Settings: Tertiary care university hospital in Egypt.
Patients: Patients with T2 or T3 anorectal cancer invading the sphincter who underwent Miles abdominoperineal resection and immediate total pelvic reconstruction between 2003 and 2007.
Intervention: Pelvic floor reconstruction by a vertical rectus abdominis myocutaneous flap with modified perineal colostomy pulled through the flap in order to add the high-pressure zone of the flap to that of the colostomy and to create a persistent new anorectal angle.
Main outcome measures: Early and late complications were recorded. Functional results were evaluated at regular intervals by questionnaire, physical examination, and balloon manometry. Continence was graded according to Kirwan. Satisfaction with continence was assessed by questionnaire.
Results: A total of 14 patients (3 women) were included. Tumours were adenocarcinoma (n = 11), squamous cell carcinoma (n = 2), and melanoma (n = 1).
Complete (R0) resection was achieved in all patients without perioperative deaths, major postoperative morbidity, or conversion to permanent iliac colostomy. Early postoperative complications (perineal wound infection, flap dehiscence, and partial perineal stoma necrosis) occurred in the first 4 patients. Late complications occurred in 7 patients, with mucosal prolapse in 3, stomal stricture in 4, and tumour recurrence in 1. Fecal continence progressed consistently with time, and by the end of the first year 8 patients (57%) had complete continence (grade A), 5 (36%) were continent with minor soiling (grade C), and 1 (7%) still had major soiling (grade D). After 6 months, 9 patients (64%) were satisfied with continence; after 1 year, 13 patients (93%) were satisfied. Regular enemas were necessary during the first year to improve soiling, and 8 patients (57%) were not in need after that. At 37 months median follow-up, 8 of 9 evaluable patients (89%) were satisfied with continence (grade A) without regular enemas.
Limitations: This was a preliminary observational study with no control group.
Conclusions: Total orthotopic pelvic reconstruction with autologous tissues transposition to rebuild the principle anorectal continence elements is feasible with minor complications and oncologically safe. This new technique offered high continence satisfaction independent of regular enemas and electrical stimulation.

6084 POSTER

Results of Salvage Abdominoperineal Resection After Failed Chemoradiation Therapy for Epidermoid Anal Canal Carcinoma − Retrospective Analysis at a Single Institution

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Background: Epidermoid anal cancer represents a rare clinical entity that requires a multidisciplinary approach in order to achieve optimum results. The standard approach to anal canal cancer consists of combined radiation and chemotherapy. Although disease control has been reported to have excellent results, as many as 40% of patients would develop locoregional disease progression. The treatment of choice for patients with persistent or recurrent disease is salvage abdominoperineal resection (APR). The purpose of this study is to review our experience with salvage surgery in this group of patients.
Materials and Methods: Medical records of all patients with anal canal cancer treated from January 1997 to December 2010 in our department were retrospectively reviewed. Nine patients who presented with persistent or locally recurrent anal canal cancer received salvage surgery. Before surgery, all of the patients had received chemoradiation therapy.
Results: A total of 9 patients (7 women, 2 men) with a median age of 59 years (range 40 to 79 years) underwent radical salvage surgery. Six patients were classified as having persistent disease, whereas three patients were classified as having recurrent disease. All of the patients underwent an abdominoperineal resection, including three women who underwent APR with a total salpingooophorectomy and hysterectomy due to vaginal invasion. There were no deaths attributable to operation. The median follow- up time was 31.75 (range 3–108) months after salvage surgery. At the time of the last follow- up, two patients died as a result of disease progression, with a mean survival time of 24 (range 12−36) months. In these patients, one presented with persistent disease, whereas one developed lung metastases. The median follow- up time among survivors was 34.3 (range 3–108) months. One patient has survived for 9 years. One female patient presented with a solitary liver metastasis 12 months after salvage APR and underwent a liver segmentectomy. She remains alive with disease 60 months following her last operation.
Conclusions: Long-term survival can be achieved in the majority of patients who undergo radical salvage abdominoperineal resection after failed chemoradiation therapy for epidermoid carcinoma of the anal canal.

6085 POSTER

Preliminary Experience of Radical Surgery for Locally Advanced Lower Rectal Cancer − Cylindrical Versus Conventional Abdominoperineal Resection

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Background: An alternative treatment for low rectal cancer is the extended posterior perineal approach with reconstruction of the pelvic floor (cylindrical technique). We compared the outcomes of patients undergoing conventional abdominoperineal resection (APR) versus the cylindrical APR and report the results of pelvic floor reconstruction using human acellular dermal matrix (HADM) on patients after cylindrical APR for rectal cancer.
Materials and Methods: A prospective trial was conducted in patients who underwent conventional and cylindrical APRs between January 2008 and March 2010. Pre-operatively, patients underwent digital rectal examination, MRI and/or endoscopic ultrasonography for staging of the rectal cancer. Forty-eight patients with T3−4 rectal cancer were identified during the study period (conventional n = 21, cylindrical n = 27).
Results: Patients who received cylindrical APR had shorter operative time ($p = 0.000$), larger perineal defect ($p = 0.000$), less intra-operative blood loss ($p = 0.000$), larger total cross sectional tissue area ($p = 0.000$) and larger cross sectional tissue area outside the internal sphincter or muscularis propria ($p = 0.000$) when compared with those who received conventional APR. The incidence of circumferential resection margin involvement in the cylindrical APR group was lower than in the conventional APR group ($p = 0.028$). Cylindrical APR with HADM showed more incidence of perineal pain ($p = 0.004$). The local recurrence of cylindrical APR group was improved statistically compared with that of conventional APR group ($p = 0.028$). Overall survival and disease-free survival between the two groups were not statistically significant.
Conclusions: Cylindrical APR has the potential to reduce the risk of local recurrence without increased complications when compared with conventional APR for the treatment of low rectal cancer. HADM was safe for the reconstruction of large pelvic defect in patients after cylindrical APR.

Table 1. Postoperative complications

Complications	Cylindrical APR, n (% of total)	Conventional APR, n (% of total)	*p* value†
Urinary retention	12 (44.4)	6 (28.6)	0.260
Chronic perineal pain	15 (55.6)	1 (4.8)	0.000
Perineal wound infection	3 (11.1)	5 (23.8)	0.435
Urinary system infection	2 (7.4)	2 (9.5)	1.000
Pulmonary infection	3 (11.1)	2 (9.5)	1.000
Perineal seroma	3 (11.1)	0	0.329
Peristomal hernia	8 (29.6)	7 (33.3)	0.784
Abdominal wound infection	2 (7.4)	2 (9.5)	1.000
Perineal herniation	1 (3.7)	4 (19)	0.211

APR, abdominoperineal resection; † chi-squared analysis.

6086 POSTER

Liver Abscess After Liver Metastasectomy is a Poor Prognostic Factor in Patients With Colorectal Cancer

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Purpose: More and more complications of extensive hepatic resection are being encountered in patients treated for liver metastases from colorectal cancer. This study aimed to determine the impact of liver abscess after hepatic resection on overall survival (OS) and the role of adjuvant chemotherapy.
Methods: A retrospective study of 252 patients treated by liver metastasectomy between 2001 and 2010.
Results: The 5-year survival rate was 55.8%. Twenty-one (8.3%) patients developed liver abscess after liver metastasectomy. Multivariate analysis identified the size of liver metastasis, surgical margin, and the presence of liver abscess as significant prognostic factors. Patients (whether or not they developed liver abscess after hepatic resection) had short progression-free survival in trend (median, 9.8 months vs. 12.4 months, $P = 0.476$) but patients who developed liver abscess had significantly shorter OS (26.6 months *vs.* 76.0 months, $P = 0.004$). Subsequent adjuvant therapy