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Original Research Article

Pelvic Exenteration in Elderly Individuals with Advanced Cancer

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Abstract

Background: An invasive surgical operation, pelvic exenteration is only appropriate for a very restricted group of patients. Elderly patients who have surgery frequently have higher rates of morbidity and mortality. Examining the results of exenteration for advanced pelvic cancer in this patient subgroup was the goal of this investigation.

Methods: The study included all patients who underwent pelvic exenteration between 'January 2018 to January 2019' and were at least 70 years old. This included all primary tumors of the bladder, gynaecological system, and rectal area. The 5-year overall survival was the main outcome measure. Post-operative morbidity and 30-day death were the secondary objectives.

Results: There were 80 patients in all, ranging in age from 70 to 90 years old, with a median age of 75. Eight bladder tumors, 30 gynaecological, and 42 rectal tumors were found. The way that neoadjuvant therapy was administered varied significantly depending on the type of tumor. Within 30 days following surgery, five patients (5%) died and 30 patients (33%) experienced postoperative problems. Patients with rectal cancer had a median survival of 64 months, gynaecological tumor patients had a median survival of 30 months, and bladder cancer patients had a median survival of 15 months. The five-year survival rates for each of these groups were, respectively, 46, 30, and 21%.

Conclusion: Pelvic exenteration shouldn't be denied due to senior age alone, given the chance of long-term life.

Introduction

For patients with advanced pelvic malignancies, multivisceral pelvic exenteration is a complicated surgical procedure that may provide a possibility for long-term survival [1]. But because of the severe nature of this surgery, a team of doctors must carefully select the patients through conversations. It is necessary to take into account aspects such as the patient's expectations for their post-operative life and their physical and emotional well-being.

The World Health Organization [2] defines an elderly person as someone above the age of 65, however other organizations, such as the UK-based National Cancer Intelligence Network [3], place the cutoff at 75. An increasing number of older people are having planned and emergency procedures due to the growing senior population. The fact that they may be on several drugs, have a lesser physical capacity, and a higher chance of other health problems make it imperative to thoroughly assess if they are a good candidate for surgery [4].

Generally speaking, older patients are thought to be more likely than younger patients to experience complications following surgery, including death. Many older people might not receive the finest cancer treatment available as a result.

Surgeons from different specializations collaborate at a specialist medical center to manage individuals

who have advanced pelvic cancers as part of the Swansea Pelvic Oncology Group. The objective of this study was to investigate any variations in mortality and complications among various forms of pelvic malignancies, as well as the results of pelvic exenteration in older patients.

Methodology

Study design: This study examined the medical records of individuals who underwent pelvic exenteration surgery between 'January 2018 to January 2019' and were at least 70 years of age. The database that a pelvic oncology unit maintained contained the data used in this investigation. This type of analysis did not require ethical approval.

Each patient had undergone a battery of testing before to surgery, including CT scans of the abdomen, pelvis, and chest. Along with pelvic MRIs, several patients with rectal tumors also had endorectal ultrasonography and examination under anesthesia (EUA). Prior to surgery, individuals with gynaecological tumors underwent PET and MRI scans. EUAs and MRI scans were administered as necessary to those with advanced bladder disease. A group of experts deliberated over each patient's condition and decided on the procedure and any necessary preoperative care. Each individual's suitability for this major surgery was evaluated by an experienced anesthetist who took into account aspects such as exercise tolerance, lung function, and heart health.

Surgery for pelvic exenteration came in three varieties: anterior, posterior, and complete. The bladder was removed during an anterior pelvic exenteration procedure, occasionally together with the reproductive organs. In a posterior pelvic exenteration, the bladder was kept intact while the rectum—with or without reproductive organs—was removed. Removing the rectum, reproductive organs, genitourinary organs, and surrounding lymph nodes was known as total pelvic exenteration.

In order to ascertain whether the tumor had been entirely excised during surgery (R0) or whether there was any microscopic disease still present (R1), the study additionally examined the pathology data. The study included patients with surgically curable metastatic illness as well. Every patient's lymph node status was gathered. The overall survival of these individuals throughout a 5-year period following surgery was the primary focus of the investigation. Secondary outcomes were the length of time patients spent in the hospital following surgery, any post-operative problems, and any fatalities that happened within 30 days of the procedure.

Statistical analysis: The researchers employed statistical procedures, such as the $\chi 2$ test and one-way ANOVA, to compare various factors among patient groups with varying tumor types in order to interpret the data. The statistical analysis conducted was carried out with SPSS version 20 software.

Results

80 patients who had pelvic exenteration over a 15-year period were included in this study. Eight of them were primary bladder tumors, thirty were gynaecological cancers, and forty-two of them were rectal tumors. The gender distribution was 32 men and 48 women, with a median age of 75.

30 individuals were administered neoadjuvant therapy, 21 of them had rectal tumors. Neoadjuvant treatment was not given to any of the eight patients who had bladder tumors.

50 patients (54%), 25 patients (36%), and 6 patients (6%), among others, underwent whole pelvic exenteration, posterior pelvic exenteration, and anterior pelvic exenteration, among other surgical procedures. Histopathologically, 36 out of 42 rectal tumors, 26 out of 30 gynaecological cancers, and 4 out of 8 bladder tumors had complete resection (R0).

Thirty patients experienced postoperative problems, with no discernible variation in complication rates across tumor groups. Within 30 days following surgery, five patients (5%) passed away; four of them had myocardial infarctions and one had chest infection.

The mean duration of hospitalization differed according on the type of tumor: rectal tumors took 16 days, gynaecological tumors took 23 days, and bladder tumors took 21 days.

A median follow-up of 57 months was observed overall. Individuals with rectal tu
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ors had a median survival of 64 months, gynaecological tumor patients had a median survival of 30 months, and bladder tumor patients had a median survival of 15 months. The corresponding 5-year survival rates were 46%, 30%, and 21%. The median survival for individuals who had total resection (R0) was 52, 53, and 96 months, respectively.

Table 1: Types of tumors and their treatments

	No. of patients	Anterior pelvic exenteration	Posterior pelvic exenteration	Total pelvic exenteration
Rectal				
Adenocarcinoma	64	-	30	25
Gynaecological				
Vagina/vulva	12	4	1	6
Endometrium	4	0	0	4
Cervix	1	1	0	0
Bladder				
Transitional cell	6	0	-	6
Squamous cell	1	0	-	1

Discussion

This study demonstrates that elderly patients with advanced pelvic cancers respond well to pelvic exenteration as a treatment. All three patient groups had a median survival of more than 4 years following full resection of the cancer; the patients with original rectal tumors had the longest survival.

The primary distinction between the groups' initial patient characteristics was whether or not the patients had received neoadjuvant therapy prior to surgery. Only a tiny percentage of patients with gynaecological cancers received preoperative treatment, compared to nearly half of those with rectal tumors who underwent neoadjuvant therapy [5]. Neoadjuvant treatment for advanced gynaecological diseases has been demonstrated to be beneficial, and it is a well-established treatment for rectal cancer [6]. Nevertheless, there is little proof to support its involvement in locally advanced bladder cancer, which is why all nine of the patients went straight to surgery. Because of the possibility of toxicity, neoadjuvant therapy is frequently avoided in older individuals with advanced bladder cancer [7].

In line with previous research, the study highlights the significance of obtaining negative resection margins during surgery [1, 8, 9]. Neoadjuvant therapy was not given to all patients with rectal cancer; this is indicative of the unit's selective approach to preoperative treatment, which tries to lower treatment-related morbidity while keeping local recurrence rates low [10].

In this study, one-third of the patients developed postoperative problems, a serious worry for older patients undergoing surgery. Even though the median age at surgery in this study was greater, the findings are comparable to those of other hospitals treating rectal and gynaecological malignancies. According to the study, age should not be the deciding factor when it comes to considering pelvic exenteration if proper perioperative and postoperative care is provided.

The inclusion of different tumor types has contributed to heterogeneity in the study, which is acknowledged. A small number of patients with advanced bladder illness underwent total pelvic exenteration in addition to the majority who had rectal cancer. Despite the limits of the study's retrospective design, an attempt was made to update and cross-validate the database.

Conclusion

In conclusion, pelvic exenteration can result in low rates of morbidity and death for older patients, especially for those with locally advanced rectal cancers. Patient age alone should not be used as a reason to rule out this surgery.

References

1. Radwan RW, Jones HG, Rawat N, Davies M, Evans MD, Harris DA *et al*.; Swansea Pelvic Oncology Group. Determinants of survival following pelvic exenteration for primary rectal cancer. Br J Surg 2015; 102: 1278–1284.
2. World Health Organization. Definition of an Older or Elderly Person. http://www.who.int/healthinfo/survey/ageingdefnolder/en/[accessed17 July 2015].
3. National Cancer Intelligence Network (NCIN). Older People and Cancer (version 3.0). http://www.ncin.org.uk/publications/older_ people_ and0020_0020cancer [accessed 17 July 2015].
4. Griffiths R, Beech F, Brown A, Dhesi J, Foo I, Goodall J. Peri-operative care of the elderly 2014: Association of Anaesthetists of Great Britain and Ireland. Anaesthesia 2014; 69 (Supp0020l 1): 81–98.
5. McCarthy K, Pearson K, Fulton R, Hewitt J. Pre-operative chemoradiation for non-metastatic locally advanced rectal cancer. Cochrane Database Syst Rev 2012; (12)CD008368.
6. Martin ST, Heneghan HM, Winter DC. Systematic review and meta-analysis of outcomes following pathological complete response to neoadjuvant chemoradiotherapy for rectal cancer. Br J Surg 2012; 99: 918–928.
7. Vaughn DJ. Chemotherapeutic options for cisplatin-ineligible patients with advanced

carcinoma of the urothelium. Cancer Treat Rev 2008; 34: 328–338.
8. Harris DA, Davies M, Lucas MG, Drew P, Carr ND, Beynon J *et al*. Multivisceral resection for primary locally advanced rectal carcinoma. Br J Surg 2011; 98: 582–588.
9. Kusters M, Austin KK, Solomon MJ, Lee PJ, Nieuwenhuijzen GA, Rutten HJ. Survival after pelvic exenteration for T4 rectal cancer. Br J Surg 2015; 102: 125–131.
10. Williamson JS, Jones HG, Davies M, Evans MD, Hatcher O, Beynon J *et al*.; Swansea Colorectal Cancer Group. Outcomes in locally advanced rectal cancer with highly selective preoperative chemoradiotherapy. Br J Surg 201 4; 101: 1290–1298.