J COLOPROCTOL (RIO J). 2017;xxx(xx):xxx–xxx

Journal of Coloproctology

www.jcol.org.br

Original Article

Mechanical technology effect in the treatment of anorectocele using transanal repair of rectocele and full rectal mucosectomy with one circular stapler procedure

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ARTICLE INFO

Article history:
Received 25 September 2016
Accepted 21 December 2016
Available online xxx

Keywords:
Treatment
Anorectocele
TRREMS
Staplers
Comparison

ABSTRACT

Objective: Transanal repair of rectocele and full rectal mucosectomy with one circular stapler is a procedure designed for the treatment of Obstructive Defecation Syndrome by doctor Fco. Sergio Regadas in 2005. We compare the use of multiple instruments and their mechanical technology effect in the treatment of anorectocele.

Patients and methods: Female patients complaining about sensation of incomplete evacuation, ages between 40 and 55. The evaluation was made with the function of evacuation protocol: colonic transit time, colon radiology, ecodefecography, anorectal manometry and psychological test. The technique used was transanal repair of rectocele and full rectal mucosectomy with one circular stapler, using staplers CPH-34, CPH-34HV and EEA-3135-HEM, with measurement of the rectal wall resected: vertical length in centimetres, horizontal length in centimetres, weight in grams and volume in cubic centimetres; afterwards histological study of the tissue thickness, and applied the ANOVA and SPSS 12 tests for the statistical analysis.

Results: The results obtained by comparing the resections made with the CPH-34, the CPH-34HV and the EEA-3135-HEM in respect of vertical length, horizontal length, weight and volume, were found to have no significant differences; neither in the histological study of the tissue thickness in respect of characteristics and structure.

Conclusion: The effect of mechanical technology in the treatment of anorectocele with transanal repair of rectocele and full rectal mucosectomy with one circular stapler procedure using the CPH-34, the CPH-34HV and the EEA-3135-HEM, does not show any difference. Leaving the application of each to the operator competencies.

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http://dx.doi.org/10.1016/j.jcol.2016.12.003

Please cite this article in press as: Sardiñas C, et al. Mechanical technology effect in the treatment of anorectocele using transanal repair of rectocele and full rectal mucosectomy with one circular stapler procedure. J Coloproctol (Rio J). 2017. http://dx.doi.org/10.1016/j.jcol.2016.12.003

Efeito mecânico da tecnologia no tratamento da anorretocele com o uso do procedimento TRREMS

Palavras-chave:
Tratamento
Anorretocele
TRREMS
Grampos
Comparação

RESUMO

Objetivo: TRREMS (*Transanal Repair of Rectocele and full rectal Mucosectomy with one circular Stapler*, Reparo transanal de retocele e mucosectomia retal total com um grampo circular) é um procedimento que visa o tratamento da Síndrome da Defecação Obstrutiva pelo Dr. Francisco Sergio Regadas em 2005. Comparamos o uso de diversos instrumentos e o efeito mecânico da tecnologia no tratamento da anorretocele.

Pacientes e métodos: Pacientes do gênero feminino com queixa de sensação de evacuação incompleta (SEI), com idades entre 40 e 55 anos. A avaliação foi efetuada com o protocolo de função de evacuação: tempo de trânsito colônico, radiologia do cólon, ecodefecografia, manometria anorretal e teste psicológico. A técnica empregada foi TRREMS, com o uso de grampeadores CPH-34, CPH-34HV e EEA-3135-HEM, com medição da parede retal ressecada: comprimento vertical em centímetros, comprimento horizontal em centímetros, peso em gramas e volume em centímetros cúbicos; subsequentemente, foi realizado estudo histológico da espessura do tecido, com aplicação de ANOVA e do programa SPSS 12 para a análise estatística.

Resultados: Observamos que os resultados obtidos com a comparação das ressecções realizadas com CPH-34, CPH-34HV e EEA-3135-HEM com relação ao comprimento vertical, comprimento horizontal, peso e volume, bem como os resultados do estudo histológico da espessura do tecido com relação às características e estrutura, não apresentavam diferenças significativas.

Introduction

Anatomical structures are a conjunction of relations, between each other, of an organ parts from human body. The distribution and order of organ parts provide the support structure that helps to transmit all the efforts and loads resulting of their existence and use.

Describing the anatomical structures that contribute in the regulatory mechanisms of continence and defecation can be done by explaining that the sigmoid colon has a propulsive function, the rectum acts as a container of faecal material and the anus is an organ with flow resistance and, at the same time, sensory and discriminative capacities.

The staggered arrangement of the three organs that play related functions is typical of our body. The arrangement of the terminal bowel elements ensures the continence, periodical and voluntary, also selective, with the ability to discriminate solid, liquid and gaseous contents. So, the anal continence depends on a barrier effect, which develops in the anorectal and anal junction. In the anus, this barrier effect is produced by the combination of forces that are due to the anatomical configuration of the pelvic floor and the muscle action; this complex mechanism is activated in response to sensory information obtained from this zone.

The pelvic floor and anal canal structures form an anatomic region traditionally poorly known. There are research papers, in the last years, in which new morphostructural approaches of the anal sphincter mechanism are dumped. In 2006 Regadas et al.,[1] showed discrepancies in the definition of the anal canal, as well as new data in their extension and structural elements, what they call anorectocele and what provides modifications to the anatomic, the surgical and the functional canal, considering the idea of anorectocele being part of the morphostructural and functional alterations.

The difficulty of defining a concept is generally in proportion to the number of variables that can influence it. In the case of obstructive defecation syndrome (ODS), which could arise from the anorectocele, it is especially difficult because of the impossibility of all components involved in the absence of an effective defecation clumping. Therefore we believe that the factors involved in defecation could be divided into three types: structural factors, muscle factors and sensory factors.

On the basis of considering that the anorectocele is a morphostructural alteration that comprises the evacuation, the surgical correction would be the solution to the difficulties. There are a lot of papers that provide evidences, where the surgical correction of the rectovaginal septum alterations significantly improves the patients with obstructive defecation syndrome (ODS), but it takes multiple techniques and mechanical technologies to cut and staple the affected tissues, and there is the proposal of Leal and Regadas in 2010,[2] that to optimize the surgical technique staplers should be modified or using just one.

The purpose of this paper was to use the technique created by Regadas in 2004,[3] known as Transanal Repair of Rectocele and Rectal Mucosectomy with one Circular Stapler (TRREMS) to compare the effect of various mechanical technologies for cut and staple in the surgical treatment of anorectocele.

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