

SALVAGE SURGERY FOR ANAL CANAL CARCINOMA: LONG-TERM OUTCOMES FROM A TERTIARY REFERRAL CENTRE

Awais Amjad Malik¹, Syed H Raza¹, Irfan-ul-Islam Nasir¹, Muhammad F. Shah¹, Namra Urooj¹, Tabinda Sadaf², Shahid Khattak¹, Aamir A. Syed¹

¹Departments of Surgical Oncology, Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan, ²Department of Radiation Oncology, Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan

Received: 6 December 2016 / Accepted: 13 March 2017

Abstract

Purpose: The purpose of this study was to analyse the outcome of salvage surgery in the management of anal canal cancer.

Methodology: All patients with a diagnosis of anal canal carcinoma from 2006 to 2015 were studied. Basic demographic data were recorded. Treatment modalities used were recorded for all patients. Long-term surgical outcomes were recorded. Median survival in months was recorded. All data were recorded in the SPSS ver. 20.

Results: A total of 62 patients were included in the study. Median age was 51. 38 patients had SCCa on histology and 24 had an adenocarcinoma. 52% of patients had a T4 lesion. Chemoradiotherapy (CRT) was offered to 59 (95%) patients as the first line of therapy. 12 (19%) patients had a complete response. 37 (60%) patients had a partial and 10 (16%) patients had no response to chemoradiation. Salvage surgery was offered to 27 patients. Of these, 21 had a curative resection. Six had irresectable disease and underwent a colostomy only. Median overall survival for all patients was 46 months with a 5-year survival of 55%. Patients with partial response who were offered salvage surgery the 5-year survival were 40%. For patients with no response or progressive disease after chemoradiation therapy, the 5-year survival was 20%.

Conclusion: Long-term survival can be achieved in majority of patients who undergo radical salvage surgery after failed CRT for carcinoma of the anal canal.

Key words: Adenocarcinoma, anal canal, chemoradiotherapy, surgery

Introduction

Anal canal carcinoma is a rare malignancy with an annual reported incidence of 0.5–1.0/100,000 population in most western countries.^[1] SCC represents the most common subtype. No data regarding this disease are available from Pakistan. Standard treatment of these cancers was by surgical resection with poor survival outcomes of 27–71% with a high rate of local recurrence.^[1-4] With the introduction of neoadjuvant chemoradiation, survival outcomes have increased to 65–90% with local recurrence rates of 10–30%. Accordingly, chemoradiotherapy (CRT)

has become the preferred choice of treatment and is now widely accepted,^[5-8] with radical surgery being reserved for patients with residual or recurrent disease.^[9,10]

Anal canal cancer is a relatively rare disease, and the majority of patients are cured by chemoradiation. Hence, the published literature on the role of salvage surgery for patients with failed response to CRT is very scarce. It consists of a few small case series, collected over long time intervals.^[11-13] Renehan *et al.* published the largest reported series of salvage resection, in 73 patients, and showed a 5-year survival rate of 40%.^[14] The value of salvage surgery for anal canal cancer is thus debatable at present, and more data are required. Shaukat Khanum Memorial Cancer Hospital and Research Centre is a major referral

Correspondence: Awais Amjad Malik, Fellow, Departments of Surgical Oncology, Shaukat Khanum Memorial Cancer Hospital, Lahore, Pakistan. Email: awaisamjad@gmail.com

centre for those requiring treatment of anal canal cancer. We have an established neoadjuvant chemoradiation protocol for these patients. Our purpose in the present study was to describe the long-term oncological outcomes associated with resection of residual/recurrent cancers of the anal canal at our institution.

Methodology

All patients with a diagnosis of anal canal CA from 2006 to 2015 were studied. Basic demographic data were recorded. Treatment modalities used were recorded for all patients. Long-term surgical outcomes were recorded. For survival, only patients operated before 2011 were included. Median survival in months was recorded. All data were recorded in the SPSS ver. 20.

Results

A total of 62 patients were included in the study. Median age was 51 (18–82). There were 48 males and 14 females. 38 patients had SCCa on histology and 24 had an adenocarcinoma. 52% of patients had a T4 lesion and 29% had a T3. 73% of patients were node positive. Two patients (3%) had a metastatic disease at presentation. Chemotherapy was offered to 59 (95%) patients as the first line of therapy. Radiation was also offered to 59 (95%) patients. 12 (19%) patients had a complete response. 37 (60%) patients had a partial and 10 (16%) patients had no response to chemoradiation. Surgery was offered to 27 patients. Of these, 21 had a curative resection. Six had irresectable disease and underwent a colostomy only.

Median overall survival for all patients was 46 months with a 5-year survival of 55%. For patients who had a complete response, overall survival was 60 months [Figure 1]. Patient who had a partial response to chemoradiation therapy (XRT) but did not undergo salvage surgery the survival was 40 months. However, for patients with partial response who were offered salvage surgery, the overall survival increased to 52 months. For patients with no response or progressive disease after chemo XRT, the overall survival was 18 months. When individually compared SCC had better survival outcomes as compared to adenocarcinoma. 17 patients had a recurrence. Four patients had complete response. Eight patients had partial response and five patients had no response. 10 patients had a local recurrence while seven patients presented with

distant metastasis. 9 of 21 patients who underwent salvage surgery did not show any recurrence.

Discussion

Anal canal cancers account for only 2% of all large bowel cancers.^[1,2] With the introduction of combined CRT as the primary treatment modality, 5-year survival rates improved.^[6-8] On the contrary, the morbidity also decreased as more and more patients had sphincter preservation. Our results are at par with this as 65% of our patients ended up with sphincter preservation with a median overall survival of 46 months. Despite the success of combined CRT, a good proportion of patients fail treatment. Salvage chemo XRT has been advocated by some with cisplatin-containing regimens, reporting 50% survival at 4 years,^[6] whereas others have reported more disappointing results with salvage CRT. However, experience with salvage surgery has been more rewarding making radical rectal resection the treatment of choice. Previous investigators have reported 5-year survival rates after salvage APR in the range of 24–53%.^[10-14] We had a 5-year survival of 40% for patients who underwent salvage surgery for failed response to neoadjuvant chemoradiation.

Of the patients who were offered surgery, nine patients had persistent disease and 12 had recurrent disease. Patients with persistent disease had a slightly worse outcome as compared to those who had recurrent disease (33 months for persistent disease vs. 36 months for recurrent disease). This finding is in agreement with what several other groups have reported.^[13,15] However, others have reported no difference in survival in between the two groups.^[11,14] 7/21 patients (33%) developed secondary failure. Most of these patients are either dead or are living with disease. Most of the patients did not receive adjuvant chemoradiation which supports the notion that adjuvant chemotherapy in conjunction with salvage surgery may be warranted in selected patients.

Conclusion

This study is retrospective in nature with a small patient size. Unfortunately, anal canal cancer is a rare entity and it is not possible to achieve a large sample size. However, the results of our study suggest that long-term survival can be achieved in majority of patients who undergo radical salvage surgery after failed CRT for carcinoma of the anal canal.

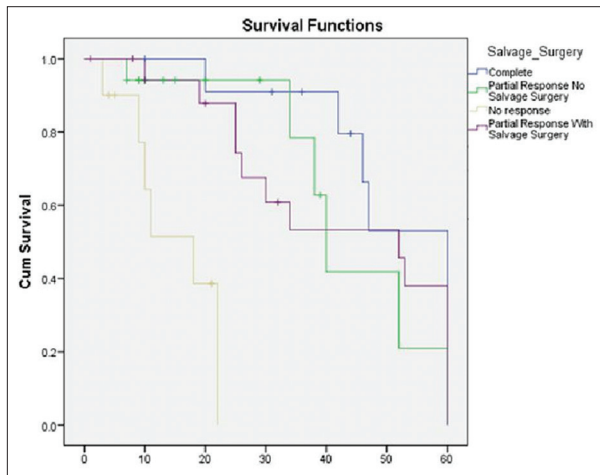


Figure 1: Survival function over 60 months

Conflict of Interest

The authors declare that they have no conflict of interest.

References

- Moore HG, Guillem JG. Anal neoplasms. *Surg Clin North Am* 2002;82:1233-51.
- Talbot RW. Changing nature of anal cancer. *BMJ* 1988;297:239-40.
- Golden GT, Horsley JS 3rd. Surgical management of epidermoid carcinoma of the anus. *Am J Surg* 1976;131:275-80.
- Fuchshuber PR, Rodriguez-Bigas M, Weber T, *et al*. Anal canal and perianal epidermoid cancers. *J Am Coll Surg* 1997;185:494-505.
- Nigro ND, Vaitkevicius VK, Considine B Jr. Combined therapy for cancer of the anal canal: A preliminary report. *Dis Colon Rectum* 1974;17:354-6.
- Epidermoid anal cancer: Results from the UKCCCR randomised trial of radiotherapy alone versus radiotherapy, 5-fluorouracil, and mitomycin. UKCCCR anal cancer trial working party. UK co-ordinating committee on cancer research. *Lancet* 1996;348:1049-54.
- Bartelink H, Roelofsen F, Eschwege F, *et al*. Concomitant radiotherapy and chemotherapy is superior to radiotherapy alone in the treatment of locally advanced anal cancer: Results of a phase III randomized trial of the European organization for research and treatment of cancer radiotherapy and gastrointestinal cooperative groups. *J Clin Oncol* 1997;15:2040-9.
- Tanum G, Tveit K, Karlsen KO, *et al*. Chemotherapy and radiation therapy for anal carcinoma. Survival and late morbidity. *Cancer* 1991;67:2462-6.
- Akbari RP, Paty PB, Guillem JG, *et al*. Oncologic outcomes of salvage surgery for epidermoid carcinoma of the anus initially managed with combined modality therapy. *Dis Colon Rectum* 2004;47:1136-44.
- Ferenschild FT, Vermaas M, Hofer SO, *et al*. Salvage abdominoperineal resection and perineal wound healing in local recurrent or persistent anal cancer. *World J Surg* 2005;29:1452-7.
- Nilsson PJ, Svensson C, Goldman S, *et al*. Salvage abdominoperineal resection in anal epidermoid cancer. *Br J Surg* 2002;89:1425-9.
- Pocard M, Tiret E, Nugent K, *et al*. Results of salvage abdominoperineal resection for anal cancer after radiotherapy. *Dis Colon Rectum* 1998;41:1488-93.
- van der Wal BC, Cleffken BI, Gulec B, *et al*. Results of salvage abdominoperineal resection for recurrent anal carcinoma following combined chemoradiation therapy. *J Gastrointest Surg* 2001;5:383-7.
- Renahan AG, Saunders MP, Schofield PF, *et al*. Patterns of local disease failure and outcome after salvage surgery in patients with anal cancer. *Br J Surg* 2005;92:605-14.
- Papaconstantinou HT, Bullard KM, Rothenberger DA, *et al*. Salvage abdominoperineal resection after failed nigro protocol: Modest success, major morbidity. *Colorectal Dis* 2006;8:124-9.