Nieuwe technieken rectumcarcinoom

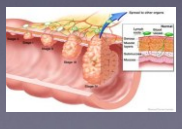
Jarno Melenhorst
colorectaal chirurg MUMC

Maastricht UMC+

UNIKLINIK RWTH AACHEN

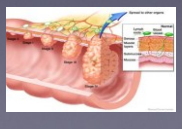
Lay out

- Rectumcarcinoom
- TME (totaal mesorectale excisie)
- TA (transanale) TME
- Robot



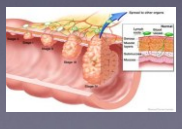
Rectumcarcinoom

- Per jaar wordt het colorectaal carcinoom bij circa 13.000 nieuwe patiënten vastgesteld. Bij ongeveer 1 op de 3 patiënten van deze groep gaat het om een rectumcarcinoom.



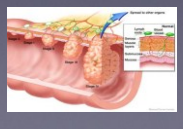
Rectumcarcinoom

- Belangrijkste ontwikkelingen
  - Pre operatieve radiotherapie
  - Neo-adjuvante chemoradiatie therapie
  - TME chirurgie



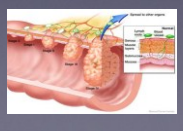
Rectumcarcinoom

- Afhankelijk stadium
  - chirurgie
  - 5*5 Gy pre operatief en chirurgie
  - chemoradiatie herevaluatie en chirurgie



Chirurgie

- Belangrijkste stap in curatie
- Belangrijkste ontwikkeling: Totaal Mesorectale Excisie chirurgie (TME)
- 1982 prof Bill Heald, Basingstoke UK



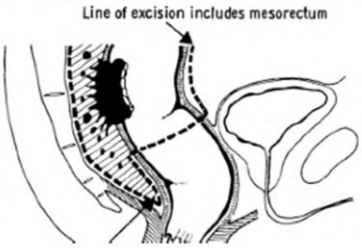
Br. J. Surg. Vol. 69 (1982) 613-616 Printed in Great Britain

The mesorectum in rectal cancer surgery—the clue to pelvic recurrence?

R. J. HEALD, E. M. HUSBAND AND R. D. H. RYALL
Basingstoke Bowel Cancer Clinic, Basingstoke District Hospital, Basingstoke, Hampshire.

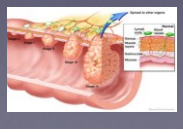
Five cases are described where minute foci of adenocarcinoma have been demonstrated in the mesorectum several centimetres distal to the apparent lower edge of a rectal cancer. In 2 of these there was no other evidence of lymphatic spread of the tumour. In orthodox anterior resection much of this tissue remains in the pelvis, and it is suggested that these foci might lead to suture-line or pelvic recurrence. Total excision of the mesorectum has, therefore, been carried out as a part of over 100 consecutive anterior resections. Fifty of these, which were classified as 'curative' or 'conceivably curative' operations, have now been followed for over 2 years with no pelvic or staple-line recurrence.

The incidence of locally recurrent disease is the most important measure of the success of any new operation for rectal cancer. Thus there has been anxiety (1) that the increase in sphincter-conserving surgery due to staplers might lead to more local recurrences. Four years ago, therefore, we combined the decrease in permanent colostomies in our unit with a change in the technique for pelvic dissection. In particular we determined that all cancers of the midrectum should be excised with the mesorectum intact. Thus the phase of dividing this during anterior resection, which is described in standard textbooks (2), was completely omitted and the whole mesorectum was encompassed by the plane of excision. In this way none of the usual 'block' of fatty lymphovascular tissue remains in the posterior half of the pelvis even though the anus, the levators, a small rectal reservoir and as much as possible of the nerve plexuses have been preserved.

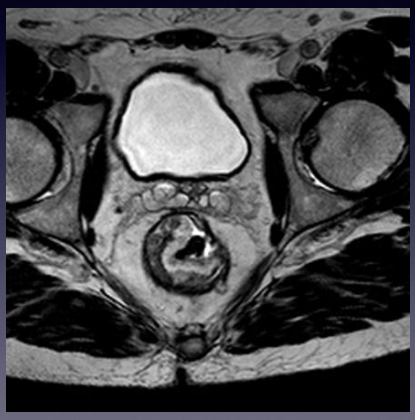


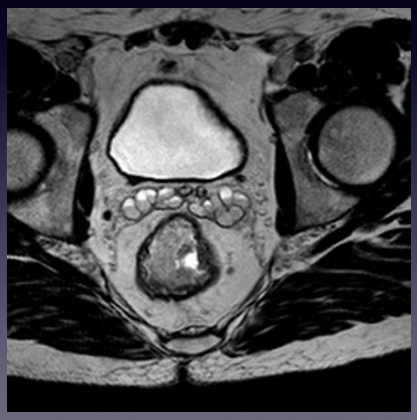
TME chirurgie

- Opereren in embryologisch avasculaire vlak
- Scherpe diathermische dissectie
- Zenuw sparend: seksuele en urinaire en fecale functie
- Dramatische reductie in recidieven

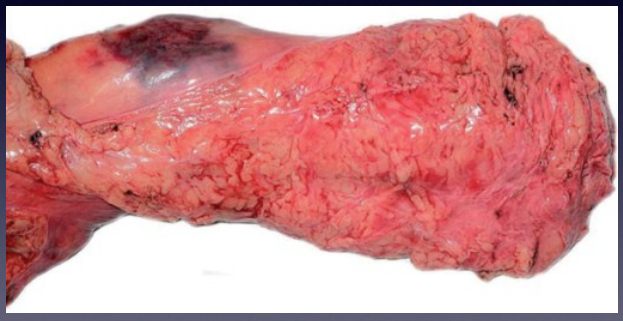


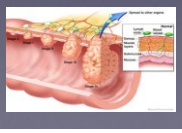
TME





TME preparaat





Dutch TME trial

N Engl J Med. 2001 Aug 30;345(9):638-46.

Preoperative radiotherapy combined with total mesorectal excision for resectable rectal cancer.

Kapiteijn E[1], Marijnen CA, Nagtegaal ID, Putter H, Steup WH, Wiggers T, Rutten HJ, Pahlman L, Glimelius B, van Krieken JH, Leer JW, van de Velde CJ; Dutch Colorectal Cancer Group.

Author information

Abstract

BACKGROUND: Short-term preoperative radiotherapy and total mesorectal excision have each been shown to improve local control of disease in patients with resectable rectal cancer. We conducted a multicenter, randomized trial to determine whether the addition of preoperative radiotherapy increases the benefit of total mesorectal excision.

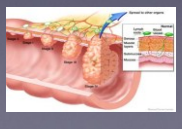
METHODS: We randomly assigned 1861 patients with resectable rectal cancer either to preoperative radiotherapy (5 Gy on each of five days) followed by total mesorectal excision (924 patients) or to total mesorectal excision alone (937 patients). The trial was conducted with the use of standardization and quality-control measures to ensure the consistency of the radiotherapy, surgery, and pathological techniques.

RESULTS: Of the 1861 patients randomly assigned to one of the two treatment groups, 1805 were eligible to participate. The overall rate of survival at two years among the eligible patients was 82.0 percent in the group assigned to both radiotherapy and surgery and 81.8 percent in the group assigned to surgery alone (P=0.84). Among the 1748 patients who underwent a macroscopically complete local resection, the rate of local recurrence at two years was 5.3 percent. The rate of local recurrence at two years was 2.4 percent in the radiotherapy-plus-surgery group and 8.2 percent in the surgery-only group (P<0.001).

CONCLUSIONS: Short-term preoperative radiotherapy reduces the risk of local recurrence in patients with rectal cancer who undergo a standardized total mesorectal excision.

Open naar laparoscopisch

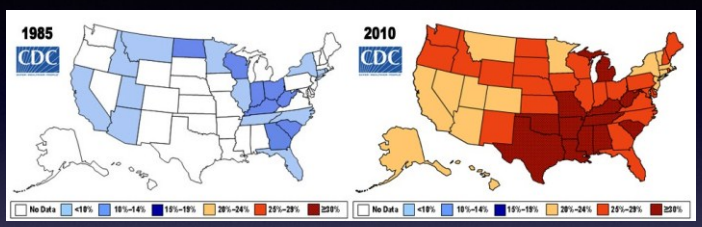
- korter verblijf in ziekenhuis
- minder bloedverlies
- minder wondproblemen en littekenbreuken
- oncologisch safe

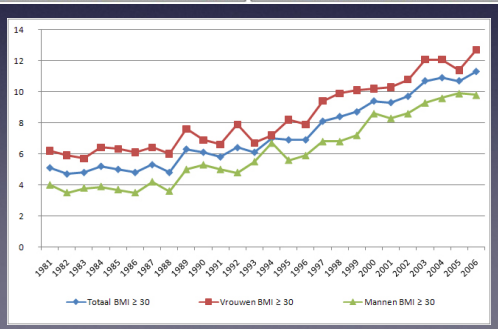


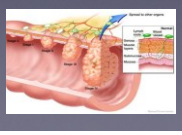
Lastige casuïstiek

- Lage rectumcacinomen
- Mannen met viscerale obesitas
  - >geen ruimte
  - >slecht zicht
  - >kans op slechte preparaten
  - >problemen met stapelen
    - hoe meer stapelen hoe groter de kans op naad lekkage

Obesitas

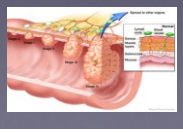






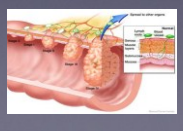
Wat nodig

- Manier om laatste gedeelte goed te doen
- Intact TME preparaat en oncologische outcome
- Laag percentage naadlekkages
- Goede ergonomie



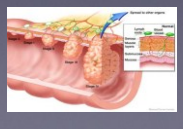
Oplossingen?

- Transanale TME
- Robot

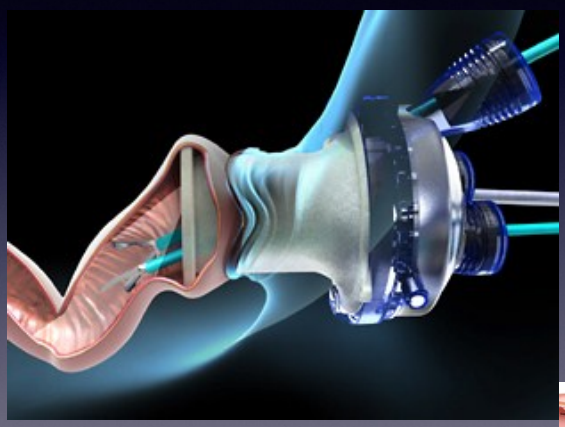


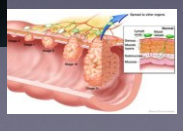
Transanale TME

- Grote man: Antionio de Lacy Barcelona
  - www.aischannel.com
- Ned: Colin Sietses Ede Wageningen



Transanale TME





Film

Surg Endosc. 2013 Sep;27(9):3165-72. doi: 10.1007/s00464-013-2872-0. Epub 2013 Mar 22.

Transanal natural orifice transluminal endoscopic surgery (NOTES) rectal resection: "down-to-up" total mesorectal excision (TME)--short-term outcomes in the first 20 cases.

de Lacy AM[1], Rattner DW, Adelsdorfer C, Tasende MM, Fernández M, Delgado S, Sylla P, Martínez-Palli G.

Author information

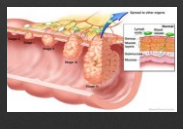
Abstract

BACKGROUND: The transanal minilaparoscopy-assisted natural orifice transluminal endoscopic surgery (NOTES) approach holds significant promise as a safe and less morbid alternative to conventional low anterior rectal resection. Previous reports have shown satisfactory short-term oncologic results. We evaluated the safety and short-term outcomes in rectal cancer subjects who underwent transanal minilaparoscopy-assisted natural orifice surgery total mesorectal excision (TME) rectal resection.

METHODS: Twenty selected patients with rectal cancer were enrolled onto a prospective study of minilaparoscopy-assisted natural orifice surgery TME rectal resection. The study endpoints were safety of access (intra- or postoperative morbidity) and adequacy of oncological resection criteria; intact TME; distal and circumferential margins; and number of lymph nodes retrieved.

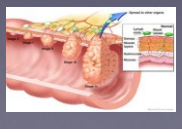
RESULTS: All procedures were successfully completed with the transanal NOTES and minilaparoscopy technique. The mean age was 65 ± 10 years; 55% of patients were male; the mean body mass index was 25.3 ± 3.8 kg/m(2). Thirty-five percent of tumors were in the distal rectum, 50% in midrectum, and 15% in proximal rectum. Coloanal anastomoses were hand sewn in 65% and stapled in 35%. Mean operative time was 235 ± 56 min. There were no procedure-related complications. Pathologic analysis demonstrated negative distal and circumferential margins in all patients. An average of 15.9 ± 4.3 lymph nodes were retrieved. The mesorectal fascia was intact in all the specimens.

CONCLUSIONS: This study demonstrates that transanal NOTES with minilaparoscopic assistance in the hands of a specialized team is safe; meets the oncologic requirements for high-quality rectal cancer surgery; and may offer advantages over pure laparoscopic approaches for visualizing and dissecting out the distal mesorectum. Minilaparoscopic assistance allows one to compensate for the limitations of current NOTES instrumentation to ensure the safety and adequacy of oncologic resection in these difficult cases. Careful patient selection, a specialized team, and long-term outcome evaluation are critical before this procedure can be considered for routine clinical use.



Transanale TME

- Ned studie:
  - COLOR III trial
  - gecoördineerd door de VU



COLOR III

Surg Endosc. 2015 Nov 4. [Epub ahead of print]

COLOR III: a multicentre randomised clinical trial comparing transanal TME versus laparoscopic TME for mid and low rectal cancer.

Deijen CL[1], Velthuis S[2], Tsai A[3], Mavroveli S[3], de Lange-de Klerk ES[4], Sietses C[2], Tuynman JB[4], Lacy AM[5], Hanna GB[3], Bonjer HJ[4].

Author information

Abstract

INTRODUCTION: Total mesorectal excision (TME) is an essential component of surgical management of rectal cancer. Both open and laparoscopic TME have been proven to be oncologically safe. However, it remains a challenge to achieve complete TME with clear circumferential resections margin (CRM) with the conventional transabdominal approach, particularly in mid and low rectal tumours. Transanal TME (TaTME) was developed to improve oncological and functional outcomes of patients with mid and low rectal cancer.

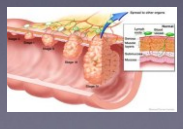
METHODS: An international, multicentre, superiority, randomised trial was designed to compare TaTME and conventional laparoscopic TME as the surgical treatment of mid and low rectal carcinomas. The primary endpoint is involved CRM. Secondary endpoints include completeness of mesorectum, residual mesorectum, morbidity and mortality, local recurrence, disease-free and overall survival, percentage of sphincter-saving procedures, functional outcome and quality of life. A Quality Assurance Protocol including centralised MRI review, histopathology re-evaluation, standardisation of surgical techniques, and monitoring and assessment of surgical quality will be conducted.

DISCUSSION: The difference in involvement of CRM between the two treatment strategies is thought to be in favour of the TaTME. TaTME is therefore expected to be superior to laparoscopic TME in terms of oncological outcomes in case of mid and low rectal carcinomas.

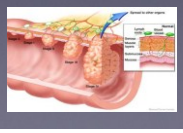
mobilized transanally in a reversed way with
minimally invasive surgery. The TaTME technique for low and mid rectal cancer has potential benefits: better specimen quality with better radicality, less morbidity as result of avoiding extraction wounds in the majority of patients and more sphincter saving rectal resections without compromising oncological outcomes.

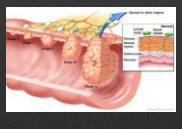
Toekomst

- 2 teams simultaan opereren
  - een team laparoscopisch en
  - een team transanaal
- Snel en efficient en oncologisch en functioneel safe



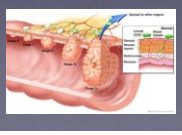
Robot chirurgie





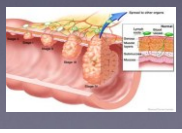
Robot MUMC

- Urologie
- Cardio thoracale
- Gynaecologie
- Chirurgie



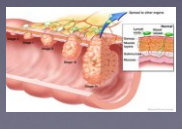
Robot rectumchirurgie

- Goede ergonomie
- Stabiel en goed beeld
- Stabiel operatie gebied
- Hogere kosten



Robot rectumchirurgie

- Prof. dr. Laurents Stassen
- Prof. dr. Nicole Bouvy
- dr. Jarno Melenhorst
- >7 patiënten geopereerd



Robot rectum

Int J Colorectal Dis. 2012 Feb;27(2):233-41. doi: 10.1007/s00384-011-1313-6. Epub 2011 Sep 13.

An international, multicentre, prospective, randomised, controlled, unblinded, parallel-group trial of robotic-assisted versus standard laparoscopic surgery for the curative treatment of rectal cancer.

Collinson FJ[1], Jayne DG, Pigazzi A, Tsang C, Barrie JM, Edlin R, Garbett C, Guillou P, Holloway I, Howard H, Marshall H, McCabe C, Pavitt S, Quirke P, Rivers CS, Brown JM.

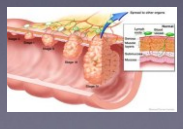
Author information

Abstract

PURPOSE: There is growing enthusiasm for robotic-assisted laparoscopic operations across many surgical specialities, including colorectal surgery, often not supported by robust clinical or cost-effectiveness data. A proper assessment of this new technology is required, prior to widespread recommendation or implementation.

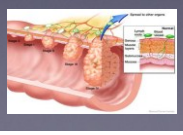
METHODS/DESIGN: The ROLARR trial is a pan-world, prospective, randomised, controlled, unblinded, superiority trial of robotic-assisted versus standard laparoscopic surgery for the curative treatment of rectal cancer. It will investigate differences in terms of the rate of conversion to open operation, rate of pathological involvement of circumferential resection margin, 3-year local recurrence, disease-free and overall survival rates and also operative morbidity and mortality, quality of life and cost-effectiveness. The primary outcome measure is the rate of conversion to open operation. For 80% power at the 5% (two-sided) significance level, to identify a relative 50% reduction in open conversion rate (25% to 12.5%), 336 patients will be required. The target recruitment is 400 patients overall to allow loss to follow-up. Patients will be followed up at 30 days and 6 months post-operatively and then annually until 3 years after the last patient has been randomised.

DISCUSSION: In many centres, robotic-assisted surgery is being implemented on the basis of theoretical advantages, which have yet to be confirmed in practice. Robotic surgery is an expensive health care provision and merits robust evaluation. The ROLARR trial is a pragmatic trial aiming to provide a comprehensive evaluation of both robotic-assisted and standard laparoscopic surgery for the curative resection of rectal cancer.



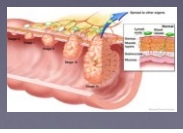
Klassieke eindpunten

- lokaal recidieven
- metastasen
- ziekte vrije overleving
- morbiditeit
- mortaliteit



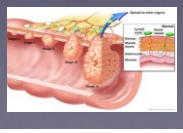
Moderne eindpunten

- Shared decision making
- Quality of life
- (kwaliteit van) chirurgie speelt hierin een grote rol



Moderne chirurgie

- Innovatie speelt hierin een grote rol
- Goede studies noodzakelijk
- Voortrekkersrol voor Nederland: COLOR III, TESAR, Wait and See, Strar Trec



Vragen?

Jarno Melenhorst
colorectaal chirurg MUMC