

Μεσοσφιγκτηριακή ή Διασφιγκτηριακή εκτομή: Ταξινόμηση, τεχνική, ενδείξεις και αποτελέσματα.

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Ιατρικό Κέντρο Αθηνών

ΕΙΣΑΓΩΓΗ CANNER

ΙΣΤΟΡΙΚΗ ΑΝΑΔΡΟΜΗ

- Η διασφιγκτηριακή εκτομή με κολοπρωκτική αναστόμωση (ISR) περιγράφηκε πρώτα από τον Schiessel et al. το 1994 ως μια εναλλακτική επέμβαση για αποφυγή της κοιλιοπερινεϊκής εκτομής του ορθού και της μόνιμης κολοστομίας.
- Θεωρείται η «κορυφαία» σφιγκτηροσωστική επέμβαση.
- Πολυάριθμες μελέτες καταδεικνύουν ότι είναι ογκολογικά εφάμιλλη, της κοιλιοπερινεϊκής εκτομής του ορθού, ενώ η ποιότητα ζωής των ασθενών είναι σε ποσοστά >70% πολύ ικανοποιητική.
- Τα ογκολογικά αποτελέσματα δεν επαπειλούνται όταν το άπω όριο εκτομής (DM) είναι >1cm και το περιμετρικό όριο εκτομής (CRM) >1mm.

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ΕΝΔΕΙΞΕΙΣ

Με βάση όσα αναφέραμε οι ενδείξεις της διασφιγκτηριακής εκτομής είναι:

- 1. Όγκος <5cm από είσοδο πρωκτού ή <2cm από οδοντωτή γραμμή
- 2. Διήθηση στο τοίχωμα του ορθού έως και τον έσω σφιγκτήρα
- 3. Εγκράτεια και καλή σφιγκτηριακή λειτουργία
- 4. Όχι διήθηση ανελκτήρα και έξω σφιγκτήρα
- 5. Όχι τοπικά προχωρημένη νόσο T4 ή κακής πρόγνωσης αδιαφοροποίητοι όγκοι
- 6. Όχι μεταστατική νόσο

ταξινομέμ

CANNIE NILO





Type I supra-anal (>1cm from the anal ring) had ultralow anterior resection;
Type II juxta-anal (<1cm from the anal ring)had partial ISR;
type III intra-anal (IAS invasion) had total ISR;
type IV transanal (EAS or levator ani invasion) had APR.

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A) ΚΛΑΣΙΚΗ ΤΕΧΝΙΚΗ ISR

ΔΙΑΣΦΙΓΚΤΗΡΙΑΚΗ ΕΚΤΟΜΗ ΟΡΘΟΥ ΑΝΟΙΚΤΗ Ή ΛΑΠΑΡΟΣΚΟΠΙΚΗ ΜΕ ΚΟΛΟΠΡΩΚΤΙΚΗ ΑΝΑΣΤΟΜΩΣΗ ΚΑΙ ΠΡΟΣΤΑΤΕΥΤΙΚΗ ΣΤΟΜΙΑ







Fig. 3 Exposition and circular incision of the anal canal. (Reprinted with permission from Laurent C, Rullier E. Intersphincteric rectal resection [in French]. J Chir (Paris) 2007;144(3):225–230.)

ANNHZ



Fig. 4 Dissection of the intersphincteric bloodless plane by scissors. (Reprinted with permission from Laurent C, Rullier E. Intersphincteric rectal resection [in French]. J Chir (Paris) 2007;144(3):225–230.)







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B) NEA TEXNIKH ISR-PTDA

ΔΙΑΣΦΙΓΚΤΗΡΙΑΚΗ ΕΚΤΟΜΗ ΟΡΘΟΥ ΜΕ PULL-THROUGH ΑΝΑΣΤΟΜΩΣΗ ΑΝΟΙΚΤΗ Ή ΛΑΠΑΡΟΣΚΟΠΙΚΗ ΧΩΡΙΣ ΠΡΟΣΤΑΤΕΥΤΙΚΗ ΣΤΟΜΙΑ

ΧΡΗΣΕΙΣ:

- 1) ΓΙΑ ΑΝΑΚΑΤΑΣΚΕΥΗ ΠΡΟΒΛΗΜΑΤΙΚΗΣ ΑΝΑΣΤΟΜΩΣΗΣ
- 2) ΓΙΑ ΑΠΟΦΥΓΗ ΠΡΟΣΩΡΙΝΗΣ ΣΤΟΜΙΑΣ

ΛΑΠΑΡΟΣΚΟΠΙΚΗ ΔΙΑΣΦΙΓΚΤΗΡΙΑΚΗΡΕΚΤΟΜΗ ΧΩΡΙΣ ΚΟΛΦΣΤΟΜΙΑ AY XA ΣΤΟΝ ΠΟ ΜΗΛΟ BATO KAPKIN ΟΡΘΟΥ **ANHΣ 27/11/2015**














REVISION INTERSPHINCTERIC RESECTION 23-3-2015

IOANNIS BOLANIS COLORECTAL SURGEON

DIRECTOR CONSULTANT SURGEON ATHENS MEDICAL CENTER





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NEA TEXNIKH ISR-PTDA

ΔΙΑΣΦΙΓΚΤΗΡΙΑΚΗ ΕΚΤΟΜΗ ΟΡΘΟΥ ΜΕ PULL-THROUGH ΑΝΑΣΤΟΜΩΣΗ ΤΙ ΜΑΣ ΠΡΟΣΦΕΡΕΙ;

1) ΓΙΑ ΑΝΑΚΑΤΑΣΚΕΥΗ ΠΡΟΒΛΗΜΑΤΙΚΗΣ ΑΝΑΣΤΟΜΩΣΗΣ U-LAR

- 1) ΔΙΑΦΥΓΗ
- 2) ΣΥΡΙΓΓΙΟ
- 3) УПОТРОПН

2) ΓΙΑ ΑΠΟΦΥΓΗ ΠΡΟΣΩΡΙΝΗΣ ΣΤΟΜΙΑΣ

- 1) ΟΤΑΝ ΔΕΝ ΤΗΝ ΕΠΙΘΥΜΕΙ Ο ΑΣΘΕΝΗΣ
- 2) ΟΤΑΝ ΥΠΑΡΧΟΥΝ ΙΑΤΡΙΚΟΙ ΛΟΓΟΙ Π.Χ ΠΡΟΗΓΟΥΜΕΝΕΣ ΕΝΤΕΡΕΚΤΟΜΕΣ, ΠΟΥ ΑΥΞΑΝΟΥΝ ΤΙΣ ΕΠΙΠΛΟΚΕΣ ΑΠΟ ΜΙΑ ΣΤΟΜΙΑ
- 3) ΑΦΥΔΑΤΩΣΗ ΚΑΙ ΗΛΕΚΤΡΟΛΥΤΙΚΕΣ ΔΙΑΤΑΡΑΧΕΣ

NEA TEXNIKH ISR-PTDA

3) ΑΠΟΦΕΥΓΟΥΜΕ ΤΗ ΣΤΟΜΙΑ ΚΑΙ ΤΗΝ ΣΥΓΚΛΕΙΣΗ ΤΗΣ

- 1) ΜΕΙΩΣΗ ΕΙΛΕΟΥ (ΟΧΙ ΕΝΔΟΚΟΙΛΙΑΚΗ ΑΝΑΣΤΟΜΩΣΗ)
- 2) ΜΙΚΡΟΤΕΡΟ ΚΟΣΤΟΣ ΓΙΑ ΤΑΜΕΙΑ ΚΑΙ ΑΣΘΕΝΗ
 - 1) ΔΕΝ ΧΡΕΙΑΖΟΝΤΑΙ ΥΛΙΚΑ ΣΤΟΜΙΑΣ (ΧΡΗΣΗ ΠΑΝΑΣ)
 - 2) 2Η ΕΠΕΜΒΑΣΗ ΠΟΛΥ ΑΠΛΟΥΣΤΕΡΗ, ΗΜΕΡΙΣΙΑ ΝΟΣΗΛΕΙΑ, ΤΟΠΙΚΗ ΑΝΑΙΣΘΗΣΙΑ
 - 3) 2Η ΕΠΕΜΒΑΣΗ ΜΠΟΡΕΙ ΝΑ ΓΙΝΕΙ ΕΝΩ ΓΙΝΕΤΑΙ Η ΧΗΜΕΙΟΘΕΡΑΠΕΙΑ
- 3) ΜΕΙΩΣΗ ΕΠΙΠΛΟΚΩΝ ΑΝΑΣΤΟΜΩΣΗΣ
 - 1) ΔΙΑΦΥΓΗ
 - 2) ΣΤΕΝΩΣΗ (ΕΝΤΕΡΟ ΛΕΙΤΟΥΡΓΕΙ ΑΜΕΣΑ)
 - 3) ΑΜΕΣΟΣ ΕΛΕΓΧΟΣ ΚΑΤΑΣΤΑΣΗ ΑΝΑΣΤΟΜΩΣΗΣ ΟΠΤΙΚΑ

NEA TEXNIKH ISR-PTDA

ΤΕΧΝΙΚΑ ΘΕΜΑΤΑ

- 1) ΙΚΑΝΟ ΜΗΚΟΣ (ΠΑΝΤΑ ΚΙΝΗΤΟΠΟΙΗΣΗ ΣΠΛΗΝΙΚΗΣ ΚΑΜΠΗΣ)
- 2) ΔΥΣΑΝΑΛΟΓΙΑ ΕΝΤΕΡΟΥ ΠΥΕΛΟΥ

AMIN

3) ΚΑΛΗ ΑΙΜΑΤΩΣΗ (ΕΠΙΠΛΕΟΝ 7-10ΕΚ)

ΑΠΟΤΕΛΕΣΜΑΤΑ

QANNH KANN

| Received: 12 January 2017 Accepted: 16 February 2017 | |
|--|---|
| DOI: 10.1002/ags3.12003 | |
| REVIEW ARTICLE | WILEY AGS Annals of Gastroenterological Surgery |
| Intersphincteric resection | n for very low rectal cancer: A review |
| of the updated literature | |
| Kazuo Shirouzu ¹ 🕞 Naotaka Mura | kami ¹ Yoshito Akagi ² |
| 5 M | |
| ANH. | |
| QA. | |
| | ΑΝΝΗΣ ΜΠΟΛΑΝΗΣ ΧΕΙΡΟΥΡΓΟΣ |

| TABLE 4 Oncological outcomes ^a | <u> </u> | |
|--|---------------------|----------------------|
| Item | Open-ISR | Laparoscopic-ISR |
| TNM stage: I/II/III/IV (%) | 0-58/4-63/16-78/0-7 | 0-48/11-24/22-86/3-8 |
| R0 resection (%) | 90–100 | 95–96.4 |
| Distal resection margin (mm) | 5-25 | 12–30 |
| Radial resection margin \leq 1 mm (%) | 4.0–19.6 | 5.0–15.5 |
| Retrieved lymph node (n) | 14.7 | 13.3–15.2 |
| Median follow up (months) | 12–94 | 31.5–53 |
| Overall recurrence (%) | 13.3–20.0 | 17.9–28.2 |
| Distant metastasis (%) | 0–19.0 | 8.5–24 |
| Local recurrence (%) | 0–22.7 | 2.6–8.2 |
| Disease-free 3-year survival (%) | 77.0 | 75.0–90.5 |
| Overall 3-year survival (%) | 81.6 | 86.6–94.8 |
| Disease-free 5-year survival (%) | 68.4-86 | 70–82.8 |
| Overall 5-year survival (%) | 76.5–97 | 85–88.4 |
| ^a Available data from 22 articles were summarized. ^{21–42} ISR, intersphincteric resection. | | |
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TABLE 5 Functional outcomes^a

| Assessment at ≥1 year after stoma closure | Open-ISR | Laparoscopic-ISR |
|---|-----------|------------------|
| Mean maximum resting pressure (cmH ₂ O) | 42–75 | NR |
| Mean maximum squeeze pressure (cmH ₂ O) | 186–259 | NR |
| Median stool frequency/24 h | 1.8–5.1 | 2–6 |
| 1–3 (%) | 50–85 | NR |
| 4–5 (%) | 12–57.1 | NR |
| >5 (%) | 0–36 | NR |
| Stool fragmentation (%) | 15–78.9 | 81 (NS) |
| Urgency (<15 min) (%) | 2–51.7 | 58-83 |
| Incontinence for flatus (%) | 7.7–68.2 | 72.8 (NS) |
| Nocturnal soiling (%) | 23.8–52.9 | 92 (NS) |
| Daytime soiling (%) | 26–35 | 92 (NS) |
| Pad wearing (%) | 19–57 | NR |
| Feces and flatus discrimination (%) | 4–86 | NR |
| Anti-diarrhea medication (%) | 0–33.3 | NR |
| Mean Wexner score (range) | 2.8–12 | 11–14 |
| Kirwan grade (%) | | |
| Grade I (perfect) | 13.9–84.6 | NR |
| Grade II (incontinence of flatus) | 7.7–36.6 | NR |
| Grade III (occasional minor soiling) | 3.8–38.6 | NR |
| Grade IV (frequent major soiling) | 0–27 | NR |
| Grade V (required colostomy) | 0–5.9 | 4.9 (NS) |
| Patient satisfaction (%) | | |
| Very low | 14–18 | |
| Medium | 11 | NR |
| Perfect (almost) | 71 | |

^aAvailable data were summarized from 14 articles.^{16,18,21–26,30,31,33,45–47} NR, not reported; NS, not sufficient data.

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| TABLE 3 Patient characteristics, surgical outcomes a | nd postoperative complications ^a | \frown |
|--|---|----------------------|
| Item | Open-ISR | Laparoscopic-ISR |
| Age (years) | 51–65 | 55–64 |
| Gender: Male/Female (%) | 33–74/26–67 | 61-76/24-39 |
| Body mass index (kg/m²) | 25 | 21.4–24.3 |
| Distance from AV [DL] (mm) | 30–50 [10–50] | 33–55 [17] |
| T factor (T1/T2/T3/T4) (%) | 3/13/83/0 | 0-12/11-33/43-86/0-4 |
| Pre-op CRT (%) | 0–100 | 26.9–100 |
| Type of ISR: P-ST/T/ESR (%) | Almost 100/13–100/Few | 73–75/25–27/0 |
| J-Pouch anastomosis (%) | Almost <50 | Almost <50 |
| Diverting stoma (%) | Almost 100 | 14–100 |
| Operating time (min) | 416 | 185–420 |
| Blood loss (mL) | 155–265 | 59–303 |
| Intraoperative transfusion (%) | 10 | 0–1.5 |
| Postoperative stay (days) | 16-18 | 9–15 |
| Operative mortality (%) | 0-1.7 | 0–1.1 |
| Leakage (%) | 4.3-48 | 3.8–24 |
| Vaginal fistula (%) | 0–19.4 | 1.5–2.8 |
| Vesical fistula (%) | 0–0.8 | 0 |
| Colonic ischemia (necrosis) (%) | 0–2.0 | 2.5–14.3 |
| Sepsis (%) | 0-8.7 | 0 |
| Pelvic abscess (%) | 0–5.6 | 0.8–8.1 |
| Pelvic hematoma (%) | 0–6.5 | 0 |
| Ileus (bowel obstruction) (%) | 0–8.5 | 1.5–15.4 |
| Stenosis (%) | 8.4–23.3 | 2.4–13 |
| Not closed (diverting stoma) (%) | 0–12.5 | NR |
| Additional surgery ^b (%) | 0–12.9 | NR |
| Grade of morbidity (%) | | |
| Dindo I–II | 96 | 63-95 |
| Dindo III–V | 3.8–27.7 | 5.4–37 |
| Overall morbidity (%) | 7.5–38.3 | 12.5–32.1 |

^aAvailable data from 22 articles were summarized.^{21–42}

^bAbdominoperineal resection, Hartmann's procedure, and/or re-creation of stoma were required because of postoperative surgical and/or functional complications.

AV, anal verge; CRT, chemoradiotherapy; DL, dentate line; ESR, external anal sphincter resection (ISR with combined resection of partial or extended external sphincter); ISR, intersphincteric resection; P-ST, partial-subtotal ISR; T, total ISR.



Intersphincteric Resection for Patients With Low-Lying Rectal Cancer: Oncological and Functional Outcomes

In Ja Park, Jin Cheon Kim

| Study | Year | No. | Anastomotic leakage (%) | Other complications (%) | Mortality (%) | Overall surgical morbidity (%) |
|------------------|--------------|-------------|-------------------------------|--|---------------|--------------------------------|
| Köhler [11] | 2000 | 31 | 48 (surgery was needed in 16) | Stricture, 9.7; wound complication, 6.5; voiding disturbance, 6.5; ileus, 3.2 | 0 | |
| Tiret [6] | 2003 | 26 | 11 | Wound complication, 3.8 | 0 | 30 |
| Saito [7] | 2004 | 35 | 11.4 | Perianal abscess, 11.4; wound, 2.9; bleeding, 5.7 | 0 | 31 |
| Schiessel [14] | 2005 | 121 | 5.1 | Stricture, 9.4 | 0.8 | 7.7 |
| Saito [15] | 2006 | 228 | 10.1 | Stricture, 3.1; pelvic abscess, 4.4; bleeding, 1.3 | 0.4 | 24 |
| Chamlou [18] | 2007 | 90 | 8.8 | | 0 | 18.8 |
| Portier [17] | 2007 | 105 | - | Local septic complication, 8.7 (CAA, 7.6) | 1.2 (CAA, 0) | |
| Akasu [19] | 2007 | 106 | 12 | | 1 | 33 |
| Bretagnol [13] | 2004 | 40 | 8 (CAA, 14) | Stricture, 5 (CAA, 3) | - | |
| Weiser [21] | 2009 | 44 | 5 | Stricture, 16 | - | 31.8 |
| Baek [25] | 2013 | 89 | Lap (8.1), robotic (8.5) | Intrabdominal abscess: Lap (8.1), robotic (8.5) Ileus: Lap (5.4), robotic (2.1) | - | Lap (27), robotic (19.1) |
| CAA, coloanal an | astomosis; l | Lap, laparo | oscopic. | | | |
| | 1 | | | | | |
| | | | | | | |

| | 0 | | 1 | | 1 | | | | | |
|----------------|------|--------------------|--|--------------------------------|---------------------------------|---------------------------------|---|---|--|--|
| Study | Year | Sample size (n) | Tumor location from anal verge (cm) | Follow- up duration (mo) | PCRT (%) | R0 resection rate (%) | Length of distal resection margin (cm) | 5-Year local recurrence rate (%) | 5-Year overall survival rate (%) | 5-Year disease-free survival rate (%) |
| Braun [2] | 1992 | 63 | - | 80 | - | | (-) | | 62 | - |
| Köhler [11] | 2000 | 31 | 1.3 | 82 | 0 | - | 1.6 | 9.7 | 79 | - |
| Rullier [12] | 2001 | 21 | 4.5 | 30 | 10 | 98 | 2.3 | 2 | 85 (3 yr) | 85 (3 yr) |
| Tiret [6] | 2003 | 26 | 4.25 | 39 | 38.5 | 96.2 | 1.6 | 3.4 | 96 | - |
| Saito [7] | 2004 | 35 | 0–2 | 23 | 57.1 | 100 | 1.3 | 1 | - | - |
| Schiessel [14] | 2005 | 121 | 3 | 94 | 0 🖊 | 96.7 | - | 5.3 | 126.1 mo | - |
| Saito [15] | 2006 | 228 | 3.4 | 41 | 25 | 98.7 | - | 6.7 | 91.9 | 83.2 |
| Chamlou [18] | 2007 | 90 | 3.5 | 56.2 | 41 | 94.4 | 1.2 | 6.6 | 82 | 75 |
| Portier [17] | 2007 | 105 | 4.1 | 66.8 | 53.2 | 96 | 2.6 | 10.6 | 86.1 | 83.9 |
| Akasu [19] | 2007 | 106 | 3 | 41 | 0 | 97.2 | 1.2 | 7.3 (3 yr) | 95 (3 yr) | - |
| Weiser [21] | 2009 | 44 | ≤6 | 47 | 100 | 90 | 1.0 | 0 | 96 | 83 |
| Park [24] | 2011 | 210 | Lap (3.6), open (4.7) | 34 | Lap (7.7), open (1.3) | Lap (97.7), open (95) | Lap (1.5), open (1.4) | Lap (2.6), open (7.7) | - | Lap (82.1), open (77) |
| Laurent [27] | 2012 | 175 | ≤6 | 53 | 90.3 | 88 | 1.9 | 3.5 | 84 | 90 |
| Baek [25] | 2013 | 84 | Lap, (5.52); robotic, (4.39) | 31.5 | Lap, (32,4); robotic, (42.6) | Lap, (91.9); robotic, (97.9) | Lap, (1.6); robotic, (1.1) | Lap, (5.4); robotic, (6.4) | Lap, (90.7); robotic, (86.5) | Lap, (81.2); robotic, (80.6) |
| Saito [32] | 2014 | 199 | <5 | 78 | 24.6 | 80.4 | - | 19.7 (7 yr) | 78.3 | 66.7 |

Table 2. Oncological outcomes after an intersphincteric resection for patients with rectal cancer

PCRT, preoperative chemoradiotherapy; Lap, laparoscopic.

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| | | | Type of anastomosis (n) | | | Evaluation | Stool | Contine | | |
|--|------|-----------------|-------------------------|-------|---------------------|--|---|--|---|-----------------|
| Study | Year | No. of patients | Straight | Pouch | Others ^a | timing, after stomy closure (mo) | frequency, per day | Normal or good | Major incontinence | Urgency |
| Braun [2] | 1992 | 41 | 41 | 0 | 0 | - | Straight, 2.2; pouch, 2–3 | 80 | 3 | 22 |
| Köhler [11] | 2000 | 26 | 0 | 26 | 0 | - | 3.3 | 55.6 | 33.3 | - |
| Rullier [12] | 2001 | 21 | 0 | 21 | 0 | - | 2.5 | 79 | 9.5 | |
| Tiret [6] | 2003 | 25 | 0 | 25 | 0 | 27 | - | 77 | 0 | |
| Bretagnol [13] | 2004 | 40 | 6 | 34 | | 4 | 2.8 | 27 | 12 | - |
| Saito [7] | 2004 | 21 | 28 | 2 | 5 | 12 | More than 6: 18.2% | 54.6 | 0 | 36.4 |
| Schiessel [14] | 2005 | 118 | 118 | - | 2.24 | 86.3 | 14.5 | - | | |
| Saito [15] | 2006 | 181 (total 228) | 147 | 51 | 30 | 24 | - | 68 | 7 | - |
| Yamada [20] | 2007 | 35 | 0 | 35 | 0 | 12 | Total, 3.6; subtotal, 3.3; partial, 2.8 | Total, 60; subtotal, 85.7; partial, 88.9 | Total, 0; subtotal, 0; partial, 5.6 | |
| Chamlou [18] | 2007 | 83 | 0 | 83 | 0 | - | 2.3 | 76 | 24 | 19 |
| Kim [26] | 2014 | 222 | 222 | 0 | 0 | 6, 12 | - | - | - | Seria compar |
| Saito [32] | 2014 | 199 | | - | - | >5 yr | 4 | - | - | 32 |
| ^a Coloplasty and side-to-end anastomosis. | | | | | | | | | | |

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REVIEW ARTICLE

Intersphincteric resection for very low rectal cancer: a systematic review

Yoshito Akagi · Tetsushi Kinugasa · Kazuo Shirouzu

| Author | Ref. No. | Years | Patients | Age (years) | Sex (M/F) | Distance from AV [DL] (mm) | T category |
|--------------------|----------|-------|----------|-------------|-----------|----------------------------|------------|
| Köhler | [5] | 2000 | 31 | 60 | 17/14 | 13 ± 9 [DL] | T1-T3 |
| Vorobiev | [6] | 2004 | 27 | 55 (26–75) | 16/11 | 10 (5–15) [DL] | T2-T3 |
| Schiessel | [7] | 2005 | 121 | 65/62 (M/F) | 83/38 | 30 (10-50) | T1-T3 |
| Rullier | [8] | 2005 | 92 | 65 (25-86) | 57/35 | 30 (15–45) | T1-T3 |
| Hohenberger | [9] | 2006 | 65 | NR | NR | <20 [DL] | T1-T2 |
| Chin | [10] | 2006 | 18 | 61 (42–79) | 7/11 | 10-30 [DL] | T2-T3 (T4) |
| Saito ^a | [11] | 2006 | 228 | 58 (27–77) | 168/60 | 34 (20–50) | T1-T3 (T4) |
| Chamlou | [12] | 2007 | 90 | 59 (27-82) | 59/31 | 35 (22–52) | T1-T3 (T4) |
| Portier | [13] | 2007 | 173 | 64 | 57/116 | 41 ± 1.4 | T1-T3 (T4) |
| Krand | [14] | 2009 | 47 | 57 (27–72) | 31/16 | 33 (15-50) | T2-T3 |
| Saito | [15] | 2009 | 132 | 57 (27-80) | 97/35 | 35 (15-50) | T1-T3 (T4) |
| Han | [16] | 2009 | 40 | 62 (34–73) | 24/16 | 20–50 [DL] | T1-T2 |
| Weiser | [17] | 2009 | 44 | 54 (28–78) | 25/19 | 50 (30-60) | T3-T4 |
| Kuo | [18] | 2011 | 26 | 51 (26–71) | 16/10 | 35 (25–50) | T3-T4 |
| Our data | | 2012 | 83 | 65 (28–91) | 48/35 | 30 (10-50) | T1–T3 (T4) |

 Table 1 Patient and tumor characteristics

Ref. No. reference number (available data were summarized), M male, F female, AV anal verge, DL dentate line, NR not reported

^a Japanese experience, including data from this institute

Table 2 Surgical proce

| Table 2 Surgical procedures | Author | Patients | Pre-op C (%) | CRT Method of ISR P-ST/T/ESR | Pouch anastomosis (%) | Diverting stoma (%) |
|---|---|--|---|---|--|---|
| Pre-op CRT preoperative chemoradiotherapy, ISR intersphincteric resection, P partial, ST subtotal, T total, ESR external sphincter resection (ISR with combined resection of partial or extended external sphincter), NR not reported ^a Japanese experience, including data from this institute | Köhler Vorobiev Schiessel Rullier Hohenberger Chin Saito ^a Chamlou Portier Krand Saito Han Weiser Kuo Our data | 31 27 121 92 65 18 228 90 173 47 132 40 44 26 83 | 0 7 0 88 65 33 25 41 53 100 36 2.5 100 88 1.2 | 31/0/0 0/27/0 Almost P–ST, T Almost P–ST, T Almost P–ST NR 159/69 (T and ESR) Almost P–ST Almost P 47/0/0 105 (P–ST and T)/27 35/5/0 44/0/0 26/0/0 17/34/32 | 0 100 (C-pouch) 0 57 Sometimes 100 22 100 NR 40 (coloplasty) NR 18 48 0 30 | 100 100 100 100 100 100 100 100 100 28 NR 100 100 28 NR |
| 19AL | | IOANNH | Σ ΜΠΟΛΑΝΗ | Σ ΧΕΙΡΟΥΡΓΟΣ | | |



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| Complication | Data from 14 articles (%) ^a | Our data (%) |
|---------------------------------|--|-----------------|
| Mortality | 0-1.7 | 0 |
| Leakage | 4.3-48 | 8.4 |
| Vaginal fistula | 0-19.4 | 1.2 |
| Vesicle fistula | 0-0.8 | 0 |
| Colonic ischemia (necrosis) | 0-2.0 | 2.4 |
| Sepsis | 0-8.7 | 1.2 |
| Pelvic abscess | 0-5.6 | 4.8 |
| Pelvic hematoma | 0-6.5 | 0 |
| Ileus (bowel obstruction) | 0-8.5 | 2.4 |
| Stenosis | 8.4-15.9 | 4.8 |
| Unable to divert stoma closure | 0–5 | 2 |
| Additional surgery ^b | 0 12 0 | 0 |
| Overall | 7.5–38.3 | 24.1 |

Table 3 Postoperative complications

^a Available data were summarized

^b Abdominoperineal resection, Hartmann's procedure, and/or recreation of stoma were required because of postoperative surgical and/or functional complications

ANNY

| Table 4 Oncologic outcomes | | |
|--|---------------------------------------|------------|
| Oncologic item | Data from 14 articles ^a | Our data |
| TNM stage; I/II/III/IV (%) | 0–58/4–63/16–78/ 0–7 | 27/29/24/3 |
| R0 resection (%) | 92-100 | 100 |
| Distal resection margin (mm) | 5-20 | 10 (2-40) |
| Radial resection margin $\leq 1 \text{ mm} (\%)$ | 4.0-13.3 | 11 |
| Median follow-up (months) | 40–94 | 60 (5-110) |
| Overall recurrence (%) | 13.3–19.4 | 25 |
| Distant metastasis (%) | 2.5-19.0 | 10 |
| Local recurrence (%) | 0–22.7 | 11.3 |
| Disease-free 5-year survival (%) | 69–86 | 74 |
| Overall 5-year survival (%) | 79–97 | 87 |

^a Available data were summarized

scores <12 and lower rates of Grade IV and V. Patient satisfaction is around 70 %. Unexpectedly, anti-diarrhea medication is not frequently required.

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Table 5 Comparison of the oncologic outcomes between surgical procedures

CAA coloanal anastomosis, ISR intersphincteric resection, APR abdominoperineal resection, LR local recurrence rate, RFS recurrence-free (metastasisfree) survival rate, DSS diseasespecific (cancer-related) survival rate, DFS disease-free (metastasis-free) survival rate, OS overall survival rate, NA not available

* *p* < 0.05

| nes between | Author | Oncologic | Surgica | al procedu | re | Notes |
|------------------|---------|------------------|------------|------------|------------|---|
| res | | outcome | CAA (%) | ISR (%) | APR (%) | |
| | Portier | LR | 6.7 | 10.6 | NA | No differences in background between |
| astomosis, ISR | | 5-year RFS | 74.7 | 83.9 | | CAA and ISR, except tumor location |
| resection, APR | | 5-year DSS | 80 | 86.1 | | |
| rate, RFS | Weiser | LR | 2 | 0 | 9 | No differences in background among CAA, |
| metastasis- | | RFS | 85 | 83 | 47 | ISR and APR, except tumor location, |
| e, DSS disease- | | DSS | 97 | 96 | 59 | response rate |
| S disease-free | Saito | LR | NA | 10.6 | 15.7 | No differences in background between |
| survival rate, | | 5-year local-RFS | | 83.4 | 80.6 | ISR and APR |
| val rate, NA not | | 5-year DFS | | 69.1 | 63.3 | |
| | | 5-year OS* | | 80.0 | 61.5 | |
| | | | | | | |
| 10AN | | ιοάννης Μι | πολάνης χ | ΈΙΡΟΥΡΓΟΣ | | |

| Table 6 Functional outcomes | Assessment at 1 year after stoma closure | Data from 14 articles ^a | Our data $(n = 67)$ |
|-------------------------------------|---|------------------------------------|---------------------|
| | Mean maximum resting pressure (cm H ₂ O) | 52–75 | 41 (4-84) |
| | Mean maximum squeeze pressure (cm H ₂ O) | 186–259 | 178 (20-346) |
| | Median stool frequency/24 h | 1.8–4.7 | 5.1 (1-20) |
| | 1-3 (%) | 50-85 | 46.8 |
| | 4-5 (%) | 12–57.1 | 17.7 |
| | >5 (%) | 0–36 | 35.5 |
| | Stool fragmentation (%) | 15-78.9 | 53.2 |
| | Urgency (<15 min) (%) | 2–51.7 | 33 |
| | Incontinence for flatus (%) | 7.7–32 | 16 |
| | Nocturnal soiling (%) | 23.8–29 | 16 |
| | Daytime soiling (%) | 26–27 | 22.4 |
| | Pad wearing (%) | 19–57 | 53.8 |
| | Feces and flatus discrimination (%) | 4-86 | 88 |
| | Anti-diarrhea medication (%) | 0-33.3 | 16.4 |
| | Mean Wexner score (range) | 2.8-12 | 7.2 (1-20) |
| | Kirwan grade (%) | | |
| | Grade I (perfect) | 13.9–84.6 | 59.2 |
| | Grade II (incontinence of flatus) | 7.7–36.6 | 16.1 |
| | Grade III (occasional minor soiling) | 3.8-38.6 | 21.0 |
| | Grade IV (frequent major soiling) | 0–27 | 9.7 |
| | Grade V (requiring colostomy) | 0-5.9 | 0 |
| | Patient satisfaction (%) | | |
| | Very low | 14–18 | 8.8 |
| | Medium | 11 | 19.3 |
| ^a Available data were | Perfect (almost) | 71 | 71.9 |
| summarized | | | |
| ~ | | | |

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> 2013 – 2019 6 ΕΤΗ ΛΕΙΤΟΥΡΓΙΑΣ

ΑΠΟΤΕΛΕΣΜΑΤΑ

Κλινική Γενικής & Λαπαροσκοπικής Χειρουργικής και Χειρουργικής Γαστρεντερικού ΔΗΜΟΣΙΕΥΣΗ 2016

CASE SERIES

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Intersphincteric Resection for Rectal Cancer with Pull Through Delayed Anastomosis. An Alternative to Coloanal Anastomosis with Covering Ileostomy

I. Bolanis, S. Bassioukas, D. Psilopoulos, D. Gialvalis, G. Filippou, R. Galanopoulou, M. Oikonomou, N. Spourlis

Abstract

Standard surgical treatment for low rectal cancer below 5 cm from the anal verge used to be abdominoperineal resection (APR). In recent years sphincter saving techniques, like intersphincteric resection (ISR) proved to be an ongologically accepted alternative. Operations for ultra low rectal cancer are challenging and coloanal anastomosis is probably the source of most postoperative complications. We present ISR with pull-through delayed anastomosis (PTDA) as a surgical option for the management of elective cases, when standard coloanal anastomosis (CAA) is at greater risk of dehiscence or a covering stoma is refused or dangerous.

Key words: Rectal cancer; intersphincteric resection (ISR); pull-through delayed anastomosis (PTDA); anastomotic salvage

Κλινική Γενικής & Λαπαροσκοπικής Χειρουργικής και Χειρουργικής Γαστρεντερικού 2013 –2019 (6χρ)

| PATIENTS | 35 |
|--------------------|--------------------------------|
| ISR (18) | 18 |
| ISR – PTDA (21) | 4 REVISIONS ISR-PTDA AFTER ISR |
| | 17 FIRST OPERATION |
| MALE / FEMALE | 27/8 |
| RT/CHT NEOADJUVANT | 32/35 (91%) |
| AGE | 49-83 (61) |
| I CANK | |

Κλινική Γενικής & Λαπαροσκοπικής Χειρουργικής και Χειρουργικής Γαστρεντερικού 2013 –2019 (6χρ)

| PATIENTS / YEAR | 5,8 |
|---|----------------------|
| DISTANCE FROM ANAL VERGE | 1,5 – 4 cm (2,8 cm) |
| COMPLETE RESPONSE TO RT | 7 (20%) |
| R0 / R1 | 34 / 1 (97% / 3%) |
| RECURRENCE | 4 (R1, EMBOLI) (11%) |
| REVISION (ANASTOMOSIS) | 4 (11%) |
| COMPLICATIONS (STENOSIS, INFECTION, NECROSIS) | 8 (22%) |

Συμπεράσματα

- Πριν την έναρξη οποιασδήποτε θεραπείας καλή σταδιοποίηση και εξέταση από τον ειδικό χειρουργό.
- Η διατήρηση του σφιγκτήρα δεν επηρεάζει την επιβίωση όταν γίνεται σωστά και με τις κατάλληλες ενδείξεις.
- 3. Αντενδείξεις διάσωσης σφιγκτήρα είναι η διήθηση του έξω σφιγκτήρα ή του ανελκτήρα και η ακράτεια.
- Η σωστή επιλογή των ασθενών και η καλή συνεργασία χειρουργού, ογκολόγου και ακτινολόγου στα πλαίσια διεπιστημονικής ομάδας εξασφαλίζει τα καλύτερα αποτελέσματα.

Συμπεράσματα

- Η διασφιγκτηριακή εκτομή ορθού (ISR) για πολύ χαμηλό καρκίνο του ορθού είναι μια ογκολογικά ασφαλής και τεχνικά εφικτή επέμβαση.
- Μειώνει αρκετά τις ενδείξεις για κοιλιοπερινεϊκή εκτομή για αυτό και κερδίζει σε δημοτικότητα σε Ευρώπη και Ασία τα τελευταία χρόνια.
- Η εναλλακτική ISR-PTDA έχει ακόμα περισσότερα πλεονεκτήματα καθώς αποφεύγει τη νοσηρότητα της ειλεοστομίας.

ΣΑΣ ΕΥΧΑΡΙΣΤΩ