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MANAGEMENT OF MALIGNANT COLONIC POLYPS: FROM ENDOSCOPIC TREATMENT TO SURGERY

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Objective: Colorectal malignant polyps are treated by endoscopic polypectomy or surgery. The aim of the study is to evaluate the outcome of patients with malignant colorectal polyps submitted to endoscopic or surgical resection, trying to identify any factors related to an aggressive management.
Methods: Patients with malignant polyps treated in the last 10 years were retrospectively reviewed. Age, sex, location and size of polyp, histological pattern, grading, distal clearance were collected and correlated with the treatment used. Overall survival was also assessed during follow up for each group.
Results: 67 patients (M:F=1.6, mean age 68) were included, 38 (56,7%) underwent endoscopic polypectomy, 29 surgery. Predictive factors for surgical resection were the site of the polyp (sigma-rectum; OR=0,12, p=0,018), histologic pattern (tubule-villous; OR= 5,64; p=0,019), positive distal clearance (OR=7,42; p=0,03) and T2 stage (OR=66,3; p=0,044). Polyps size, structure, number and grading had no influence on the surgical approach. After a mean follow-up of 36 months, there were 24 drop-out. Among 43 patients available for long-term outcome 30 were disease-free, 6 were alive with-disease and 7 (16,2%) were dead. Overall survival analysis found no difference in the two groups (p=0,158). In patients submitted to surgery, survival has been proven to be adversely affected by positive distal clearance in resected specimen (p= 0,0339).
Conclusions: Site and histologic pattern of polyps, positive distal clearance and T stage are factors predictive of surgical resection. Presence of residual tumor in the resected specimen is related to lower survival rate.

ROBOTIC, LAPAROSCOPIC AND OPEN SURGERY IN RECTAL CANCER SURGERY: A COMPARATIVE STUDY

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Objective: Minimally invasive, robot- assisted surgery has gain worldwide acceptance in the past decade and several studies have shown that this technique is feasible and oncologically safe. In this study we compare Open, Laparoscopic and Robotic-assisted surgery in order to evaluate perioperative clinical-pathologic outcomes.
Methods: We prospectively analyze 59 patient treated for rectal cancer in our department with Open (n=12), Laparoscopic (n=24) or Robotic-assisted surgery (n=23) from October 2010 to July 2012.
Results: There were no significance differences in the mean operative time between the three groups as well as the conversion rate. Sphincter preservation resulted in a significant higher number of patients in the Robotic (19/23: 82%) compared with the Laparoscopic and Open groups (6/12; 50%) (P< 0.05). Concerning protective ileostomy, intra operative transfusion, intensive care and hospital stay there were no significant differences. Perioperative mortality was null. General morbidity was no significant between the three groups. Lymphadenectomy resulted to be slightly more extended in robotic group in which mean resected lymph nodes were 11,52 compared to a mean of 7.8 and 10.3 of the Laparoscopic and Open group, respectively (p=0.1). All surgeries were R0.
Conclusions: Robot-assisted surgery represents a valid alternative to conventional open or laparoscopic surgery for rectal cancers in terms of postoperative clinical-pathological outcomes. Furthermore, it allows higher sphincter preservation. Further studies are needed to validate these preliminary results.

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THE USE OF CT-ANGIOGRAPHY WITH THREE-DIMENSIONAL RECONSTRUCTION OF MESENTERIC VESSELS CAN IMPROVE THE PERFORMANCE OF LAPAROSCOPIC COLORECTAL RESECTION. A RANDOMIZED CONTROLLED TRIAL

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Objective: Laparoscopic surgery although its indubitable advantages in terms of reduced invasiveness, pain and hospitalization and its continuous technological improvement, had still today its limits in the reduced view of the operative field and in the absence of tactile sensations. In laparoscopic colorectal resection these disadvantages are particularly evident due to the individual variability of the course and number of mesenteric vessels. We conducted a randomized controlled trial to verify if the prior knowledge of the individual colonic vascular anatomy represents an advantage while performing laparoscopic colorectal resections.
Methods: Between January 2010 and January 2012 all patients undergoing left or right hemicolectomy and anterior rectal resections were submitted to CT-angiography with three-dimensional reconstruction of mesenteric vessels and then randomly divided in two groups. In the first group the surgeons was able to view the 3D reconstruction before and during surgery while in the second group only after surgery.
Results: In the study were finally included 112 patients. The procedures performed by surgeons who were able to view the 3D reconstruction showed a statistically relevant decreasing in operative time with lower incidence of intraoperative and postoperative complication related to wrong identification of colonic vascular anatomy and erroneous dissection manoeuvres.
Conclusions: The prior knowledge of the individual colonic vascular anatomy of each patient represent an advantage for the surgeon during laparoscopic colorectal resection.

PRELIMINARY RESULTS OF THE COMPRESSION ANASTOMOSES IN COLON AND RECTAL SURGERY WITH THE NITI CAR™ 27

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Objective: To evaluate the safety and efficacy of the compression anastomosis ring (CAR™ 27) for colo-rectal anastomoses.
Methods: A prospective study comparing the NiTi CAR™ 27 (Group A) to the standard double-stapled colorectal anastomosis (Group B) was performed from November 2009 to June 2012. Main eligibility criteria: elective left-sided colon resection or sub-total proctectomy, followed by an anastomoses ≥ 7 cm from the anal verge. Group A 21 patients (12M; 9F average age 62.3 range 45-86), Group B 21 patients (13M; 8F average age 64.9 range 48-90).
Results: No intraoperative adverse events were checked. Passage of flatus took 2.8 days (range 2-6) vs 3.08 days (range 2-4), first postoperative bowel movement took 5.9 days (range 4-8) vs 6.13 days (range 5-8) respectively in Group A and B. Mean length of hospital stay was 10.7 days (range5-21) vs 9.5 days (range 9-18) respectively in Group A and Group B. Anastomotic rings were expelled naturally within 6-15 days (mean, 10.1 days). In 33% patients (7/21) exact date of expulsion could not be recorded. Morbidity was 23.8% vs 28.5% respectively in Group A and Group B. Anastomotic leakage-rate was 4.7% in each group, treated conservatively. No reoperations was required. No mortality. A satisfactory anastomosis was revealed in patients examined colonoscopically at 6 and 12 months.
Conclusions: Our preliminary results suggest the safety and efficacy of NiTi CAR™ 27 in colorectal anastomosis that is comparable to standard staples technology.

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NEW TRENDS IN INTESTINAL ANASTOMOSIS: INITIAL WAY IN THE USE OF BIOLOGIC MESH. AN EXPERIMENTAL STUDY

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Objective: Despite the improvement of surgical techniques, gastrointestinal anastomosis leakage is still a major complication following abdominal surgery. An innovative application of the biologic patch seems to be the use as reinforcement of gastrointestinal anastomosis. The aim of this experimental study was to verify if bovine pericardium patches improves the healing of anastomosis by wrapping the suture line of pig intestinal anastomosis and avoids leakage in cases of deliberately incomplete sutures.
Methods: 43 pigs were randomly divided in four groups: Group 1 (control, n=14): hand-sewn ileo-ileal and colo-colic anastomosis; Group 2 (n=14): standard anastomosis wrapped by pericardium bovine patches; Group 3 (n=1) and 4 (n=14): one suture was deliberately incomplete but also wrapped by patch in the last one. Intraoperative evaluation, histological, biochemical, tensiometric and electrophysiological studies of intestinal specimens were performed at 48h, 7 and 90 days after the experiment.
Results: In Groups 2 and 4, no leaks, stenosis, abscesses, peritonitis, mesh displacement and shrinkage were found and adhesion rate decreased compared to control. Biochemical studies showed mitochondrial functions improvement in colic wrapped anastomosis. Tensiometric evaluations suggested that the patches preserves the colic contractility similar to the controls. Electrophysiological results demonstrated that the patch also improves the mucosal function restoring the almost normal transport properties.
Conclusions: Our experimental study is the first in the literature that investigate the capacity of a pericardium bovine patch as reinforcement by wrapping ileo-ileal and colo-colic hand-sewn anastomosis in pigs to strengthen the anastomosis and improve its healing.

CIRCUMFERENTIAL RECTAL RESECTION OF GIANT RECTAL ADENOMAS WITH TRANSANAL ENDOSCOPIC MICROSURGERY (TEM)

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Objective: To assess the feasibility of circumferential resection and rectal wall suture by Transanal Endoscopic Microsurgery (TEM) for giant rectal adenomas.
Methods: Rectal adenomas larger than 10 cm and involving the lumen to 360 degrees with benign macroscopic features, endoscopic ultrasound (EUS) extension limited to the mucosal layer (uT0) and absence of distant metastases were included. The rectal tumor was dissected under TEM conditions by means of an en-bloc full-thickness rectal wall excision until the perirectal fat, removing a cylindrical portion of rectal wall. Then a full thickness continuous suture was performed after positioning 4 stitches at cardinal points.
Results: Between March 2010 and March 2013, 8 circumferential resection were performed by TEM. Preoperative biopsy showed 2 low grade (LGD) and 6 high grade dysplasia (HGD) adenomas. Median operative time was 130 minutes (range 100-250) and median post-operative stay 8 days (range 7-20). We observed rectal fistulas in 2 cases, both conservatively treated. Pathological examination showed a mean surface area of 73 cm^2; 5 HGD adenoma, 1 pT1 sm1 and 2 pT2 carcinoma; lateral and deep margin were always free from disease. Neither infectious complication were reported nor stool incontinence or urinary/sexual dysfunction. Two patients required endoscopic balloon dilatation for stenosis. None of the pT2 cancers underwent further treatment but are free from disease at 12 and 18 months.
Conclusions: Circumferential rectal resection by TEM for giant superficial rectal lesion is a feasible and safe technique, with satisfactory post operative outcomes and poor complications.

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LONG TERM OUTCOME OF SACRAL NERVE STIMULATION FOR COMBINED PELVIC FLOOR DYSFUNCTIONS

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Objective: Pelvic Floor dysfunctions are often associated because all compartments work as a functional unit. Sacral Nerve stimulation (SNS) is effective in their treatment, however little is known about its application in patients with two or more PFDs and about the long-term outcome. The aim of the study is to analyze the effectiveness of SNS in patients with >1 PFD and the outcome in the long term.
Methods: Patients with at least 2 associated PFDs underwent temporary test for SNS along 10 years. Severity of fecal and urinary incontinence, constipation, urinary retention were scored by appropriate questionnaires (AMS, Wexner, and ODS scores, SF36, FIQL , ICIQ-SF). Permanent implant was done in case of >50%-improvement of at least 1 PFD. Data were evaluated by an intention to treat analysis .
Results: 43/80 patients (54%) improved significantly in at least 1 PFD and were implanted. Among them 27 (33%) improved in 2 PFDs. After a mean follow-up of 50 months the stimulator was removed in 5 patients, leaving 22 (27%) for long-term follow-up. Number of episodes of fecal incontinence/week, Wexner's and AMS score significantly decreased (6,4±3,3 vs 1±2, 13±3,6 vs 6±4,8 and 93±19 vs 43±36, p<0,0001). The ICIQ-SF score decreased significantly from 11±6 to 6±5, p=0.0005 and the FIQL improved from 61±21 to 87±26, p<0.0001. The SF36 QoL did not changed significantly (100±8 vs 97±8,7, p=0.17).
Conclusions: As intention-to-treat analysis, after SNS 33% of patients can relieve at least 2 PFD simultaneously and 27% of them maintain at least 50% improvement in the long term.

ANAL MALIGNANCIES ASSOCIATED TO CONDYLOMA ACUMINATA: DIFFERENCES BETWEEN HIV+ AND HIV- PATIENTS

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Objective: to value incidence of degenerations in patients affected by anal condyloma and their relations with HIV status.
Methods: Patients affected by anal condylomata were submitted to surgical excision by the same surgeon and a histological exam was performed.
Results: 1342 patients were diagnosed as affected by anal and perianal condylomata in a period from October 1999 and October 2012. Mean age was 34.7 years. 207 patients (15.4%) were HIV +, 6.1% HBV + and 2.6% HCV +. 94% presented a perianal localization, 62% an endoanal (4.6% only endoanal), and 35.8% a genital localization. 1062 patients were submitted to surgery in one or more sessions. Histological exam revealed a degeneration in 82 patients (7.7%). Degenerations occurred in 22.2% of HIV + patients vs 3.6% of HIV- patients. Histological exam revealed 17 AIN I; 12 AIN II; 14 AIN III; 12 Buschke Lowenstein neoplasms, 16 Bowen disease or Bowenoid papillomatosis; 3 carcinomas in situ; 8 squamous or basaloid carcinomas (3 of these were multifocal). Considering CD4 count was < 200 in 20/46 (43.5%) and > 200 in 26/46 patients (56,5%). Considering all HIV + patients 45/207 (21.7%) have a CD4 + count < 200, and 162/207 > 200. All patients are actually in follow up.
Conclusions: HPV related perianal condylomata become increasingly frequent. Histopatological examination should be performed to confirm the diagnosis and to detect precancerous or cancerous changes, mainly in HIV + patients. An accurate follow up is mandatory for patients revealed as malignancies to prevent transformation in anal carcinoma.

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DETECTION OF INGUINAL METASTASES IN ANAL CANCER

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Objective: Accurate detection of inguinal node metastases could obviate the need for prophylactic inguinal radiotherapy and eliminate related morbidity. SLNB biopsy of inguinal nodes has been proven as a simple, safe and effective method for staging patients with anal cancer. The role of preoperative diagnostic methods such as clinical examination, CT scan and PET-CT is debated, to identify the best technique to detect inguinal lymphnode metastases in anal cancer.
Methods: We performed a prospective study to compare clinical examination, CT scan and PET-CT scan with the results of sentinel lymph node biopsy (SLNB) in patients with anal cancer. Patients were stratified for T stage.
Results: 49 consecutive patients (33 F and 15 M) were included. Mean age was 60.2 years. Inguinal metastases were suspected in 12 patients (24.5%) at clinical examination, 8 (16.3%) at CT scan and 9 (18.4%) at PET-CT. At SLNB 7 patients (14.3%) were diagnosed with lymphnode inguinal metastases. Inguinal nodes metastases were present at SLNB in 14.5% of T2, 16% of T3 and 20% of T4. The false positive and false negative rates were respectively 72% and 11.4% at clinical examination, 62.5% and 10.5% at CT scan, 44.4% and 5.4% at PET-CT when compared with the results of SLNB. At 23 months follow up no inguinal metastases occurred in negative SLNB patients, thus confirming the accuracy of SLNB.
Conclusions: SLNB is superior to clinical exam, CT scan and PET-CT in staging inguinal metastases in anal cancer patients.

MANAGEMENT OF TEMPORARY STOMA AFTER ELECTIVE SURGERY IN AN ITALIAN TERTIARY CARE REFERRAL CENTER FOR RECTAL CANCER

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Objective: Rectal surgery for cancer often requires the creation of a temporary stoma to protect an anastomosis that can be jeopardized by neoadjuvant therapy. The recanalization can be performed either immediately or several months after surgery (early or delayed). This series reports about the results in the management of the stoma in a tertiary care referral center for rectal surgery.
Methods: Two hundred and seven consecutive patients (M: 56; F: 53; average age: 71 years) undergoing surgery for rectal cancer have been included in this report . All patients underwent anterior rectal resection. Overall, a stoma was performed in 109 patients (53%): it was an ileostomy in 63, a colostomy in 46. Among these, adjuvant chemotherapy was performed in 58 patients (53.2%).
Results: The stoma was temporary in 92 cases (54 patients with ileostomy and 38 with colostomy). Early recanalization was performed in 3 cases (2.75%). The average range from surgery to recanalization was 150.46 days (168 days after colostomy, 138 after ileostomy; overall SD 139.8; p>0.30). The only statistical difference affecting recanalization was the adjuvant therapy, with a later recanalization performed after the therapy (p=0.009).
Conclusions: In our experience ileostomy was performed in the majority of patients who underwent surgery for rectal cancer and a later recanalization was preferred: early recanalization is currently rarely performed.

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ROLE OF TRG IN RECTAL CANCER PATIENTS RADICALLY RESECTED AFTER PREOPERATIVE CHEMORADIATION (CHRT): AN INDICATOR OF RESPONSE

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Objective: to evaluate role of TRG (Mandard scale), particularly the subgroup with incomplete regression (TRG3), in rectal cancer patients radically resected (TME) after CHRT; its relationship with pathological TNM classification and relapse of disease.
Methods: Both conventional pathological TNM and TRG classification were carried out on 174 extraperitoneal T3 rectal cancer pts. submitted to TME after preoperative CHRT. The TRG 1,2 and 3 subgroups were allocated in the group A whereas the TRG 4 and 5 ones in the group B. Correlation between TRG and TNM were analyzed particularly in relationship with relapse of disease.
Results: The overall rate of pathological response by T was 55.7%; while 13.2% were complete. A statistically significant (p=.01) correlation was observed between favorable TRG (Group A) and the pathological T 0-2 stages. In the pT0-is pts. alone, the statistically significant correlation with Group A increased (p=.003). As expected the Group A correlated strongly with pN- status (p=.0001). TRG3 correlation with pT stage was similar to unfavorable Group B:58.9% of non responders, instead the TRG 3 outcome respect to pN stage was similar to favorable Group A:80% N-;p.0001. In terms of relapses of disease we didn't observe a significant correlation between poor TRG and recurrent pts (31% Group A; 32% Group B).
Conclusions: TRG showed a good correlation with TNM, should be considered in all pathological reports ad response indicator. In case of incomplete regression, often one third of series presented, heterogeneity was observed in the pathological score of residual disease and should be considered as unfavorable response.

CLINICAL CASE: LOW RECTAL ADENOCARCINOMA UNDERWENT TEM TECHNIQUE POST NEOADJUVANT RADIOCHEMOTHERAPY. LITERATURE REVIEW

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Objective: Transanal local excision (TLE) is performed in patients with benign and low-risk superficial malignant rectal neoplasms, but is also considered an alternative for patients who are unsuitable for major surgery because of medical comorbidity or those patients who require an APR but refuse a colostomy.
Methods: 80 years old man with low rectal adenocarcinoma clinical staging as T3N0M0. Further the patient underwent to neoadjuvant radiochemotherapy since 17/08/10 at 24/09/10. Later (November 2010), after reducing of neoplasm size, we recommend abdominoperineal amputation of rectum sec. Miles. The patient refused the treatment and so we decided to perform a resection of the rectal lesion by Transanal endoscopic microsurgery (TEM). Definitive istological exam showed absence of residual desease. Actually the patient is out desease.
Results: The key to appropriate use of TLE for rectal cancer is patient selection: accurate preoperative primary tumour staging and prediction of lymph node involvement. The incidence of lymph node metastasis ranges from 6% to 14% for T1 tumours, 17% to 23% for T2 tumours, and 49% to 66% for T3 tumours which is lower after neoadjuvant CRT. Since 8% to 27% of the patients receiving neoadjuvant CRT for locally advanced rectal cancer has a pathological complete tumour response. Compared to rectal resections, TEM has a reduced morbidity and mortality, the hospital length of stay is shorter and the reoperation rate lower.
Conclusions: The perspectives for TEM are promising and the association with neoadjuvant CRT will probably expand the select group of patients who would benefit from the procedure.

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