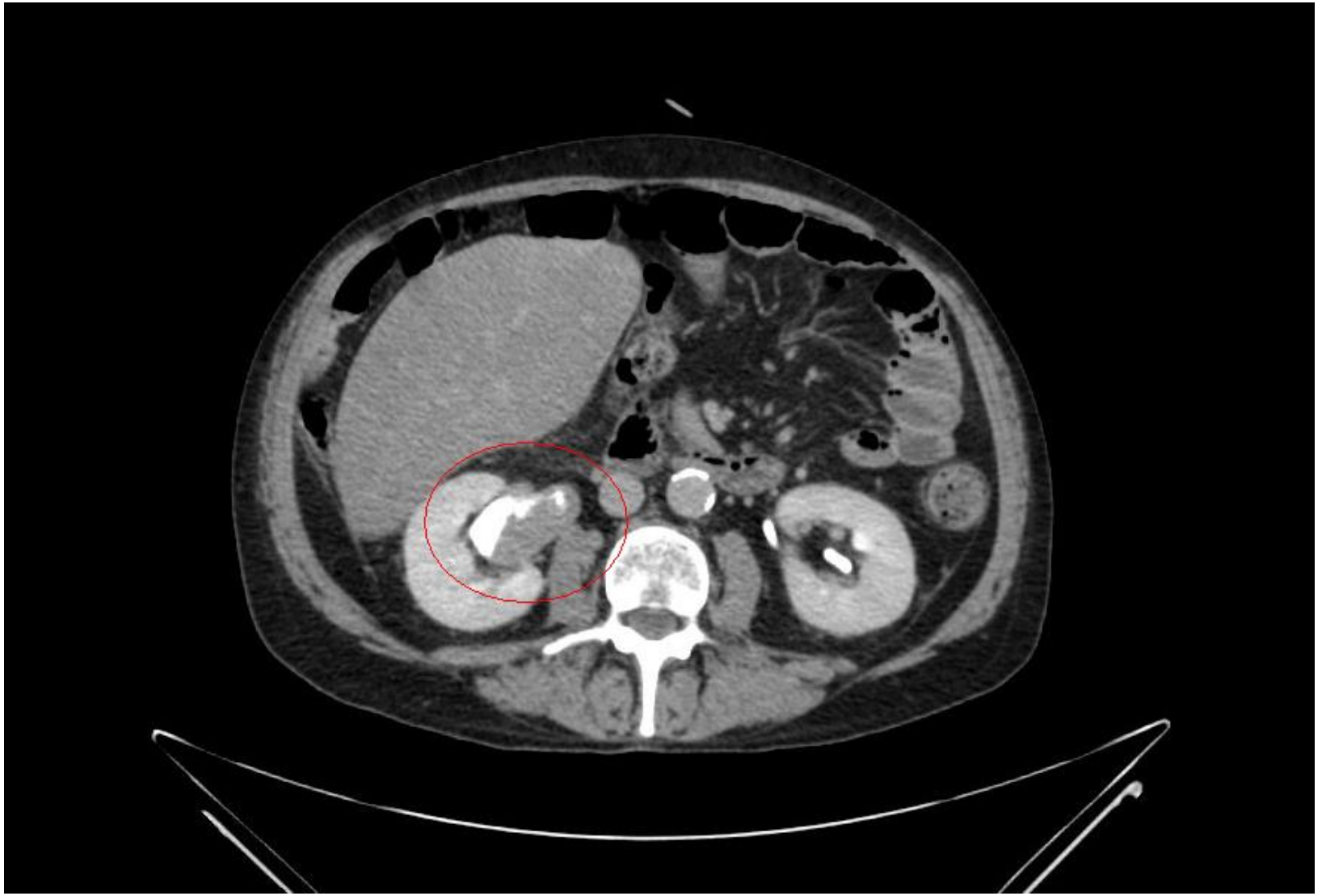
Analítica:

Creatinina 1.35 Na 128 K 3.3 BT: 12.3 GOT: 122 GPT: 56 GGT: 750

Alb: 2.1 ProtT: 4.5

Hb 8.6 VCM: 120; Plaq: 59.000 Leucos: 2340 N 910

AP 36.0% INR 1.83



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Caso 5.

Varón de 56 años con cirrosis asociada al VHC tratado con AAD y RVS. Nunca descompensaciones previas.

1. Varices esofágicas pequeñas sin puntos rojos.
2. Rotura del velo de la válvula mitral con IM grave
3. No hipertensión pulmonar ni cardiopatía isquémica
4. Pendiente de cirugía de recambio valvular

Analítica:

Creatinina 0.72 Na 134 K 3.8 BT: 2.3 GOT: 31 GPT: 22 GGT: 80

Alb: 2.9 ProtT: 6.5

Hb 13.6 VCM: 83; Plaq: 98.000 Leucos: 5230 N 2910

AP 68.0% INR 1.27

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SELECCIÓN

CIRUGÍA URGENTE, ¿QUÉ HACEMOS?

ALTERNATIVAS

SEGUIMIENTO POSTERIOR

TIPO CIRUGÍA

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CIRUGÍA ELECTIVA

ETIOLOGÍA

DESCOMPENSACIONES

NUTRICIÓN

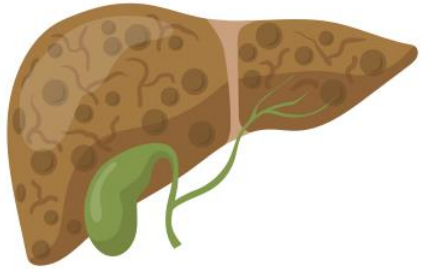
SARCOPENIA

ENCEFALOPATÍA MÍNIMA

ALTERACIONES COAGULACIÓN

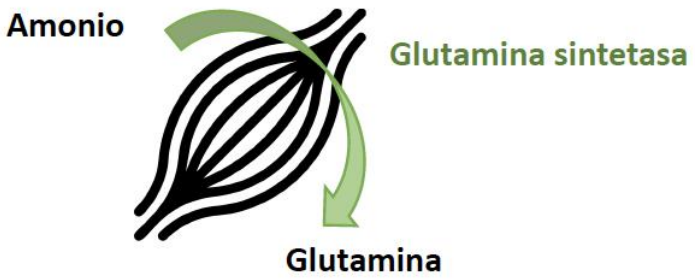
TIPS

CIRROSIS:
Disfunción hepatocelular
Shunts portosistémicos



AYUNO ACELERADO:
Gluconeogénesis a partir de las 12h de ayuno
(vs. 48-72h en persona sana).
Consumo de lípidos y proteínas
(75% del sustrato)

Disminución de testosterona, GH/IGF-1
Disfunción mitocondrial
Menor actividad física



Proteolisis
SARCOPENIA
Complicación más frecuente
del cirrótico (60%)
Morbimortalidad

114.703 pacientes cirróticos ingresados entre 1998-2004.

- Malnutrición (PCM) es **más frecuente** en cirróticos: 6,1% vs. 1,9%.
- **Enolismo** aumenta el riesgo de PCM en los cirróticos OR 1,81 (1,7-1,94).

Sam J. Liver Int. 2009

PCM en la cirrosis se asocia a mayor riesgo de:

- Ascitis (64% vs. 48%)
- SHR (5,1% vs. 2,8%)
- Mortalidad: mortalidad hospitalaria cruda 14,1% vs 7,5%. Ajustada por factores de confusión OR 1,76 (1,6-1,94).

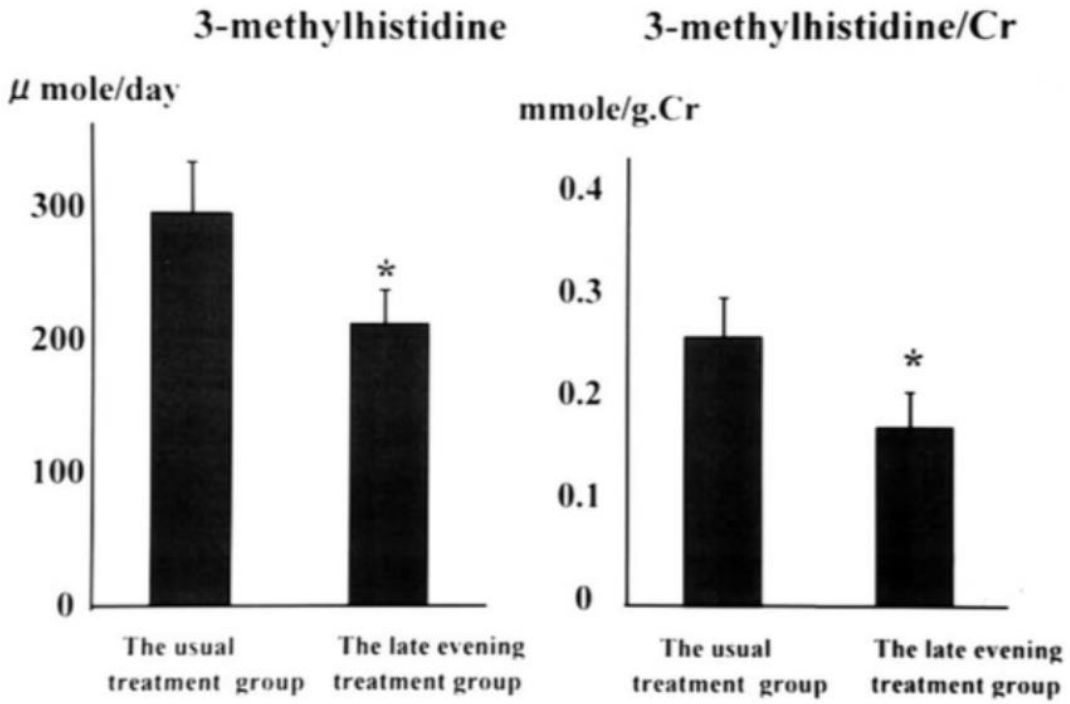
Mayor frecuencia de **complicaciones** en cirróticos malnutridos:

- Outcome compuesto (ascitis, hemorragia variceal, encefalopatía): 65% vs. 11%.
- Child A malnutridos: **20,7% mortalidad** a 1 año.

Alvares-da-Silva M. Nutrition 2005

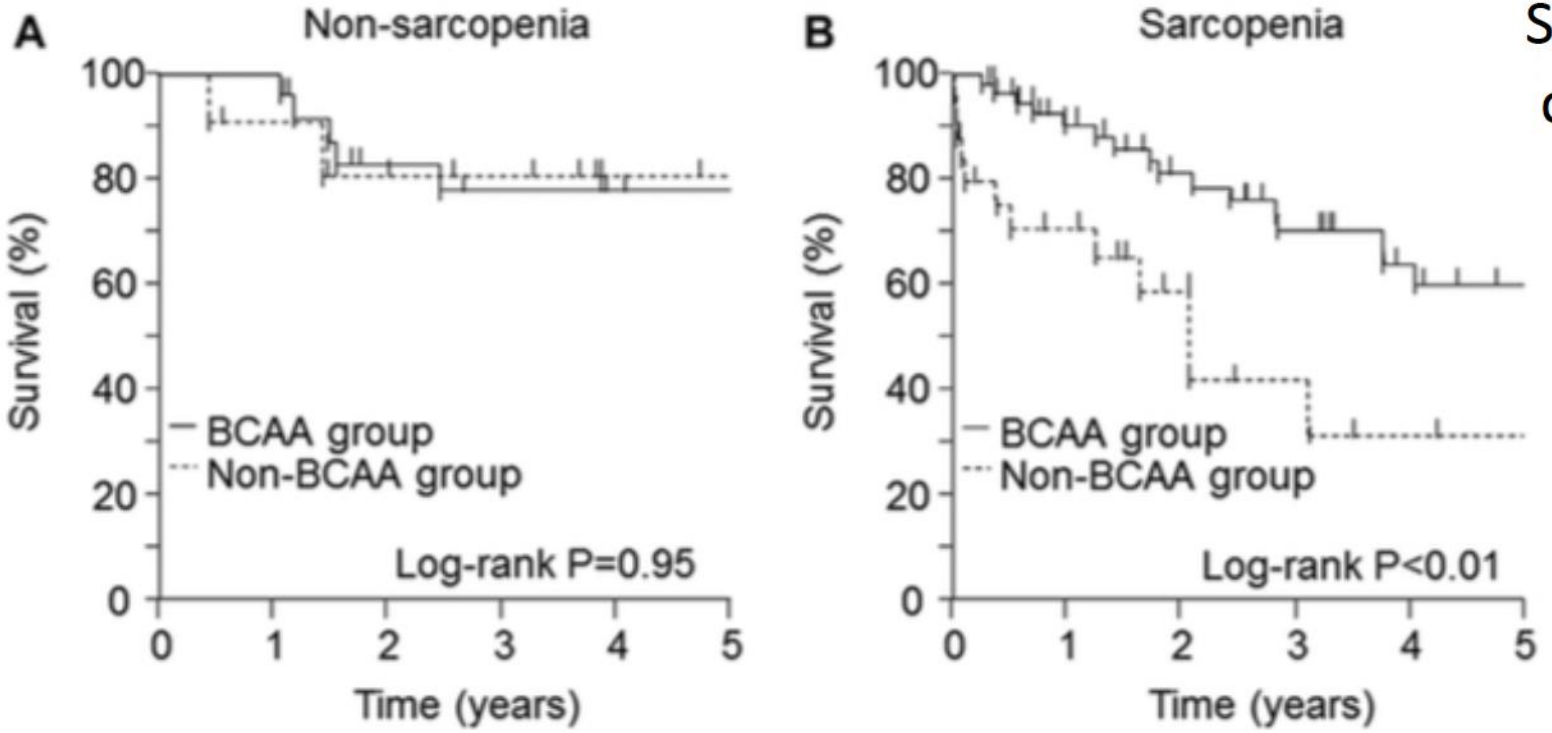
En el cirrótico se produce de forma precoz un aumento del **consumo de reservas proteicas** con intención de suministrar sustrato para la gluconeogénesis.

Disminuir el periodo postpandrial durante el mayor ayuno del cirrótico. **SNACK NOCTURNO**



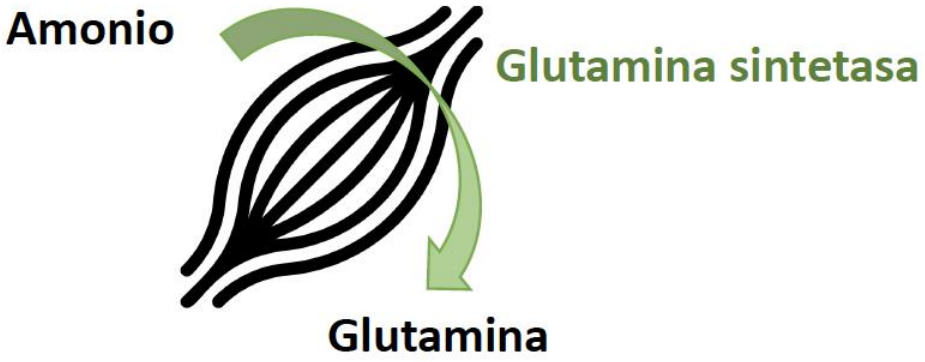
Disminución en 3-metilhistidina urinaria (producto del catabolismo proteico) en pacientes con suplementos calórico-proteicos (***Aminoleban EN***).
Medida indirecta de **menor proteólisis**.

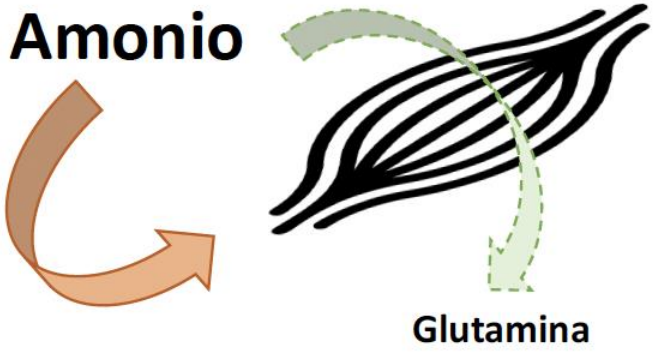
Tsien C. J Gastroenterol Hepatol. 2012.
Yamauchi M. Hepatol Res. 2001



Suplementar con BCAA a pacientes con cirrosis y sarcopenia aumenta la **supervivencia a largo plazo**.

Hanai T. Nutrition. 2014





ECA en India. 120 pacientes aleatorizados a recibir soporte nutricional durante 6 meses vs. No cambios dietéticos:

- 30-35 kcal/kg de peso ideal
- 1-1,5g/kg de peso ideal de proteínas vegetales.

Resultados:

- **Reducción de EH mínima** (PHES) 71,1% vs. 22,8%
- **Incremento de la calidad de vida** (SIP) 3,24+/-3,63 vs. 0,54 +/-3,58
- **Menor riesgo de desarrollar EH clínica** 10% vs. 21,7%

Ventaja de proteína vegetal: mayor contenido en fibra. Efecto prebiótico y laxante.

Maharshi S. Clin Gastroenterol Hepatol. 2016.

ENCEFALOPATÍA

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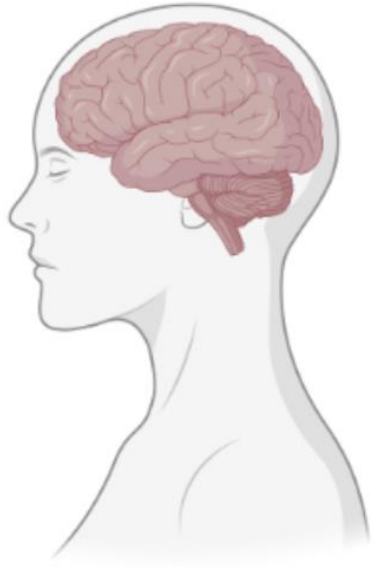
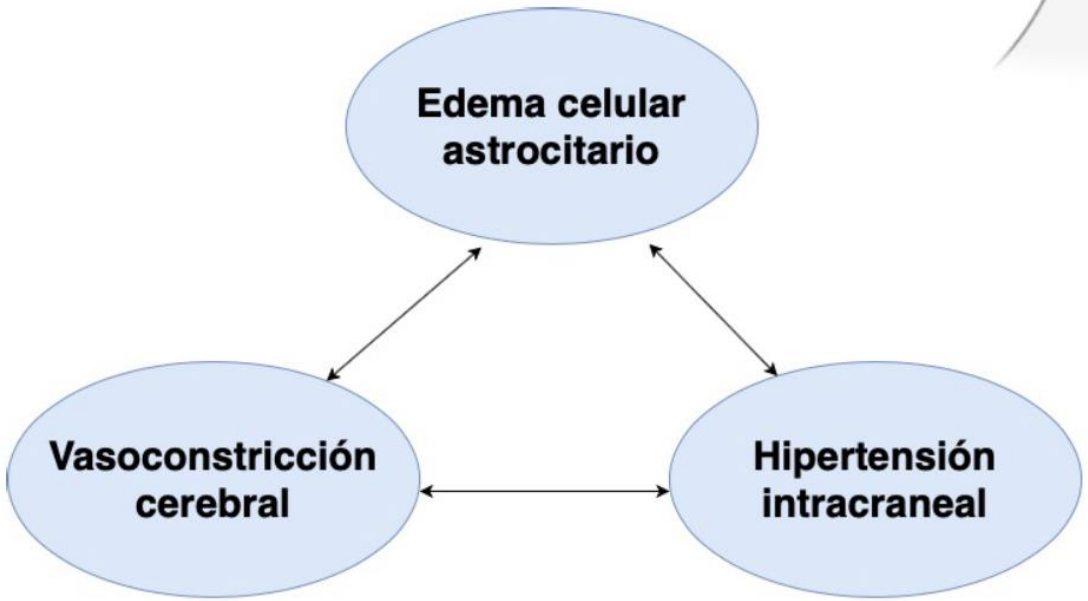
NH_3

Glutamina sintetasa

NH_3 + Glutamato → Glutamina





INFLAMACIÓN

Alteración de la BHE.
TNF e IL-6 aumenta la difusión del amonio a los astrocitos.
ROS, lactato.

- Efecto neuroinhibidor (GABA)
- Senescencia celular y apoptosis, ¿totalmente reversible con TOH?

Wright G, Noiret L, et al. Liver Int. 2011.
Romero-Gómez, Montagnese S. J. Hepatol. 2015.
Davis B, Bajaj J. Semin Liver Dis. 2017.

Gastroenterology 2021;161:1615–1627

CLINICAL PRACTICE GUIDELINES

AGA Clinical Practice Guideline on the Management of Coagulation Disorders in Patients With Cirrhosis

Robert S. O'Shea,[1] Perica Davitkov,[2] Cynthia W. Ko,[3] Anita Rajasekhar,[4] Grace L. Su,[5,6] Shahnaz Sultan,[7] Alina M. Allen,[8] and Yngve Falck-Ytter[2]

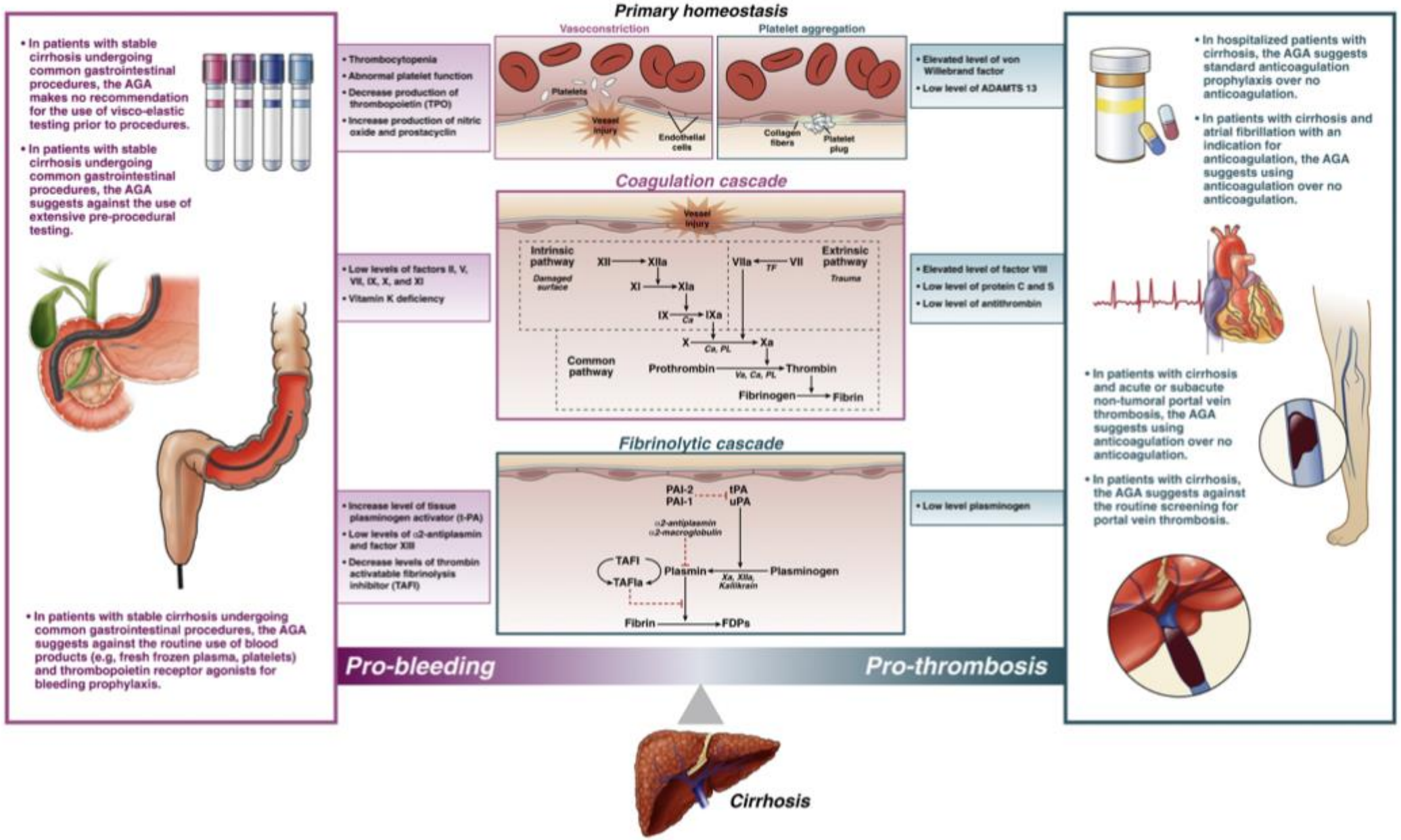
aga American Gastroenterological Association

Gastroenterology Spotlight

Spotlight: Management of Coagulation Disorders in Patients With Cirrhosis

Perica Davitkov, MD[1]; Cynthia W. Ko, MD, MS[2]; Shahnaz Sultan, MD[3]

COAGULACIÓN



COAGULACIÓN

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	PICO Question	Patient Population	Recommendations	Strength of Recommendation	Quality of Evidence	Comments
1	What testing strategy for bleeding risk assessment is most beneficial for patients with cirrhosis?					
1a	Should visco-elastic testing be performed in patients with cirrhosis prior to procedures?	Patients with stable cirrhosis undergoing common gastrointestinal procedures (paracentesis, thoracentesis, variceal banding, colonic polypectomy, ERCP, liver biopsy)	The AGA makes no recommendation regarding visco-elastic testing prior to procedures to predict bleeding risk (knowledge gap)	No recommendation	Knowledge gap	
1b	Should PLT and PT/INR testing be done prior to procedures to prevent procedure related bleeding?	Patients with stable cirrhosis (with known baseline abnormal coagulation parameters) undergoing common gastrointestinal procedures (paracentesis, thoracentesis, variceal banding, colonic polypectomy, ERCP, liver biopsy)	The AGA suggests against the use of extensive pre-procedural testing, including repeated measurements of PT/ INR or platelet count	Conditional	Very low	
2	Does pre-procedure prophylaxis to correct coagulation parameters and/or platelet level reduce the risk of bleeding in patients with cirrhosis?					
2a	Should platelet and/or fresh frozen plasma (FFP) transfusions be given to patients with cirrhosis prior to procedures to prevent procedure related bleeding?	Patients with stable cirrhosis undergoing common gastrointestinal procedures (paracentesis, thoracentesis, variceal banding, colonic polypectomy, ERCP, liver biopsy)	The AGA suggests against the routine use of blood products (e.g., fresh frozen plasma, platelets) for bleeding prophylaxis	Conditional	Very low	*This recommendation applies to the majority of patients with stable cirrhosis who usually do not have severe thrombocytopenia or severe coagulopathy. In patients with severe derangements in coagulation or thrombocytopenia undergoing a procedure that is high-risk for bleeding, decisions about prophylactic blood transfusions should include discussions about potential benefits and risks (including transfusion reactions and delay of procedure) in consultation with a hematologist.*
2b	Should thrombopoietin receptor agonists (TPO-RA) be given to patients with cirrhosis and thrombocytopenia prior to procedures to prevent procedure-related bleeding?	Patients with thrombocytopenia and stable cirrhosis undergoing common procedures (and in particular, "low risk" procedures)	The AGA suggests against the routine use of thrombopoietin receptor agonists for bleeding prophylaxis	Conditional	Very low	*Patients who place a high value on the uncertain reduction of procedural bleeding events and a low value on the increased risk for portal vein thrombosis may reasonably select a thrombopoietin receptor agonist.*
3	Is venous thromboembolism prophylaxis with anticoagulation indicated in hospitalized patients with cirrhosis?	Hospitalized patients with cirrhosis and who otherwise meet standard guidelines for the use of venous thromboembolism prophylaxis	The AGA suggests standard anticoagulation prophylaxis over no anticoagulation	Conditional	Very low	
4	Should patients with cirrhosis be screened for portal vein thrombosis?	Patients with cirrhosis	The AGA suggests against routine screening for portal vein thrombosis	Conditional	Very low	*Patients who put a high value on the uncertain benefits of portal vein thrombosis screening and a low value on the potential downsides and harms related to treatment would reasonably select screening. This does not apply to patients who are listed for liver transplantation.*
5	What, if any, specific therapies should be offered for treatment of portal vein thrombosis in patients with cirrhosis: low molecular weight heparin, direct-acting oral anticoagulants, or vitamin K antagonists?	Patients with cirrhosis and acute or subacute non-tumoral portal vein thrombosis	The AGA suggests using anticoagulation over no anticoagulation for treatment of portal vein thrombosis	Conditional	Very low	*Patients who put high value on the bleeding risk on anticoagulation and lower value on uncertain benefits of anticoagulation would reasonably choose no anticoagulation.*
6	In patients with atrial fibrillation and cirrhosis, is anticoagulation safe and effective?	Patients with cirrhosis and atrial fibrillation with an indication for anticoagulation	The AGA suggests using anticoagulation over no anticoagulation	Conditional	Very low	*Patients, particularly those with more advanced cirrhosis (Child-Turcotte-Pugh class C) and or low CHA2DS2-VASC scores who put high value on avoiding the bleeding risk on anticoagulation and lower value on the stroke reduction, would reasonably choose no anticoagulation.*

[1]Division of Gastroenterology and Hepatology, VA Northeast Ohio Health Care System, Case Western Reserve University School of Medicine, Cleveland, Ohio; [2]Division of Gastroenterology, University of Washington, Seattle Washington; [3]Division of Gastroenterology, Hepatology, and Nutrition, University of Minnesota

COAGULACIÓN

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	PICO Question	Patient Population	Recommendations	Strength of Recommendation	Quality of Evidence	Comments
1	What te…					
1a	Should … patients					
1b	Shoul… prior to					
2	Does pr…					
2a	Should … (FFP) tra… cirrho…					…usually do not …derangements in …eding, decisions …l benefits and …h a hematologist.
2b	Should… (TPO-RA… and thr… to pre…					…g events and a …l a
3	Is venc… wi… hosp…					
4	Should …					…screening and …asonably select
5	What, … offered for treatment of portal vein thrombosis in patients with cirrhosis: low molecular weight heparin, direct-acting oral anticoagulants, or vitamin K antagonists?	Patients with cirrhosis and acute or subacute non-tumoral portal vein thrombosis	anticoagulation over no anticoagulation for treatment of portal vein thrombosis	Conditional	Very low	…lue on uncertain
6	In patients with atrial fibrillation and cirrhosis, is anticoagulation safe and effective?	Patients with cirrhosis and atrial fibrillation with an indication for anticoagulation	The AGA suggests using anticoagulation over no anticoagulation	Conditional	Very low	*Patients, particularly those with more advanced cirrhosis (Child-Turcotte-Pugh class C) and or low CHA2DS2-VASC scores who put high value on avoiding the bleeding risk on anticoagulation and lower value on the stroke reduction, would reasonably choose no anticoagulation.*

Recomendación	Población
No recuento de plaquetas e INR sistemático	Cirróticos estables Exploraciones convencionales ¿Cirugía?
No transfusión de plaquetas o plasma de rutina	
No uso de agonistas del receptor trombopoyetina	

[1]Division of Gastroenterology and Hepatology, VA Northeast Ohio Health Care System, Case Western Reserve University School of Medicine, Cleveland, Ohio; [2]Division of Gastroenterology, University of Washington, Seattle Washington; [3]Division of Gastroenterology, Hepatology, and Nutrition, University of Minnesota

¿HAY QUE PONER UN TIPS ANTES DE LA CIRUGÍA?

TIPS PREVIO A CIRUGÍA

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BPA 5: TIPS is not routinely recommended before surgical procedures in patients with cirrhosis and portal hypertension with abdominal collaterals. Small uncontrolled case series have demonstrated the ability to decompress collateral vessels with TIPS preoperatively in patients requiring deep pelvic and colonic resections; however, the absolute benefit of TIPS over conservative management is not established.

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Conceptualmente:

- TIPS reduce la presión portal y disminuye el riesgo de sangrado
- Mejora parámetros hemodinámicos en pacientes seleccionados
- Mejora la perfusión renal en pacientes seleccionados
- Reduce la ascitis
- Reduce el riesgo de descompensación
- “two-steps strategy”

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AUTOR	Nº	TIPO	BENEFICIO
Gil A. Eur J Sur Oncol 2004	3	Gástrica, colon y páncreas	Sí
Schlenker C Surg Endos 2009	7	Gástrica, colon, urológ y gineco.	Sí
Kim JJ Clin Gastroenterol 2009	25	Abdominal y torácica	Sí
Vinet E Canad J Gastroent 2006	18	Abdominal	No

El único con grupo control

Journal of Gastrointestinal Surgery
https://doi.org/10.1007/s11605-018-4053-x

ORIGINAL ARTICLE

Original Study: Transjugular Intrahepatic Portosystemic Shunt as a Bridge to Abdominal Surgery in Cirrhotic Patients

N. Tabchouri[1,2] · L. Barbier[1,2] · B. Menahem[3] · J.-M. Perarnau[4] · F. Muscari[5] · N. Fares[6] · L. D'Alteroche[4] · P.-J. Valette[7] · J. Dumortier[7] · A. Alves[3] · J. Lubrano[3] · C. Bureau[6] · Ephrem Salamé[1,2]

Received: 18 July 2018 / Accepted: 8 November 2018

TIPS PREVIO A CIRUGÍA

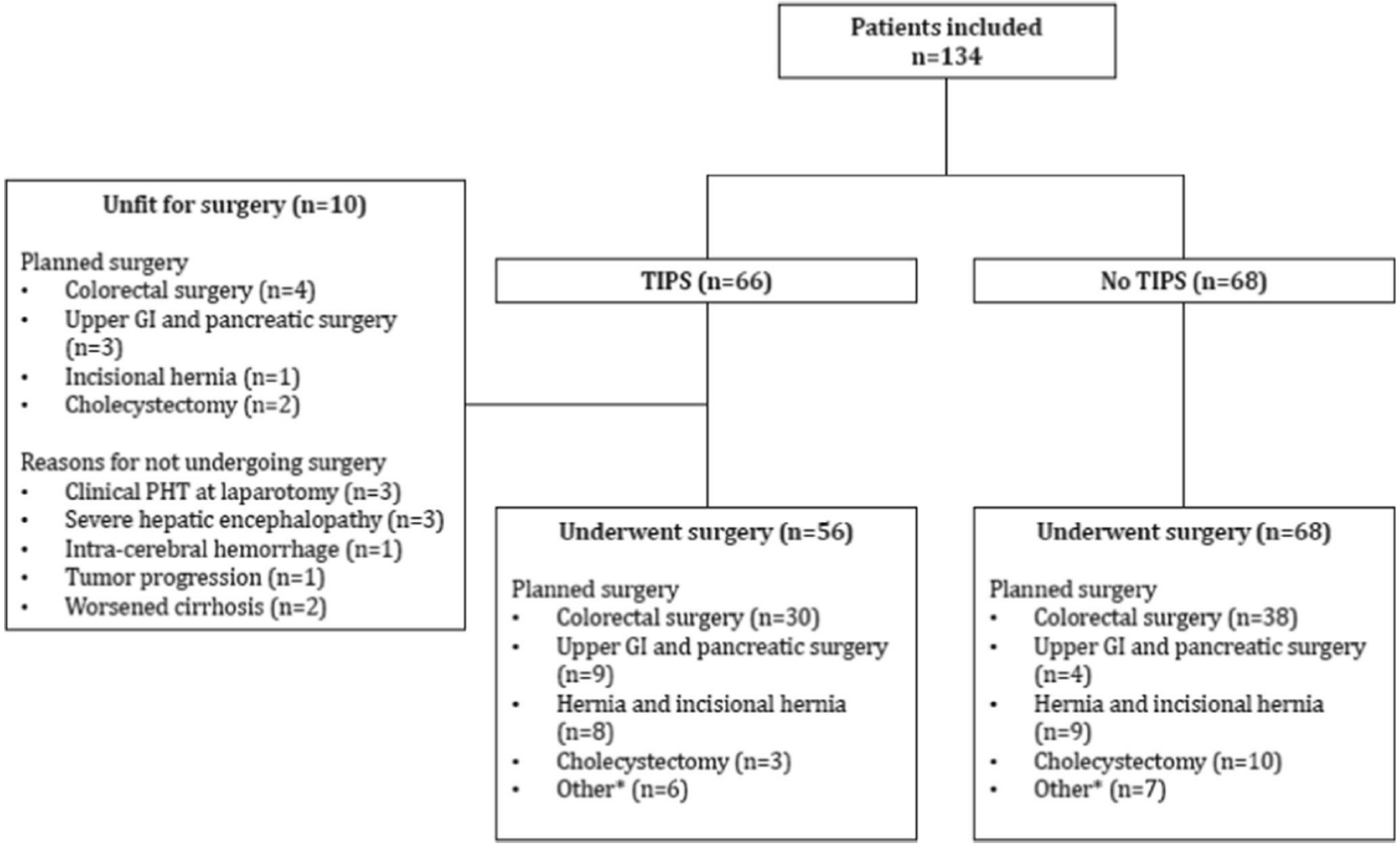

Fig. 1 Flow Chart. TIPS transjugular intrahepatic portosystemic shunt, PHT portal hypertension, GI gastrointestinal, Other* includes abdominal non-digestive surgical procedures (vascular and urological surgeries)

Table 3 Postoperative outcome analysis of TIPS and no-TIPS groups using IPTW

	TIPS ($n = 56$)	No TIPS ($n = 68$)	HR	IC 95%	p
30-day postoperative mortality, n (%)	1 (1.8)	2 (3)	0.650	0.260–1.780	0.355
90-day postoperative mortality, n (%)	4 (7.5)	5 (7.8)	0.720	0.180–2.920	0.644
Severe postoperative complications, n (%)	10 (17.9)	16 (23.2)	0.670	0.270–1.680	0.392
ICU stay, n (%)	17 (31.5)	17 (24.6)	1.070	0.407–2.420	0.878
Postoperative sepsis, n (%)	19 (33.9)	22 (32.4)	0.920	0.410–2.020	0.828
Perioperative RBC transfusion requirement, n (%)	17 (30.4)	9 (13.2)	1.940	0.640–5.890	0.240
Intraoperative RBC transfusion requirement, n (%)	11 (20.4)	6 (9)	1.960	0.650–5.910	0.232
Postoperative hemorrhage, n (%)			1.230	0.410–3.720	0.716
• Intra-abdominal	13 (23.2)	5 (7.4)			
• Digestive	2 (3.6)	4 (5.9)			
Redo surgery, n (%)	9 (16.4)	9 (13.2)	1.060	0.370–3.040	0.909
Postoperative ascites, n (%)	11 (20.4)	26 (38.2)	0.330	0.140–0.780	*0.012*
Postoperative hepatocellular insufficiency, n (%)	8 (14.5)	2 (2.9)	4.460	0.870–22.860	0.073
CP delta	2.0 (− 2.0–8.0)	1.0 (− 2–8)	2.030	0.940–4.380	0.072
MELDNa delta	4.1 (− 5.7–31.9)	1.3 (− 7.7–18.4)	2.320	1.020–5.280	*0.046*

Propensity score was calculated using MELDNa score, CP score, and presence of ascites at initial assessment as well as type of surgery

p values were written in italic characters when they were considered significant ($p<0.005$)

MELDNa model for end-stage liver disease with sodium serum value incorporated, *CP* Child-Pugh score, *ICU* intensive care unit, *RBC* red blood cells

TIPS PREVIO A CIRUGÍA

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Conclusions Preoperative TIPS placement yielded an 85% operability rate with satisfying postoperative outcomes. No significant differences were found between TIPS and no-TIPS groups in terms of severe postoperative complications and mortality, although TIPS patients probably had worse initial portal hypertension.

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Resultados TIPS prequirúrgico	
Encefalopatía	4.7%
Complicaciones graves	0%
Mortalidad	0%

https://doi.org/10.1016/j.hpb.2017.09.006 HPB

REVIEW ARTICLE

Transjugular intrahepatic portosystemic shunt as a bridge to non-hepatic surgery in cirrhotic patients with severe portal hypertension: a systematic review

Eylon Lahat[1], Chetana Lim[1,2], Prashant Bhangui[4], Liliana Fuentes[1], Michael Osseis[1], Toufic Moussallem[1], Chady Salloum[1] & Daniel Azoulay[1,2,3]

[1]Department of Hepatobiliary and Pancreatic Surgery and Liver Transplantation, Henri Mondor Hospital, [2]Université Paris-Est UPEC, [3]INSERM, U955, Créteil, France, and [4]Medanta Institute of Liver Transplantation and Regenerative Medicine, Medanta the Medicity, New Delhi, India

Table 4 Morbidity and mortality of surgery prepared by TIPS

	N cases (%)
Complication	
None	26 (40.6)
Yes	38 (59.4)
Complications	
Ascites	8 (12.5)
Hemorrhage	4 (6.3)
Encephalopathy	8 (12.5)
Infection[a]	8 (12.5)
Intestinal leakage	5 (7.8)
Liver failure	4 (6.3)
Ileus	6 (9.4)
Miscellaneous	15 (23.4)
Mortality	5 (7.8)
Root-cause	
Intestinal leakage	2
Ascites and hemorrhage	1
Multiple organ failure	1
Acute respiratory distress syndrome	1

TIPS, Transjugular Intrahepatic Portosystemic Shunt.
[a] Surgical site, wound, or systemic.

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EXPERIENCIA DE UN CENTRO

6 TIPS PREQUIRÚRGICOS EN 2 AÑOS POR HIPERTENSIÓN PORTAL:

2 VIVOS > 1 año
1 OPERADO éxitus < 1 año complicaciones cirrosis
1 ÉXITUS prequirúrgico por encefalopatía hepática
2 ÉXITUS postoperatorio inmediato

TIPS PREVIO A CIRUGÍA

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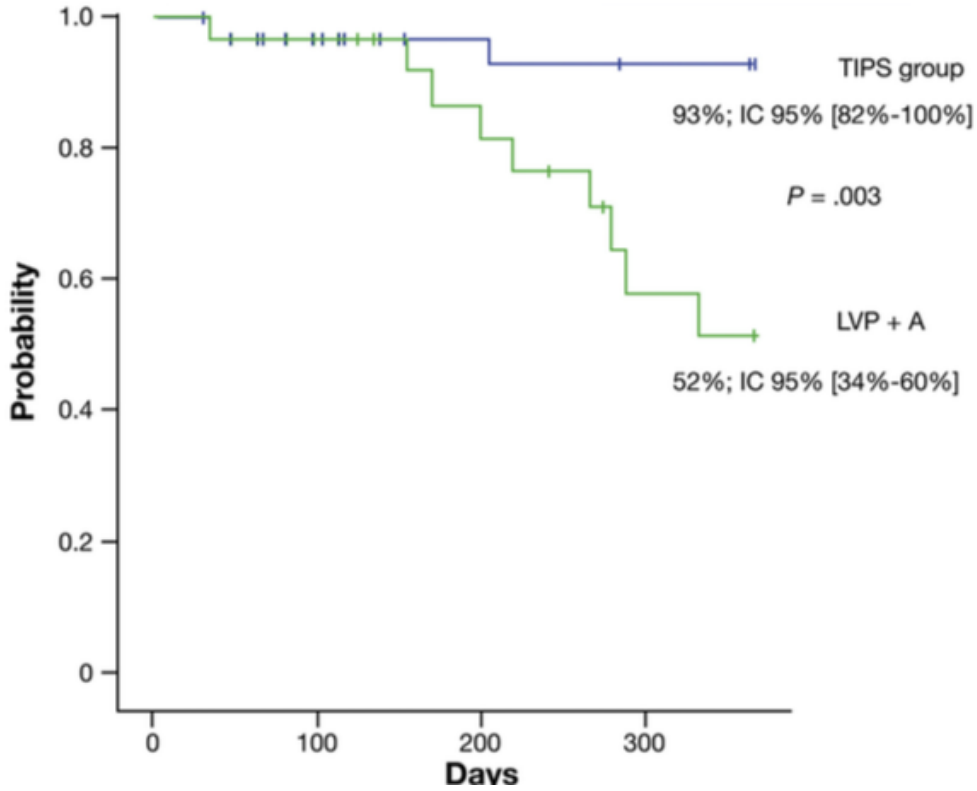
Criterios de inclusión
18-70 años Cirrosis **2 paracentesis en 3 semanas**
Criterios de exclusión
>6 paracentesis en 3 meses Insuficiencia cardíaca Lista de espera de trasplante Encefalopatía hepática recurrente Hepatocarcinoma Fallo hepático grave Alergia a albúmina Embarazo o lactancia

- **“Demasiado” pronto**
- **TIPS cubiertos Viatorr®**
- **Maestría**

Mejoría de la supervivencia



Bureau et al. Gastroenterology. 2017.

TIPS PREVIO A CIRUGÍA

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Criterios de inclusión
18-70 años Cirrosis **2 paracentesis en 3 semanas**
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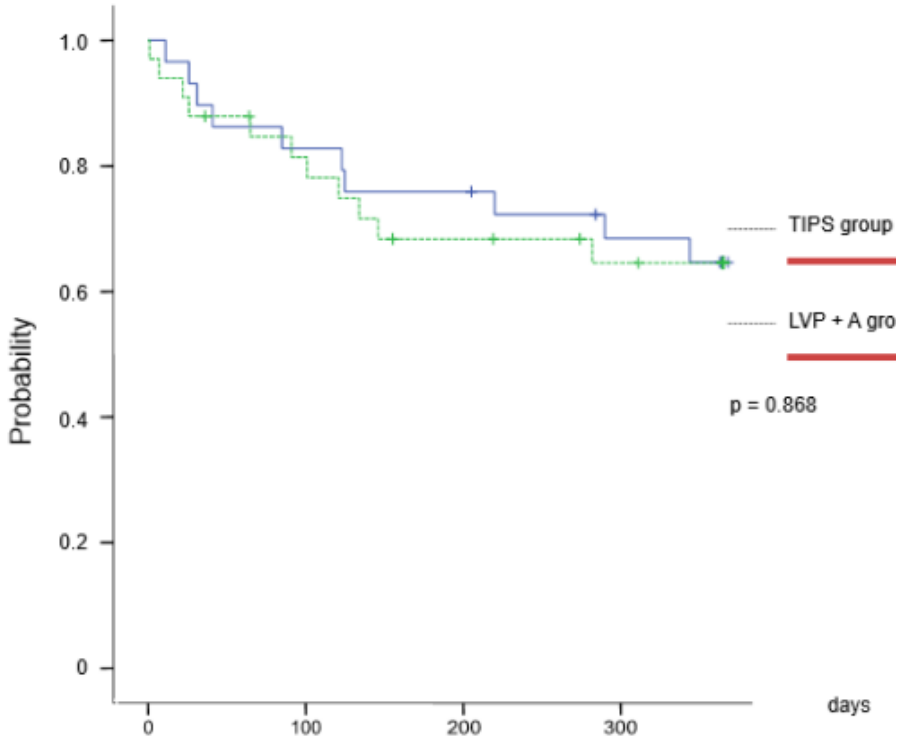
- **“Demasiado” pronto**
- **TIPS cubiertos Viatorr®**
- **Maestría**

Sin aumento de la EH



Bureau et al. Gastroenterology. 2017.

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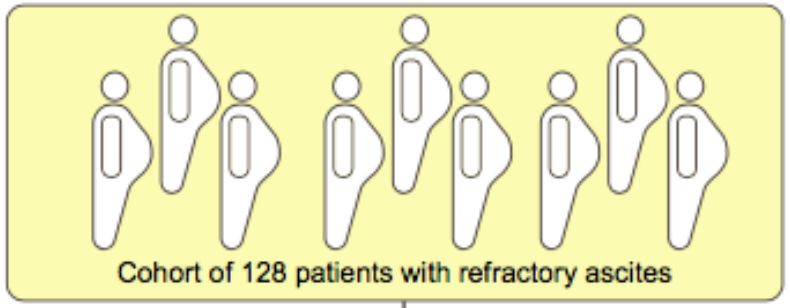
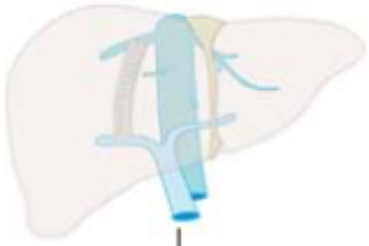
Ascites control by TIPS is more successful in patients with a lower paracentesis frequency and associated with improved survival



TIPS

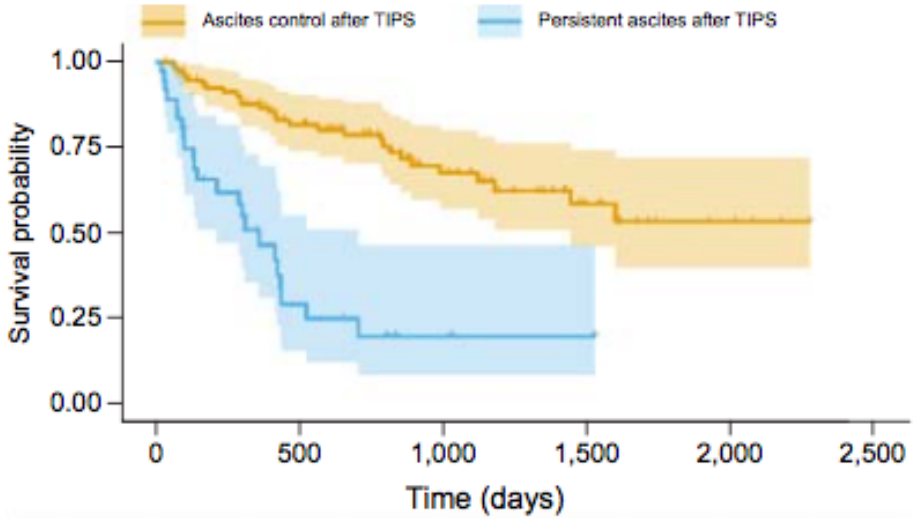


Ascites control (95/128)

Persistent ascites (33/128)

Rik factors for persistent ascites:
Paracentesis frequency (OR 1.672, CI 1.253-2.355)
Baseline creatinine (OR 2.640, CI 1.201-6.607)

Effect of persistent ascites on transplant-free survival



Conclusion:
ConsiderTIPS "early" in ascitic decompensation
Ascites control is associated with transplant-free survival

Piecha et al, JHEP Reports. 2019

TIPS PREVIO A CIRUGÍA

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ASPECTOS PRÁCTICOS

- No indicado TIPS de rutina prequirúrgico
- Valorar indicación de TIPS
- Recordar indicación precoz en ascitis
- “Necesidades del cirujano”
- ¿Límite 16 mmHg?

LA CIRUGÍA COMO TRATAMIENTO DE LA CIRROSIS

CIRUGÍA BARIÁTRICA EN CIRROSIS

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Pérdida de peso

Cambios metabólicos

Elegibilidad para TOH

Mejoría fibrosis

Descenso presión portal

Morbilidad

Mortalidad

Malnutrición

Fallo hepático

Pacientes compensados

FALTA DE EVIDENCIA TIPO 1

CIRUGÍA BARIÁTRICA EN CIRROSIS

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	Sexo	Child	HTP	Complicaciones	Descompensación	Muerte
Total 122 pt	60.6% mujeres	A 96.5% B 3.5% C 0%	5.7%	21.3%	6.55%	1.6% precoz 2.45% tardía
BPD/DS				13.3%	13.3%	20%
RYGB				31.3%	3.92%	3.9%
SG				14.6%	12.5%	0%
ABG				n/d	0%	0%

OBES SURG (2015) 25:1518–1526
DOI 10.1007/s11695-015-1727-2

REVIEW ARTICLE

A Systematic Review of Bariatric Surgery in Patients with Liver Cirrhosis

Ahmad Jan[1] · Mahendra Narwaria[1] · Kamal K. Mahawar[2]

CIRUGÍA BARIÁTRICA EN CIRROSIS

DIGESTIVO
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LA REDUCCIÓN DE PESO MEDIANTE GASTROPLASTIA ENDOSCÓPICA BARIÁTRICA SE ASOCIA A MEJORÍA HISTOLÓGICA EN PACIENTES CON ESTEATOHEPATITIS. ANÁLISIS INTERMEDIO DE UN ESTUDIO MULTICÉNTRICO DOBLE CIEGO CON BIOPSIAS PAREADAS

J. Abad[1], M. Arias-Loste[2], D. Burgos[3], J. Ampuero[4], J.L. Martínez[1], P. Iruzubieta[2], J. Graus[3], A. Rincón[4], B. Ruiz-Antorán[1], A. Santos[2], R. Martín-Mateos[3], E. Llop[1], M. Romero[4], A. Albillos[3], J. Crespo[2] y J.L. Calleja[1]

[1]Hospital Universitario Puerta de Hierro, Madrid, España. [2]Hospital Universitario Marqués de Valdecilla, Santander, España. [3]Hospital Universitario Ramón y Cajal, Madrid, España. [4]Hospital Universitario Virgen del Rocío, Sevilla, España.

Mayor pérdida de peso

Pérdida de peso mantenida

Mejoría bioquímica

Mejoría rigidez

Mejoría NAS score

Mejoría histológica

Pocas complicaciones

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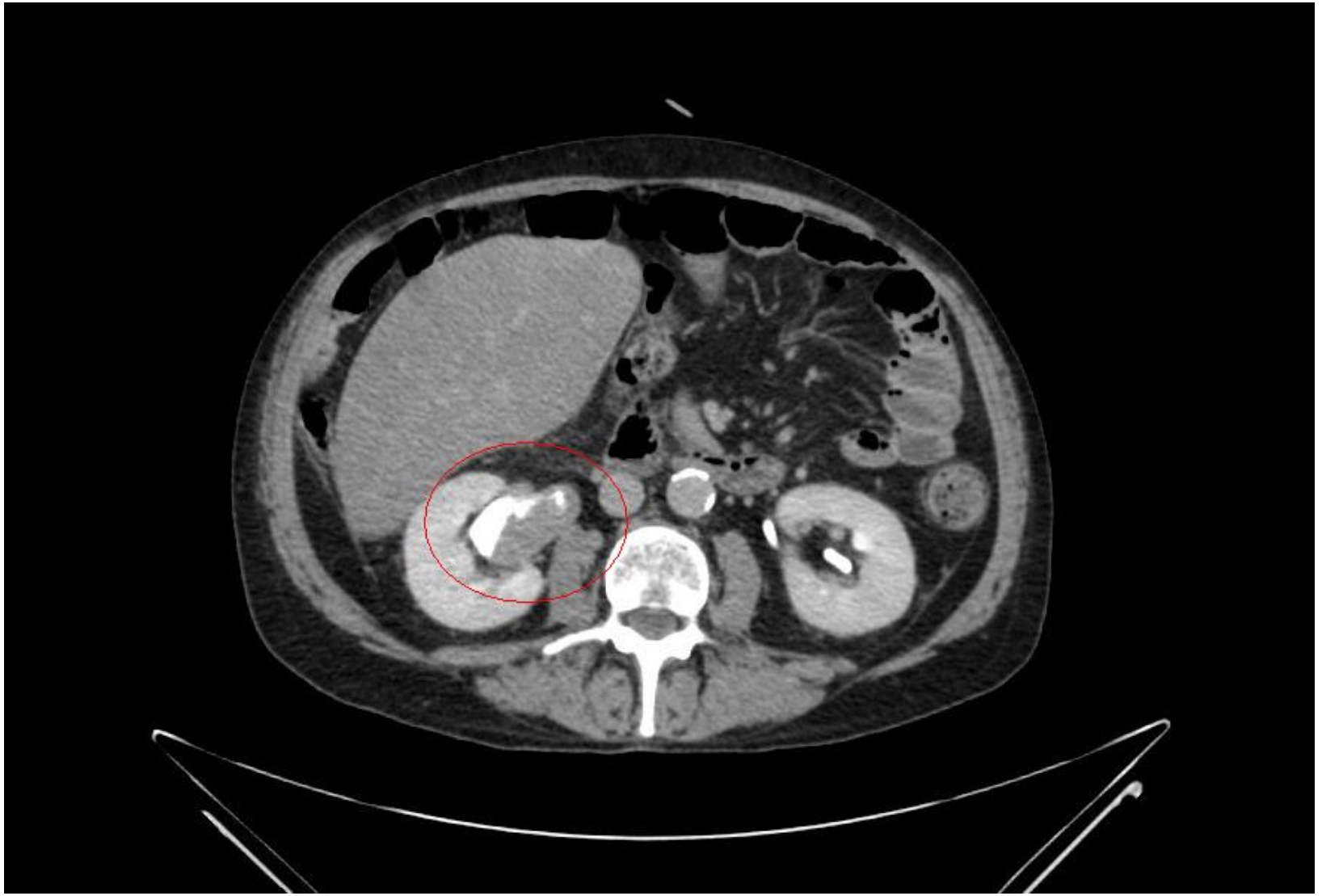
Caso 1.

Varón de 61 años con cirrosis de origen enólico diagnosticada en 2016 con signos de HTP. Como descompensaciones:

1. Ascitis controlada con diuréticos. Última descompensación hidrópica en marzo de 2016.
2. No hemorragia por varices esofágicas.
3. No encefalopatía hepática.
4. No PBE.

Analítica:

Creatinina 0.65 Na 137 K 4.3 BT: 1.36 GOT: 33 GPT: 16 GGT: 150
Alb: 2.7 ProtT: 6.2
Hb 12.6 VCM: 110; Plaq: 154.000 Leucos: 7590 N 5000
AP 57.9% INR 1.37



CASO CLÍNICO

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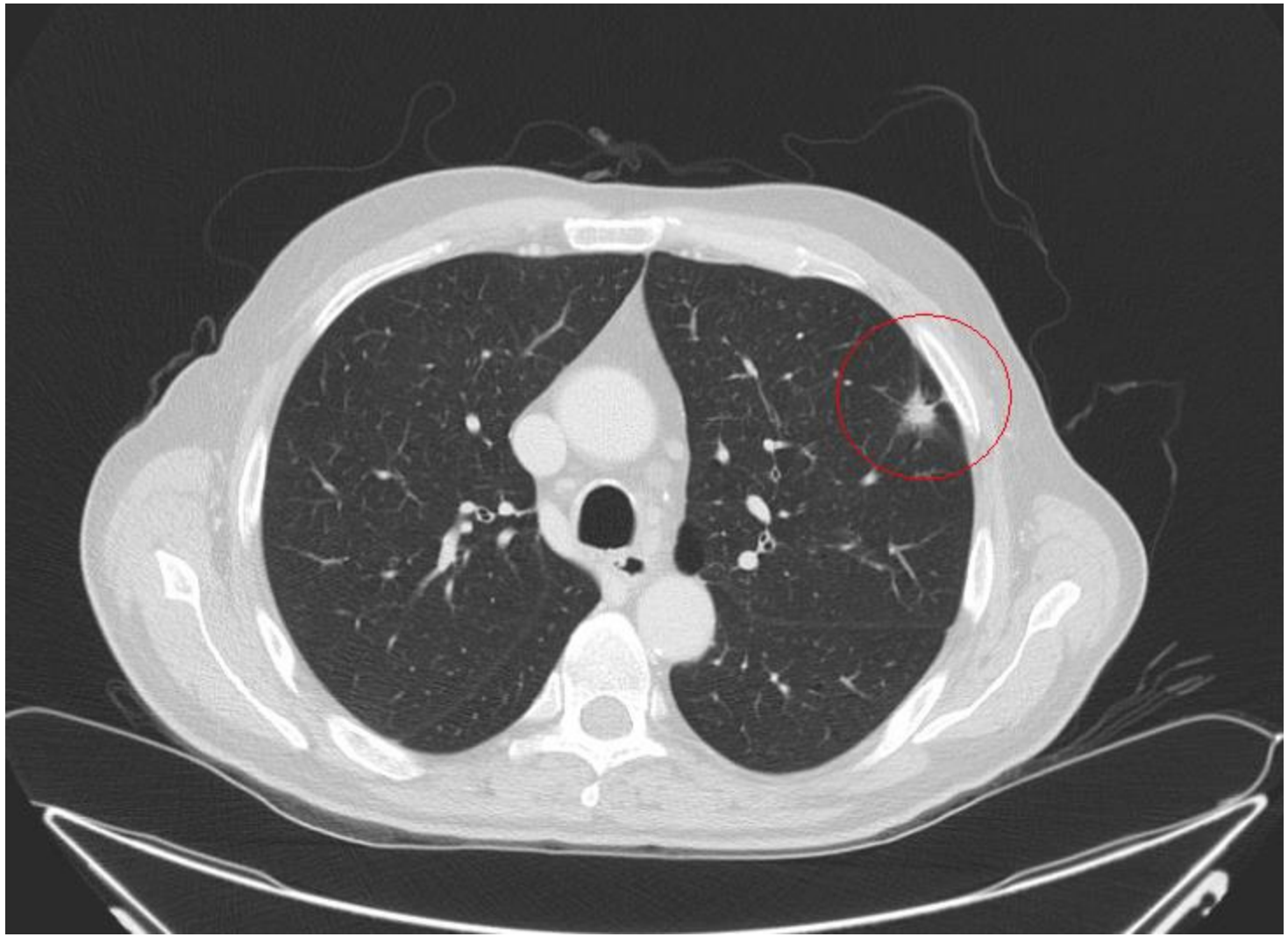

Caso 1.

El paciente es presentado en Comité de Tumores (Urología y Oncología Médica).

Es desestimado para cirugía y quimioterapia.

Se recomienda tratamiento paliativo.

El paciente ingresa en el servicio de Gastroenterología y Hepatología por absceso rectal y descompensación hidrópica.

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Caso 2.

Varón de 67 años con cirrosis de origen enólico diagnosticada en 2016 con signos de HTP. Como descompensaciones:

1. Ascitis que requiere paracentesis evacuadora en 2017.
2. No varices esofágicas.
3. No encefalopatía hepática.
4. No PBE.

Analítica:

Creatinina 0.65 Na 132 K 4.3 BT: 0.53 GOT: 22 GPT: 16 GGT: 150
Alb: 3.1 ProtT: 7.2
Hb 11.6 VCM: 78; Plaq: 89.000 Leucos: 6290 N 4000
AP 81.0% INR 1.17

CASO CLÍNICO

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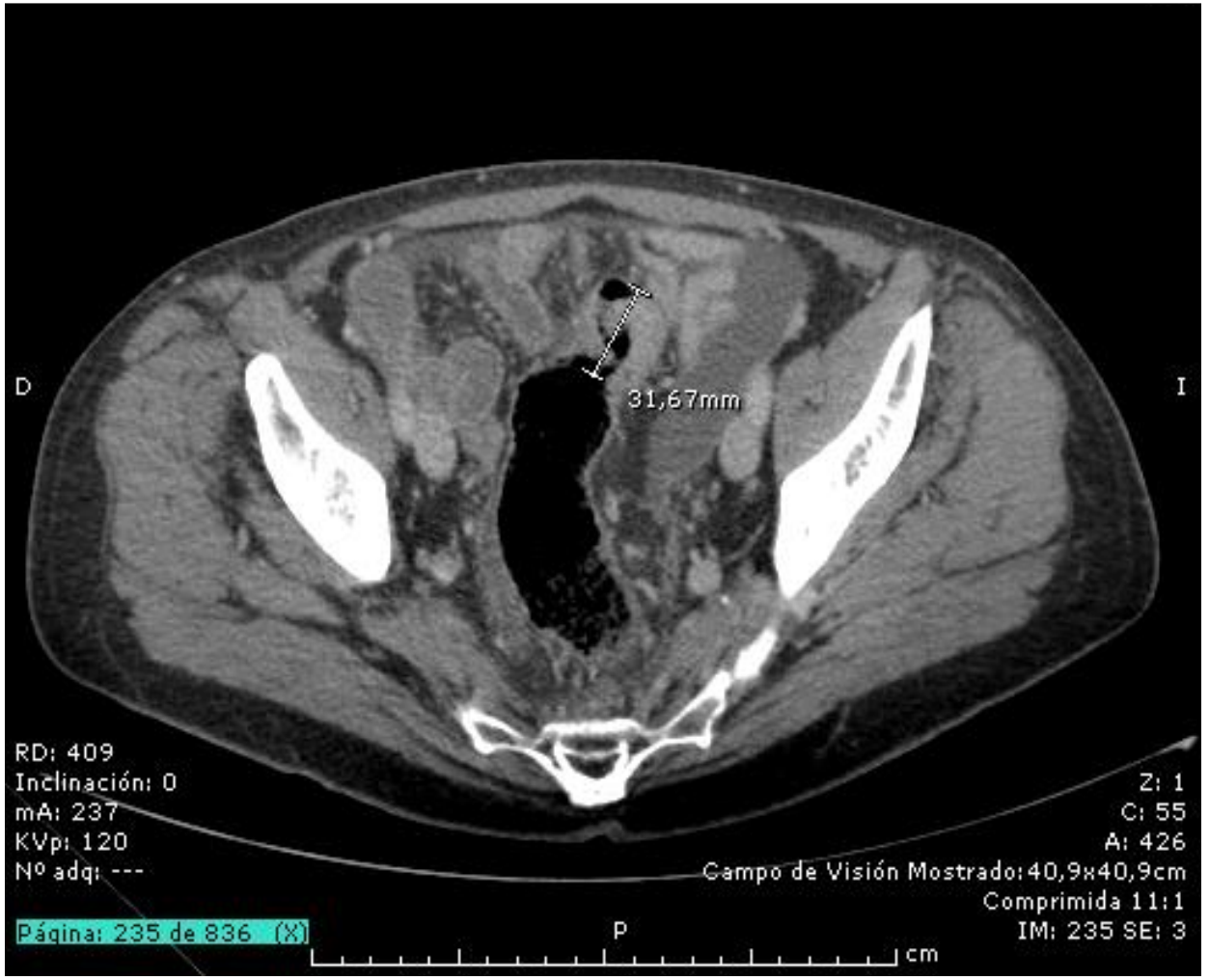

“Cirugía en la cirrosis e hipertensión portal”

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Caso 3

Mujer de 74 años. Cirrosis descompensada Child C10. Ascitis de difícil control, ingresa por HDA por varices esofágicas.

Dolor abdominal + Murphy: colecistitis aguda.

Mala evolución clínica y analítica con tratamiento antibiótico.

CASO CLÍNICO

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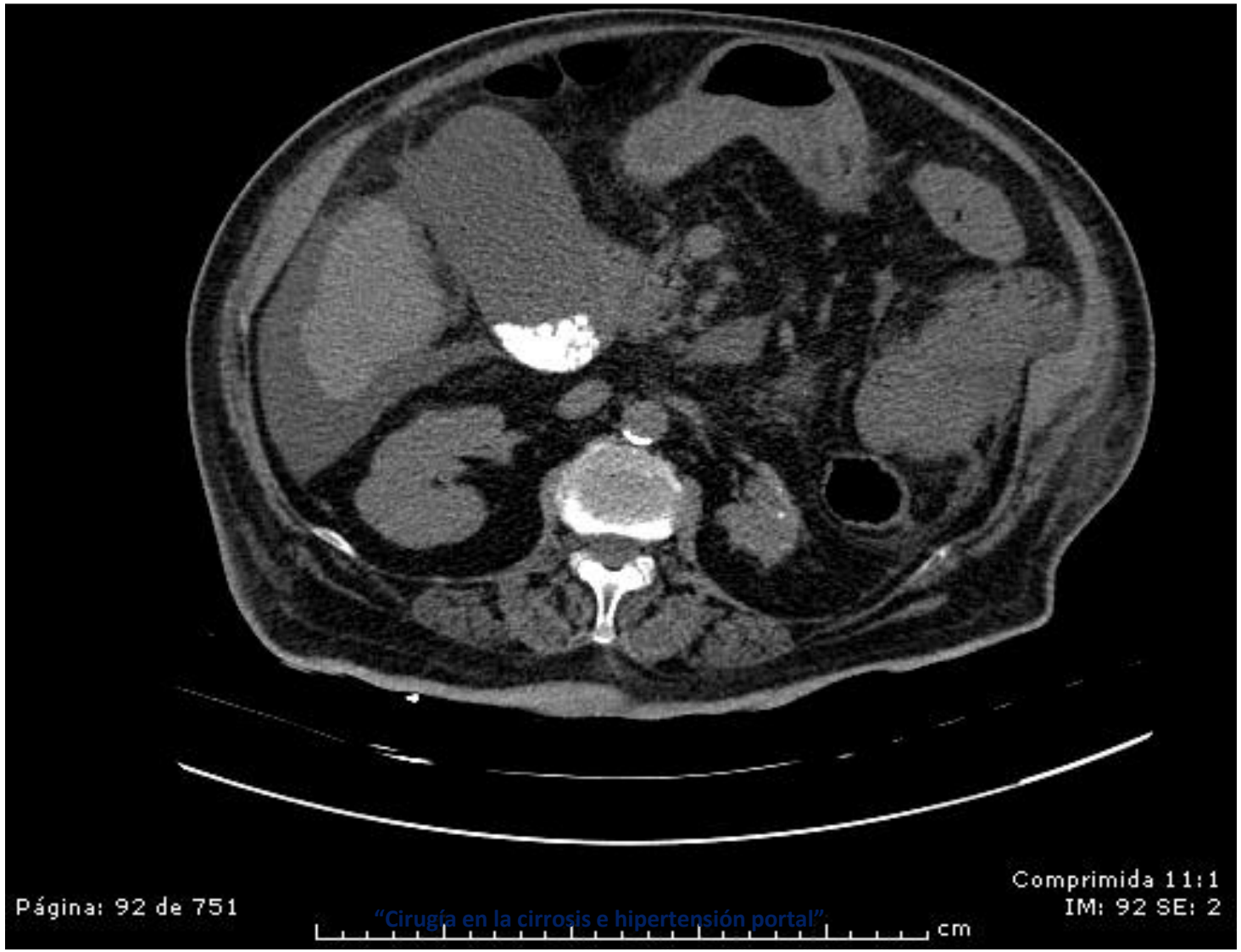

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Caso 4.

Varón de 57 años con cirrosis de origen enólico.Como descompensaciones:

1. Hepatitis alcohólica grave (Maddrey>32) Oct 2017
2. Encefalopatía hepática grado IV con ingreso en UVI e IOT
3. Neumonía nosocomial en Nov 2017
4. Celulitis infecciosa en Dic 2017

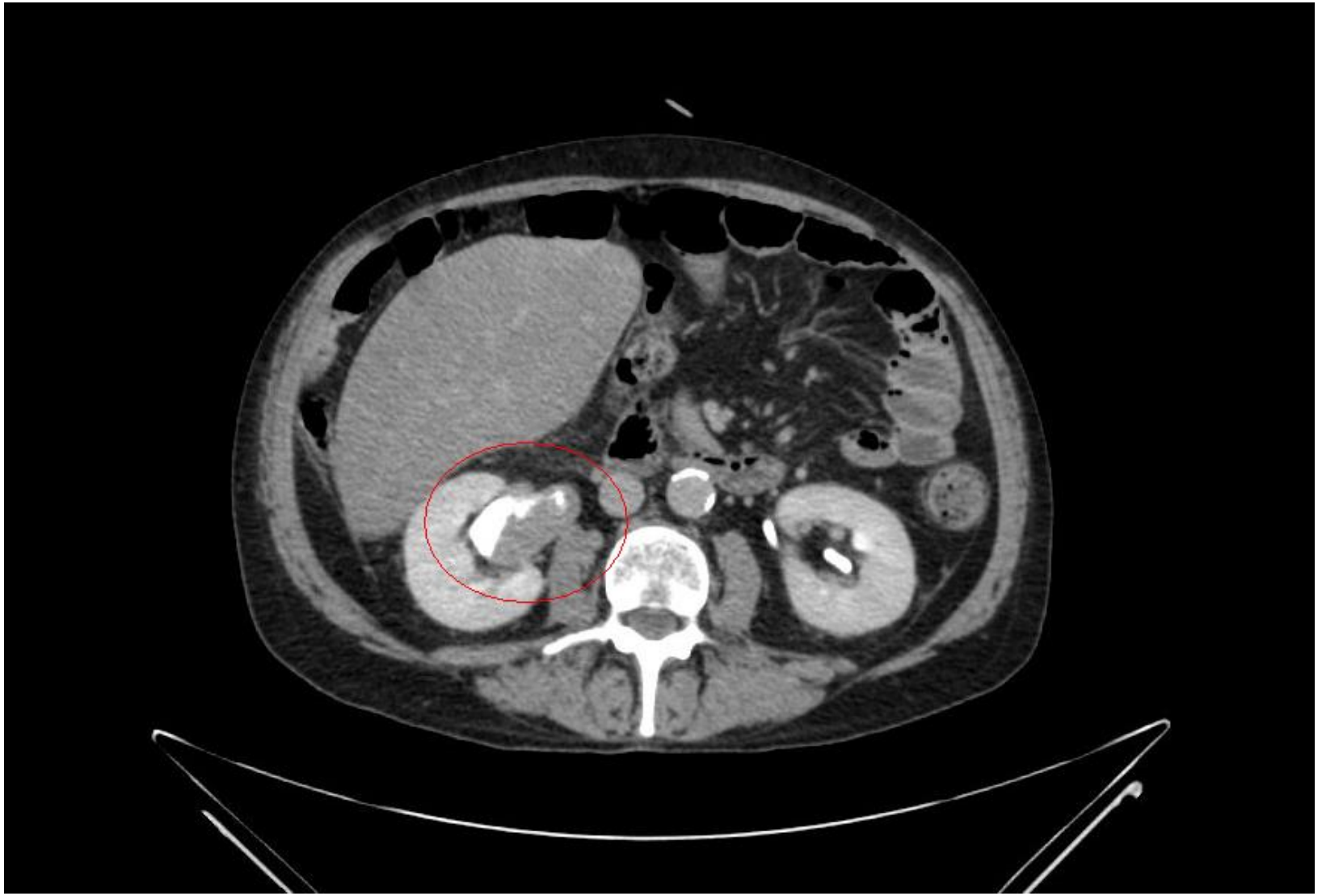
Analítica:

Creatinina 1.35 Na 128 K 3.3 BT: 12.3 GOT: 122 GPT: 56 GGT: 750

Alb: 2.1 ProtT: 4.5

Hb 8.6 VCM: 120; Plaq: 59.000 Leucos: 2340 N 910

AP 36.0% INR 1.83



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Caso 5.

Varón de 56 años con cirrosis asociada al VHC tratado con AAD y RVS. Nunca descompensaciones previas.

1. Varices esofágicas pequeñas sin puntos rojos.
2. Rotura del velo de la válvula mitral con IM grave
3. No hipertensión pulmonar ni cardiopatía isquémica
4. Pendiente de cirugía de recambio valvular

Analítica:

Creatinina 0.72 Na 134 K 3.8 BT: 2.3 GOT: 31 GPT: 22 GGT: 80

Alb: 2.9 ProtT: 6.5

Hb 13.6 VCM: 83; Plaq: 98.000 Leucos: 5230 N 2910

AP 68.0% INR 1.27

CONCLUSIONES

DIGESTIVO
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La cirugía en el paciente cirrótico tiene una alta morbimortalidad

Es imprescindible la colaboración multidisciplinar para elegir adecuadamente el candidato, el tipo de cirugía y el momento de la misma

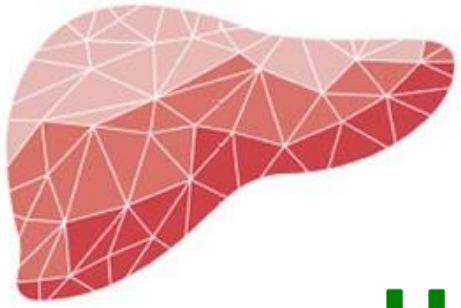
El soporte nutricional, metabólico y la optimización es fundamental previo a la cirugía

No está indicado el TIPS prequirúrgico rutinariamente

La cirugía bariátrica o sus alternativas son un tratamiento eficaz de la cirrosis

A falta de evidencia sólida es necesario experiencia e individualizar

MÁSTER EN HEPATOLOGÍA



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