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Review Article

Functional outcome and quality of life following treatment for rectal cancer☆

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ABSTRACT

Introduction: Over the last decades, treatment for rectal cancer has substantially improved with development of new surgical options and treatment modalities. With the improvement of survival, functional outcome and quality of life are getting more attention.
Study objective: To provide an overview of current modalities in rectal cancer treatment, with particular emphasis on functional outcomes and quality of life.
Results: Functional outcomes after rectal cancer treatment are influenced by patient and tumor characteristics, surgical technique, the use of preoperative radiotherapy and the method and level of anastomosis. Sphincter preserving surgery for low rectal cancer often results in poor functional outcomes that impair quality of life, referred to as low anterior resection syndrome. Abdominoperineal resection imposes the need for a permanent stoma but avoids the risk of this syndrome. Contrary to general belief, long-term quality of life in patients with a permanent stoma is similar to those after sphincter preserving surgery for low rectal cancer.
Conclusion: All patients should be informed about the risks of treatment modalities. Decision on rectal cancer treatment should be individualized since not all patients may benefit from a sphincter preserving surgery "at any price". Non-resection treatment should be the future focus to avoid the need of a permanent stoma and bowel dysfunction.

☆ Study conducted at Faculty of Medicine, Porto University, Porto, Portugal.

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Resultados funcionais e qualidade de vida após tratamento do câncer retal

Palavras-chave:
Cancro do reto
Qualidade de vida
Resultado funcional
Preservação de esfíncter
Estratégia watch and wait

RESUMO

Introdução: Ao longo das últimas décadas, o tratamento do câncer retal melhorou substancialmente com o desenvolvimento de novas opções terapêuticas. Com a melhoria da sobrevida, os resultados funcionais e a qualidade de vida são cada vez mais tidos em consideração.

Objetivos do estudo: Rever as modalidades atuais de tratamento do câncer retal, com enfase nos resultados funcionais e qualidade de vida.

Resultados: Os resultados funcionais após tratamento para o câncer retal é influenciado pelas características do doente, do tumor, da técnica cirúrgica, do uso de radioterapia pré-cirúrgica e do método e nível da anastomose. A cirurgia poupadora de esfíncter do câncer retal baixo resulta frequentemente em maus resultados funcionais que prejudicam a qualidade de vida, denominados síndrome da ressecção anterior baixa. A amputação abdominoperitoneal impõe a necessidade de uma colostomia definitiva mas evita os riscos de resultados funcionais deficitários. Contrariamente à crença geral, a qualidade de vida a longo-prazo em doentes com colostomia definitiva é semelhante à qualidade de vida após cirurgia poupadora de esfíncter do câncer retal baixo.

Conclusão: Todos os doentes devem ser informados sobre o risco das opções terapêuticas. A decisão do tratamento do câncer retal deve ser individualizada uma vez que nem todos os doentes beneficiarão de uma cirurgia poupadora de esfíncter "a qualquer preço". A possibilidade de tratamento sem ressecção devem ser o foco futuro para evitar a necessidade de uma colostomia definitiva e disfunção gastrointestinal.

Introduction

Colorectal cancer is the third most commonly diagnosed cancer worldwide. Almost 1.4 million new cases were diagnosed and 693,900 deaths were estimated to occur in 2012, with about 55% of cases occurring in developed countries. In Europe, it counts as the second most frequent malignancy and cause of cancer death, with an estimated 447,000 new cases diagnosed and 215,000 deaths occurring in 2012.[1]

Approximately 30% of colorectal cancer are diagnosed in the rectum and around one third of rectal cancer (RC) are located on its third distal part.[2,3]

Improvements in earlier detection of RC from screening programs, reduction of risk factors and enhanced treatment modalities resulted in increased survival rates over the last decades.[4,5]

Treatment of RC had been primarily focused on oncologic outcome, with detailed assessment of survival and local recurrence.[6] Less attention has being given to functional outcomes and quality of life (QoL). QoL is the personal perception of the impact of illness or treatments on physical, psychological and social well-being.[7] Functional and QoL impairments are frequent among patients treated for RC, predominantly in patients with low RC.[8] With the increasing number of patients living with treatment effects,[9] these factors get a more significant role in decision making for RC treatment.

The purpose of this study is to review current modalities in RC treatment, particularly its impact on functional outcomes and QoL. Therefore, a review of the medical literature was performed regarding these outcomes after operative and non-operative management of RC.

Historical background

Although main enhancements in treatment modalities of RC were achieved over the last decades, surgery remains the privileged form of treatment.[3,10] Abdominoperineal resection (APR), primarily described by Miles in 1908, was the first step given in modern era of RC surgery. This procedure consisted of an en bloc rectal dissection with its lymphovascular supply in order to obtain a cylindrical specimen.[11] The anterior resection of the rectum, popularized by Dixon 40 years later, proved to be successful in cancers of the middle and upper rectum and was the first surgical procedure to avoid a definitive stoma. However, the creation of a safety 5 cm resection margin from the dentate line did not allow resection of the lower rectum, where APR remained the only available option.[12]

Several works began to re-evaluate the effect of distal resection margins (DRM) on oncologic outcome. Many studies reported that a DRM of 1 cm or even smaller had no negative impact on oncologic outcome.[13] In fact, distal intramural dissemination of RC is rarely observed and probably linked to high grade tumors, where survival is mostly due to metastatic spread rather than local recurrence.[14,15] On the other side, the importance of circumferential resection margin (CRM) was confirmed in multiple works, with positive CRM negatively influencing local recurrence and survival.[16] Its surgical approach was achieved by the introduction of total

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