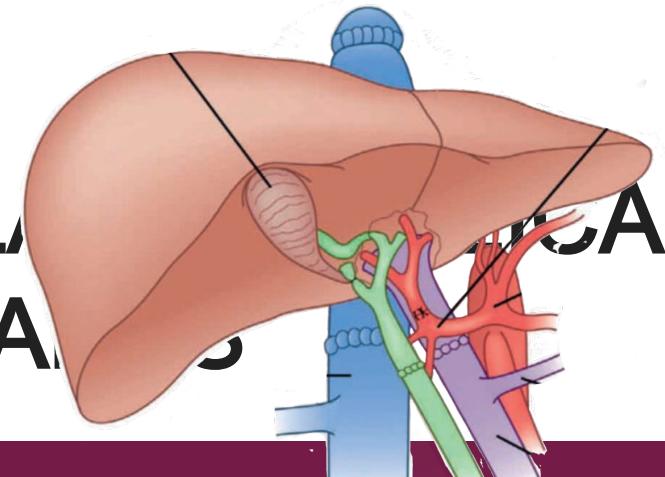


USO DE PRÓTESIS BILIARES AUTODEXPANDIBLES REABSORBIBLES DURANTE EL TRASPLANTE HEPÁTICO UNA SOLUCIÓN PARA LAS OBSTRUCCIONES BILIARES TEMPRANAS



María Iniesta Cortés

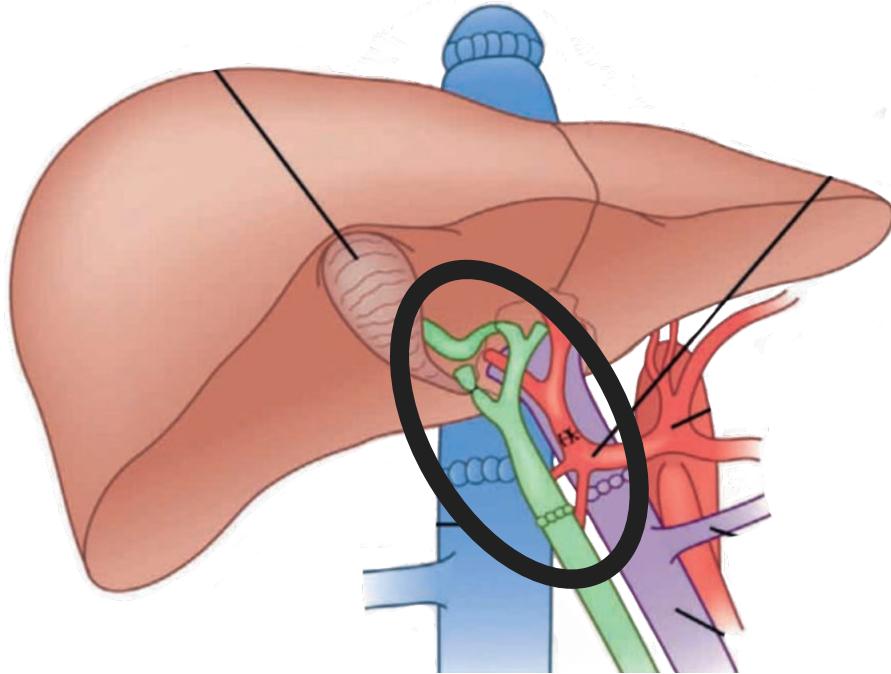
Víctor López López, Pedro Antonio Cascales Campos, Lucía Hernández Ramos, Alberto Baroja Mazo, José A. Pons, Alberto Hiciano, Pablo Ramírez Romero, Francisco Sánchez Bueno, Ricardo Robles Campos

Hospital Universitario Virgen de la Arrixaca

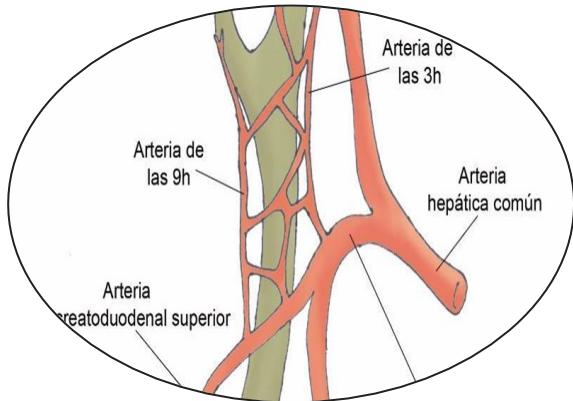
introducción

“Talón de Aquiles”

Entre el 10-34% de los TH



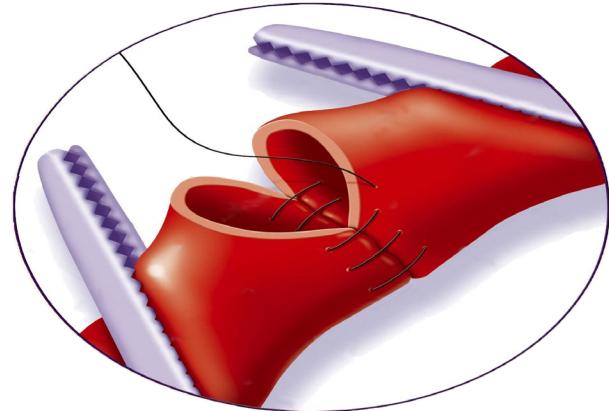
FACTORES DE RIESGO



TÉCNICOS/VASCULARIZACIÓN

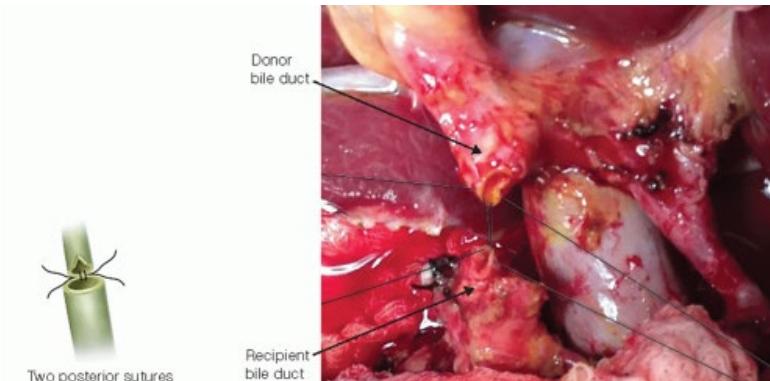
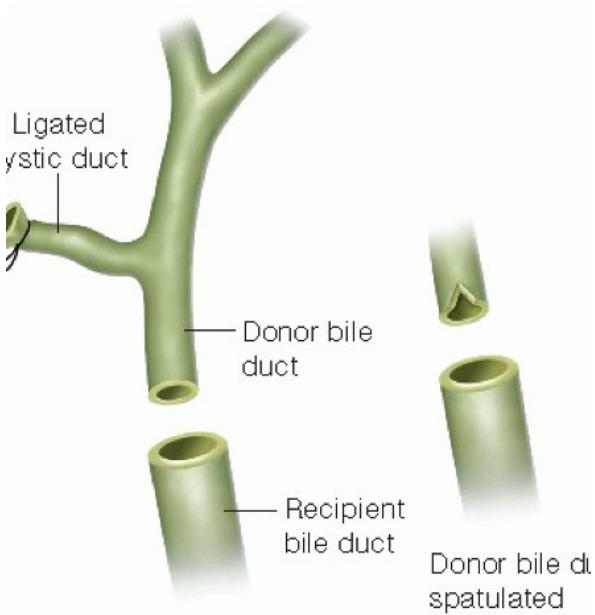


INMUNOLÓGICOS

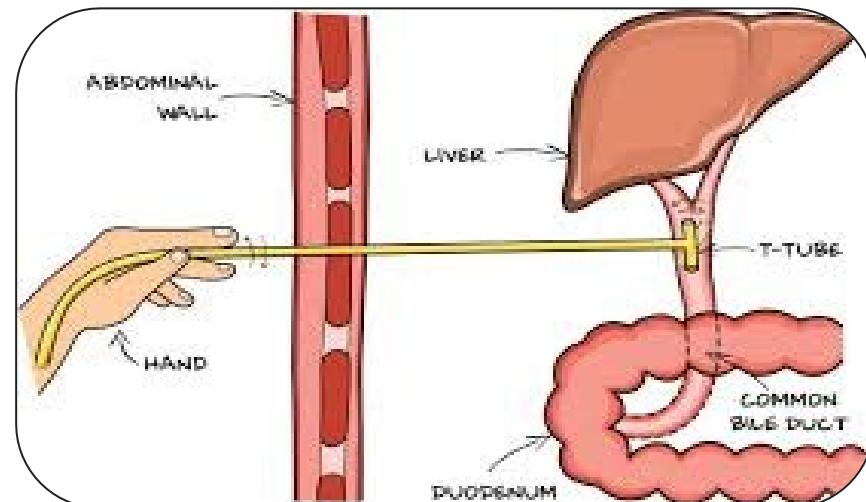
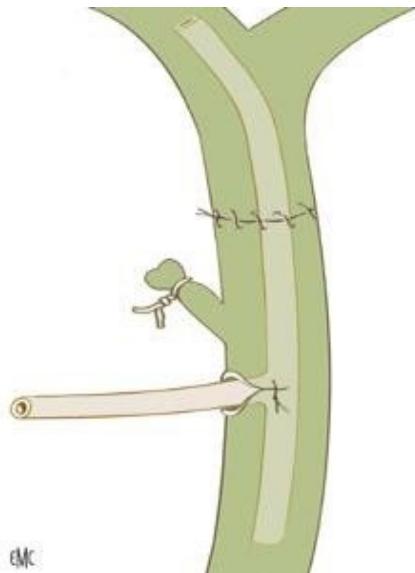


ISQUEMIA/REPERFUSIÓN

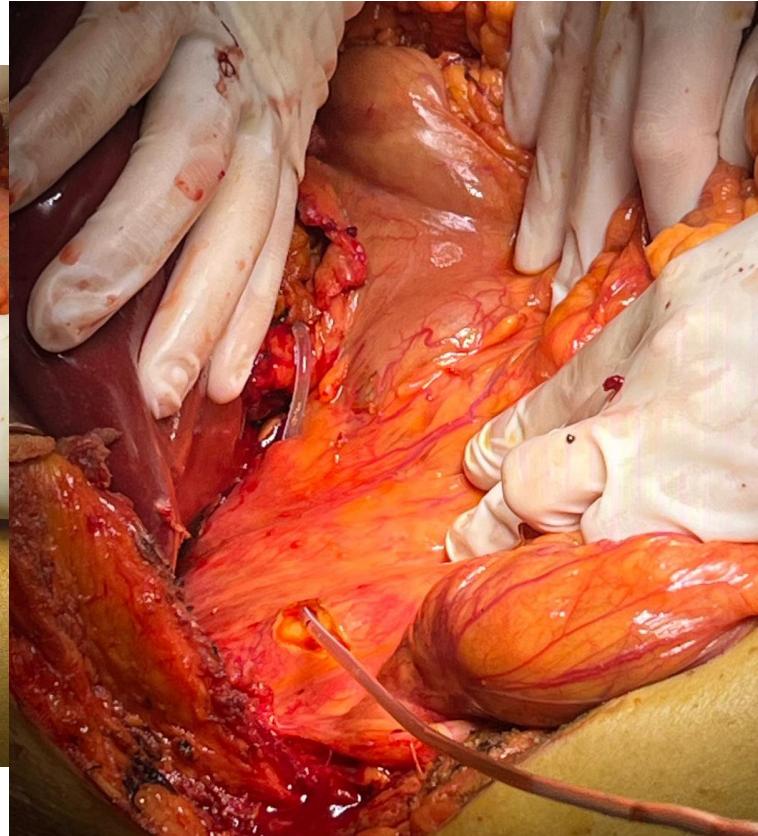
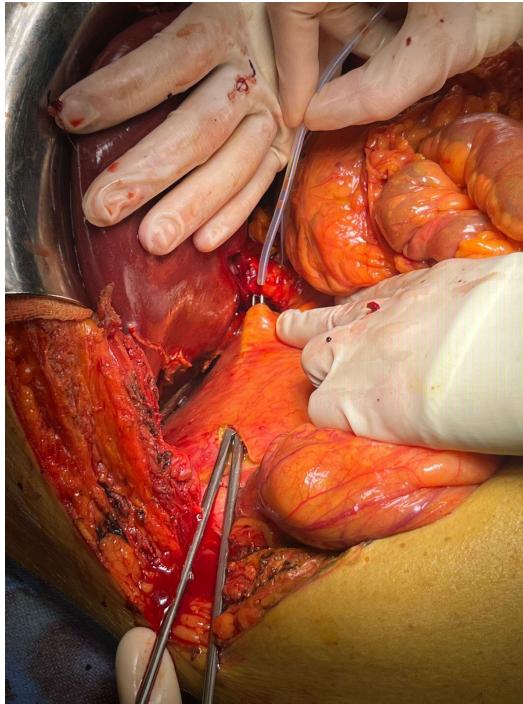
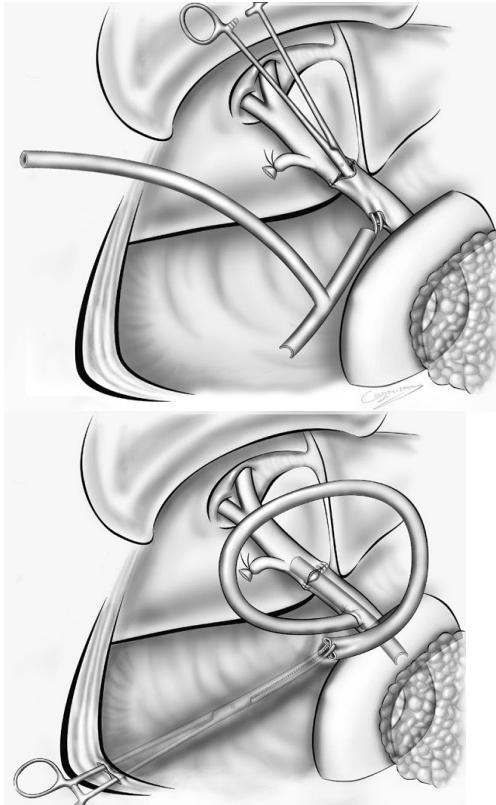
FACTORES DE RIESGO



TUBO T KEHR



RETROPERITONEAL TUBO T KEHR



INTRADUCTAL REMOVABLE STENT

Duct-to-duct biliary reconstruction with or without an intraductal removable stent in liver transplantation: The BILIDRAIN-T multicentric randomised trial

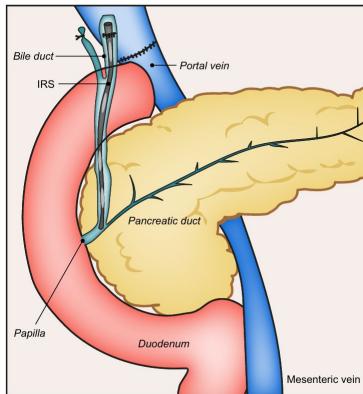


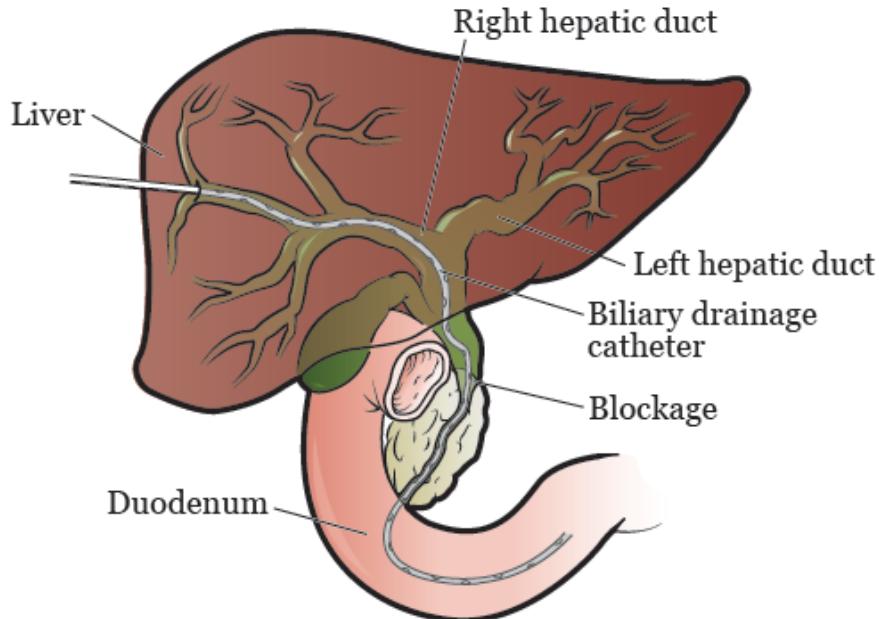
Table 2. Post-LT outcome of 235 patients included according to their randomisation group (IRS, n = 117 vs. control, n = 118).

| Variable | IRS n = 117 | | Control n = 118 | | Difference [95% CI] |
|--|----------------|------------------------|--------------------|------------------------|---------------------|
| | n ^a | n (%) | n ^a | n (%) | |
| Primary outcome: BC | | | | | |
| Biliary fistula | 117 | 31 (26.5) ^b | 118 | 24 (20.3) ^b | 6.2 [-4.9 to 17.1] |
| Biliary stenosis | 116 | 9 (7.8) | 117 | 6 (5.1) | 2.6 [-4.3 to 9.7] |
| | 116 | 16 (13.8) | 117 | 15 (12.8) | 1.0 [-8.1 to 10.2] |
| Secondary outcome: complications related to IRS | | n % [95% CI] | | | |
| Infectious cholangitis | 113 | 1 0.9 [0.0-4.8] | – | – | |
| Extraction difficulties | 98 | 19 19.4 [12.1-28.6] | – | – | |
| ERCP-related haemorrhage | 104 | 5 4.8 [1.6-10.9] | – | – | |
| ERCP-related duodenal perforation | 109 | 1 0.9 [0.0-5.0] | – | – | |
| ERCP-related severe acute pancreatitis | 109 | 2 1.8 [0.2-6.5] | – | – | |
| IRS spontaneous migration | 117 | 24 20.5 [13.6-29.0] | – | – | |
| Association of BC and IRS-related complications | – | 11 9.6 [4.9-16.5] | – | – | |
| Association of BC and migration | – | 9 7.8 [3.6-14.3] | – | – | |

Conclusions: IRS does not prevent BC after LT and may require specific endoscopic expertise for removal.

Goumard et al. JHEP Reports 2022

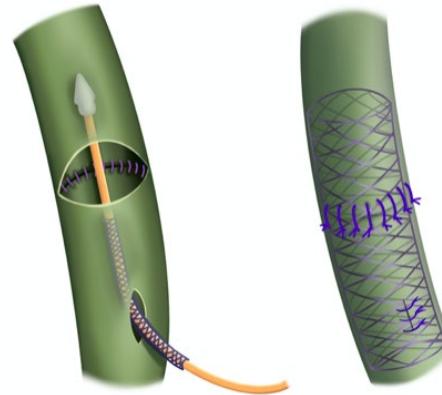
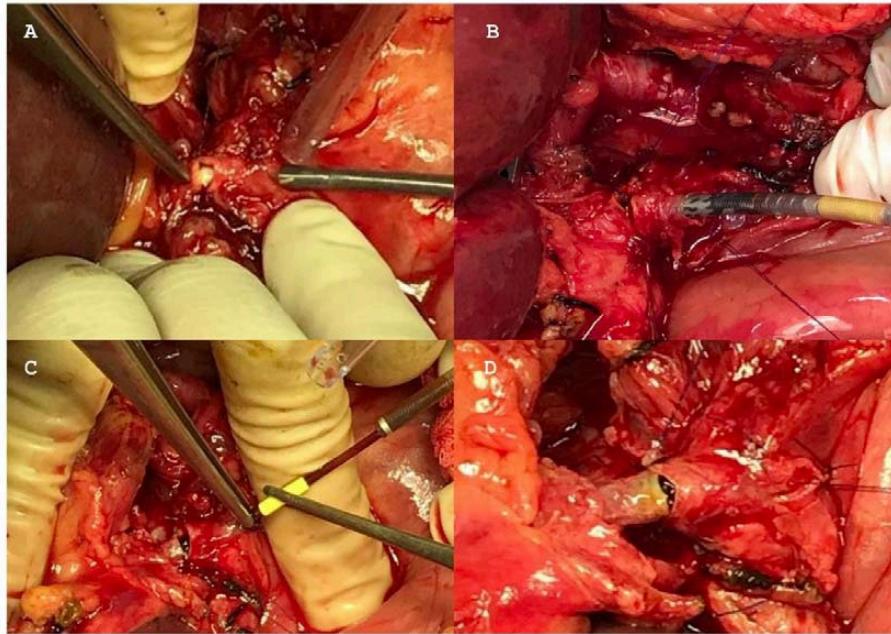
DRENAJES INTERNO-EXTERNOS



- ✓ + COLANGITIS
- ✓ + FUGAS BILIARES
- ✓ + COLEDOCOLITIASIS
- ✓ + MIGRACIONES

SIN reducción significativa en las complicaciones biliares tempranas.

PRÓTESIS BILIAR

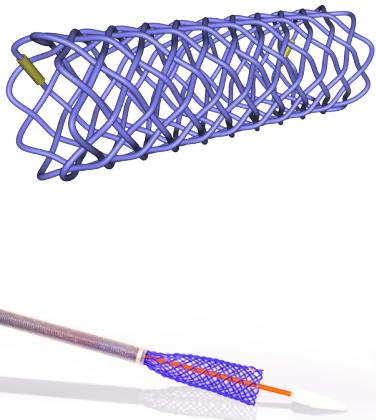


Autoexpandibles +
Reabsorbibles

características

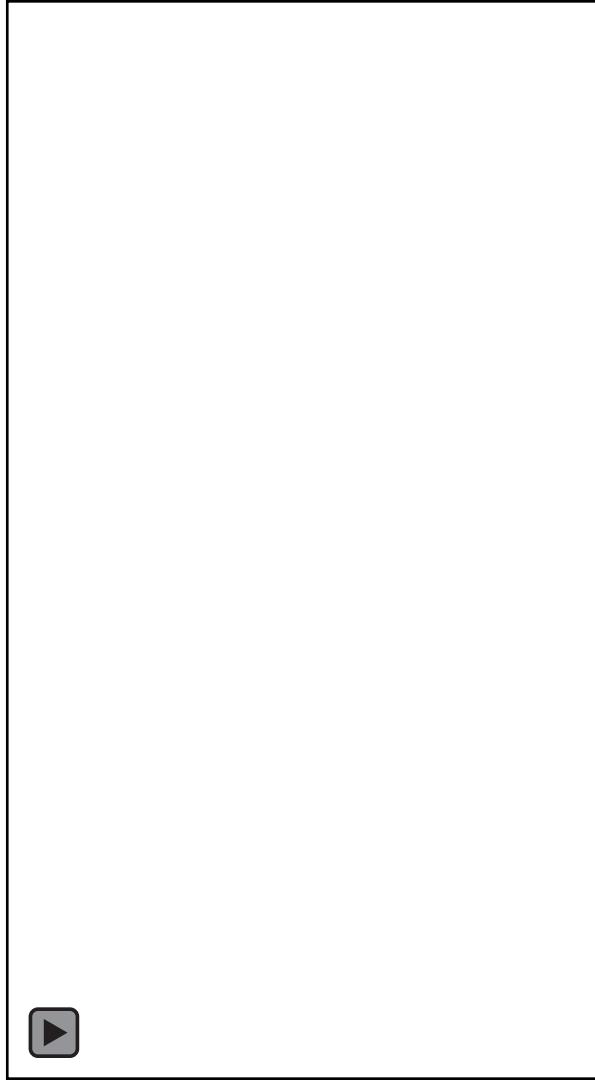
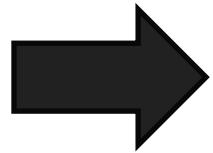
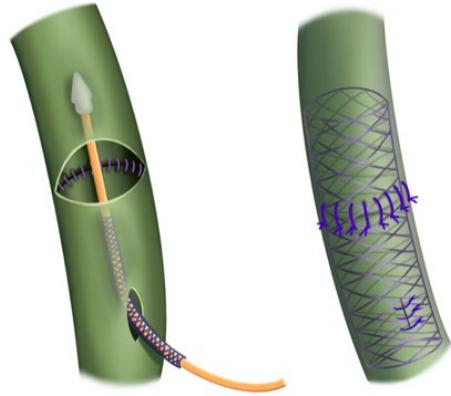
ELLA-CS, s.r.o.

Milady Horákové 504/45, Třebeš
500 06 Hradec Králové
Czech Republic



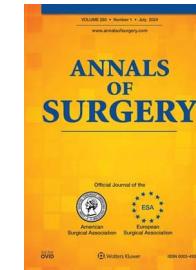
- Diameters: **5, 6, 7, 8 y 9 mm**
- Length: **5-6 cm**

- Compact and **self-expandable** endoluminal prosthesis made of polydioxanone monofilament
- Radial **strength** is 70% at 14 days and 25% at 42 days.
- Radiopaque **markings** for visibility.
- Resorption: minimal in the **first 90 days** and complete at **5-6 months**.



Efficacy of Self-Expandable Absorbable Stents during Liver Transplant to Minimize Early Biliary Complications

Lopez-Lopez, Victor MD, PhD^{*,†}; Kuemmerli, Christoph MD, PhD[‡]; Iniesta, Maria MD^{*,†}; Hiciano-Guillermo, Alberto MD^{*,†}; Cascales-Campos, Pedro MD, PhD^{*}; Baroja-Mazo, Alberto MD, PhD[†]; Antonio-Pons, Jose MD, PhD[§]; Sánchez-Esquer, Ignacio MD^{*,†}; Ferreras, David MD, PhD[¶]; Sánchez-Bueno, Francisco MD, PhD^{*,†}; Ramírez, Pablo MD, PhD^{*,†}; Robles-Campos, Ricardo MD, PhD^{*,†}



| 👉 Variable | SEABS | No-SEABS | Key comparisons |
|---|------------------------------------|---------------------------------------|--------------------------------|
| 👤 Patients | 78 | 80 (22 T-tube, 58 no stent) | — |
| ⚠ Adverse effects | ✗ None | — | SEABS safe |
| ⌚ Early biliary complications (90 days) | 2.6% | 23.8% | 📈 P < 0.001 |
| 🏥 Hospital stay | 15 days | 19 days | 📈 P = 0.001 |
| 镊️ Procedures | 35 ERCP + 2 surgeries (incl. 2 LT) | 63 ERCP + 13 surgeries (incl. 2 LT) | Fewer reinterventions in SEABS |
| 🕒 PSM (58 vs 58) | 0% complications | 40% complications | 📈 P < 0.001 |
| 👉 T-tube vs SEABS (high risk) | 5% | 22.7% | P = 0.23 |
| 💸 Extra cost per patient | €6,988 | €17,992 (T-tube) / €36,364 (no stent) | 📈 SEABS most cost-effective |

HIPÓT

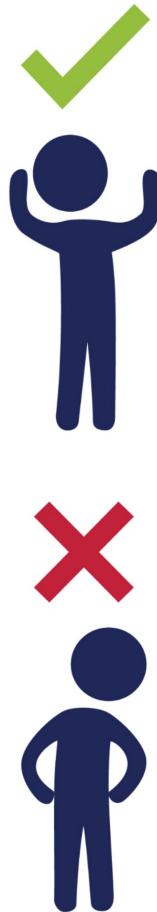


El uso de **SEABS** en TH reduce la incidencia de **complicaciones biliares tempranas (≤ 90 días)** = estrategia segura + efectiva en el manejo inicial de la anastomosis biliar término-terminal

metodolo



OBSERVACIONAL
PROSPECTIVO
UNICÉNTRICO
180 pacientes



- Pacientes intervenidos de TH en HUVA entre noviembre de 2020 y julio de 2025 con **anastomosis T-T + uso de SEABS**
- Disponibilidad de documentación clínica y seguimiento postoperatorio

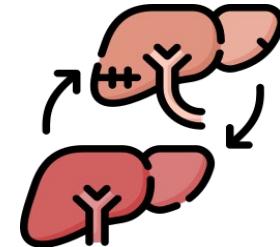
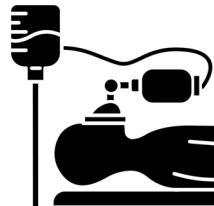
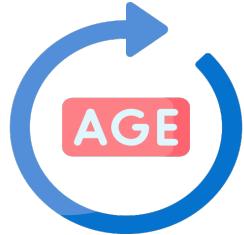
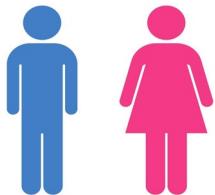


- **1** H-Y
- **1** Split
- **5** TH hepatorrenal simultáneo
- **9** Colangiopatía/Trombosis arterial
- **4** ReTH urgentes
- **11** Fallecimiento intraoperatorio/temprano
- **5** Pérdida de seguimiento postoperatorio

=144 pacientes

resultados

receptor:



77,78% Varones
22,22% Mujeres

$60,25 \pm 8,74$ años
Mediana: 62 años
Rango [15-76]
IQR: 11

$26,78 \pm 4,64\text{kg/m}^2$
Mediana: 26,12
Rango [17,33-40,3]
IQR: 5,97

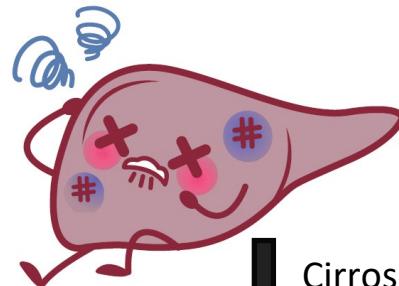
ASA II → 6,94%
ASA III → 75,69%
ASA IV → 17,36%

Child A → 34,03%
Child B → 49,31%
Child C → 16,67%

MELD → $13,27 \pm 6,12$
Mediana: 12
Rango [6-43]
IQR: 8



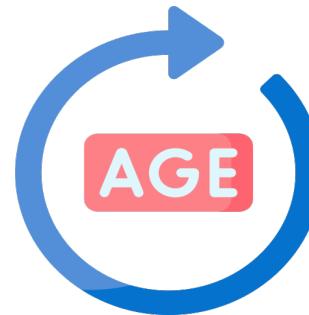
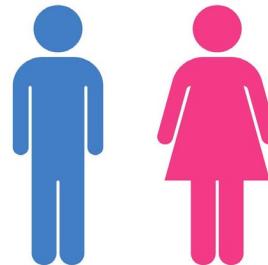
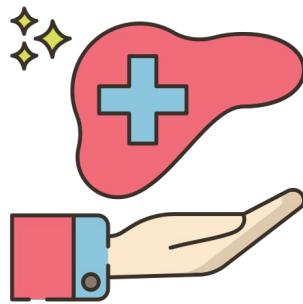
- Ascitis → **51,39%**
- HTA → **43,75%**
- DM → **40,97%**
- Tabaquismo activo → **29,86%**
- Exfumador → **29,17%**
- Enfermedad coronaria → **6,94%**
- EPOC → **6,94%**
- Insuficiencia renal → **6,25%**
- Insuficiencia cardiaca → **4,17%**



- Cirrosis alcohólica → **59,03%**
- Hepatocarcinoma → **41,67%**
- Virus Hepatitis C → **9,03%**
- NASH o Enf. Metabólica → **7,64%**
- Otras causas → **5,56%**
- Virus Hepatitis B → **4,86%**
- Fallo hepático agudo → **2,78%**

resultados

DONANTE:

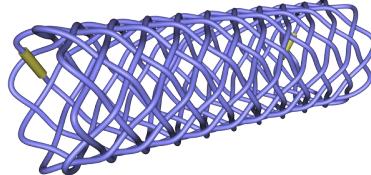


Muerte encefálica → 52,08%
Asistolia controlada → 47,92%

Varones → 66,66%
Mujeres → 33,33%

55,99 ± 15,59 años
Mediana: 58 años
Rango [12-81]
IQR: 22

quirúrgicos y postquirúrgicos:



Isq. Fría:
 $302,78 \pm 128'$

Tiempo Quirúrgico:
 $204,92 \pm 40,26'$

CH: **$4,12 \pm 3,35$**
unid.

Fib: **$4,64 \pm 3,45g$**

$36,11\% \rightarrow 7\text{ mm}$
 $26,39\% \rightarrow 8\text{ mm}$
 $25,69\% \rightarrow 5\text{ mm}$
 $11,11\% \rightarrow 9\text{ mm}$
 $0,69\% \rightarrow 6\text{ mm}$

UCI: **$3,35 \pm 2,17$**
días

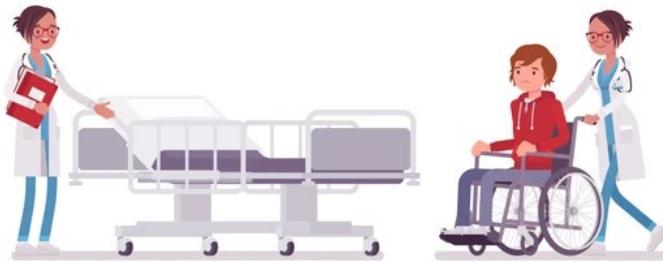
Total: **$15,52 \pm 6,3$** días

quirúrgicos y postquirúrgicos:



16 pacientes (**11,02%**)
Clavien ≥3^a en <90d

3a → 7 casos (4,86%)
3b → 6 casos (4,17%)
4a → 3 casos (2,08%)



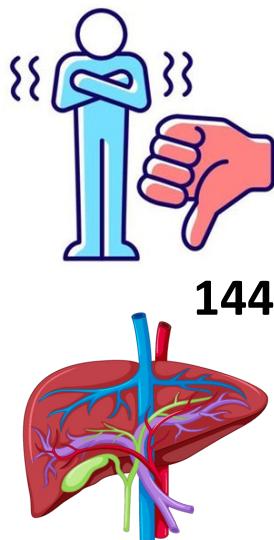
Reingreso: 16 pacientes (**11,11%**)

Causas: ascitis, ITU, astenia, seroma, CMV+, fiebre, fuga biliar, diarrea, alteraciones electrolíticas...



30 pacientes (**20,83%**)

COMPLICACIONES BILIARES:



144

INMEDIATAS (<30d): 1 (0,69%)



1 Fuga

QX

PRECOCES (<90d): 5 (3,47%)



2 Fugas
2 Estenosis
1 Colangitis

1 QX
4 CPRE

TARDÍAS (>90d): 24 (16,67%)



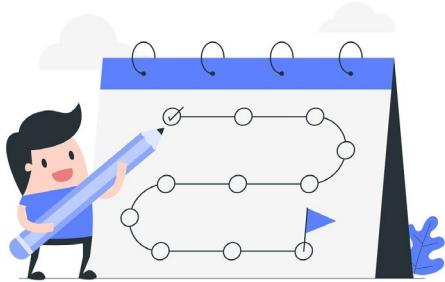
21 Estenosis
3 Coledocolitiasis

6 QX
14 CPRE

COMPLICACIONES BILIARES:

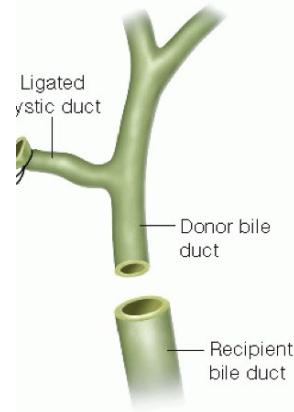
| Tipo de complicación | DPO aparición | Tratamiento | Evolución |
|-------------------------|---------------|--|--|
| Fuga biliar (inmediata) | 8º DPO | CIRUGÍA: cierre punto fuga cístico con puntos | Resolución tras cirugía |
| Colangitis | 45º DPO | CPRE: sin estenosis clara, material protésico, colocación prótesis plástica. | Evolución favorable. Pendiente retirada prótesis plástica |
| Fuga biliar (precoz) | 46º DPO | CPRE: prótesis plástica + esfinterotomía | Retirada prótesis a 6m sin fuga, buen paso. |
| Estenosis anastomótica | 53º DPO | CPRE: extracción de barro y coledocolitiasis + prótesis plástica → recambios sucesivos (plástica y metálica) | Retirada de prótesis metálica a los 8m, buen paso. |
| Estenosis anastomótica | 66º DPO | CPRE: prótesis plástica → cambio a metálica a 3m por persistencia de estenosis | Retirada de metálica a los 5m, abundante barro, buen paso |

COMPLICACIONES BILIARES:



Aparición compl.
Biliar:
 $250,55 \pm 176,16$
días
Mediana: 203
Rango: [8–72]

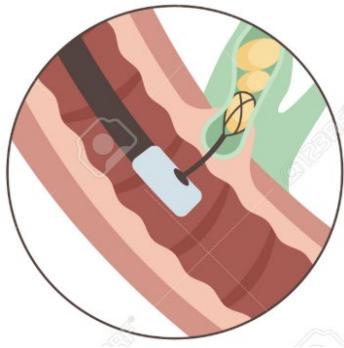
Seguimiento:
 $821,01 \pm 506,64$ días
Mediana: 718
Rango: [92–1802]



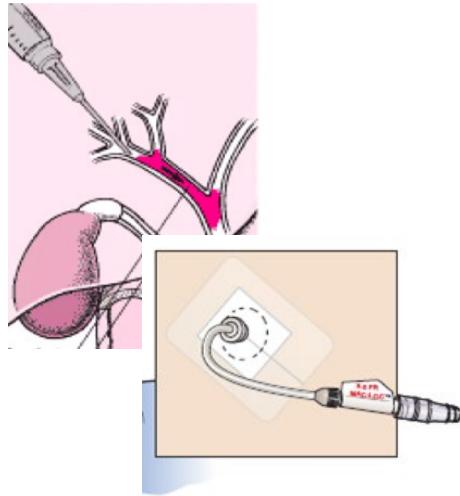
18,1% anastomosis de riesgo
*(disparidad de calibres,
plastia ductal, no alineados,
tensión o paredes muy finas)*

$11,13 \pm 10,22$
días
Mediana: 8
Rango [2–44]

COMPLICACIONES BILIARES:



25 pacientes **CPRE (17,36%)**
→ 22 pac. Prótesis
→ 3 coledocolitiasis limpieza
→ 6 complicaciones



3 CPTH (2,08%)
1 Drenaje Rx (0,69%)



6 pacientes QX (4,16%):
5 H-Y
1 fuga biliar



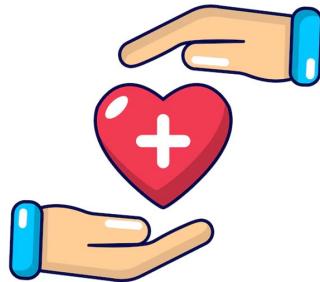
0 pacientes

discusio



- Complic <90d = **3,47%** → otras series:
 - UK- registro: Tingle et al. (9,6% vs. **3,47%**)
 - USA (1000 pac): Senter-Zapata et al. (9,8% vs. **0,67%**)
- NO extracción
 - soporte estructural transitorio
 - buena tolerancia biológica
 - reabsorción espontánea
- Complic Globales= **20,14%** → multifactorial?
- Mayoría CPRE → sólo **4,16%** cirugía

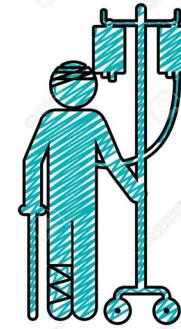
CONCLUS



SEGURIDAD
PROTECCIÓN
SOPORTE



BAJA TASA
REINTERVENCIONES
Y MORBILIDAD



NO FACTORES
CLÍNICOS
EVIDENTES =
↑ RIESGO

¡Muchas gra

