

Original Article

HIPPOCRATES-THOMA JONESCU METHOD FOR TREATMENT OF ANAL FISTULES: REPORT ON 164 PATIENTS

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Summary

Surgical treatment of anal fistules leads to perianal fibrosis with subsequent disturbance of continence that later require reconstructive surgery. There is no other area in anorectal surgery, in which the risk of inflicting life-long damages to patients is so high, and results achieved depend so much on the experience of and expertise of surgeons. The study covered a period in 11 years (2001-2011) and included 164 patients with transsphincter and extrasphincter fistules, treated in the University Hospital-Pleven using the elastic ligature method. The study group was compared with a control group of 147 patients who underwent a different kind of surgical intervention. The analysis of the type of operative techniques applied and subsequent postoperative incontinence showed that applying the method of Hippocrates-Thoma Jonescu resulted in the highest percentage of postoperative incontinence: 15.9% (low degree) and 4.3% (average degree) by FIS (p=0.003). When we analyzed the relationship between the type of operative treatment and reported cases of relapse we established that the application of the same method resulted in a lower percentage of relapses reported after the sixth postoperative month – 0.8% (p=0.005).

Key words: anal fistule, elastic ligature, anal incontinence.

Introduction

Treatment of anal fistules was described by Hippocrates 460 years B.C. Gradual slashing of the anal sphincter was recommended, using a streak of tissue, impregnated with caustic juice from Euphorbia [1]. Instruments for treatment of anal fistules were found in Pompey [2]. In the Middle Ages, fistulotomy was widely used [3]. Persival Pott offered opening the fistule and stressed on the importance of wound dressing. Frederick Salmon, founder of St. Mark's Hospital, formulated principles in the treatment of anal fistules (still valid) 150 years ago.

Surgical treatment of anal fistules results in perianal fibrosis with subsequent disturbance of continence and requires later reconstructive interventions. There is no other area in anorectal surgery, in which the risk of inflicting life-long

damages is so high [4] and results depend so much on the experience of and expertise of surgeons [5].

The aim of this study was to establish results from applying elastic ligatures in the treatment of transsphincter and extrasphincter anal fistules, effects of treatment, and occurrence of postoperative anal incontinence and relapse.

Materials and Methods

The study group included 164 cases of transsphincter and extrasphincter fistules, in which elastic ligature technique was applied. The control group of 147 patients selected underwent a different type of surgical intervention. Both groups were selected from records of patients treated at the University Hospital – Pleven over a

period of 11 years from 2001 to 2011.

The operative procedure included: verification of an internal opening, removal of fistula path to gain access to fibers of the external anal sphincter, abrasion of the transsphincter passageway and fitting in an elastic ligature. The ligature was strained every ten days 10 days until the anal sphincter was totally slashed.

The results achieved were very good: there were no relapses and no postoperative anal incontinence.

Incontinence was assessed using a questionnaire, suggested by Fecal Incontinence Severity Index (FISI). Assessment was made three times: before intervention, and on the first and sixth postoperative months. The table design and values used were those suggested by FISI (Table 1).

Table 1. Questionnaire for value degree by FISI

	2 or more times a day	Once a day	2 or more times a week	Once a week	1 to 3 times a month	never
Gas	12	11	8	6	4	0
Mucus	12	10	7	5	3	0
Liquid stool	19	17	13	10	8	0
Solid stool	18	16	13	10	8	0

The maximum number of points was 61. This was the highest degree of incontinence reported. Values for the degree of incontinence were distributed in three groups:

1. Low incontinence degree: 0-10 points
2. Average incontinence degree: 11-30 points
3. High incontinence degree: 31-61 points

Values were processed using by statistical package SPSS 12.0.1. The level of significance

selected was, at which a zero hypothesis was not considered.

Results

Surgical treatment was applied in all patients. In most of the cases, combinations of surgical techniques were applied. The types of interventions are presented on Figure 1.

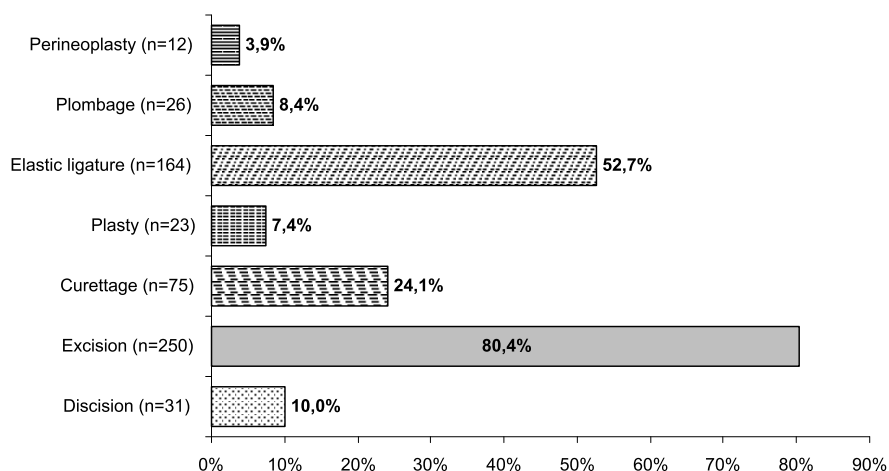


Figure 1. Distribution of types of surgical treatment applied: single and combined surgical techniques

Analysis of the results of the surgical methods applied and the relapses reported showed that , the results obtained from applying the Hippocrates-Thoma Jonescu method were

statistically significant ($p=0.005$) and the rate of late relapses was 0.8%. No relapses were reported one month after surgery in the cases in which elastic ligature was applied (Table 2, Figure 2).

Table 2. Operative method and relapse-distribution of clinical cases

Operative methods	Lack of relapse		Relapse on first month		Relapse on sixth month	
	n	%	n	%	n	%
Discision	30	96.8	1	3.2	2	6.4
Excision	244	97.6	6	2.4	7	2.8
Plasty	23	100.0	0	0	0	0
Elastic ligature	164; $p=0.005$	100.0	0	0	1	0.8
Plombage	26	100.0	0	0	0	0
Perineoplasty	12	100.0	0	0	0	0

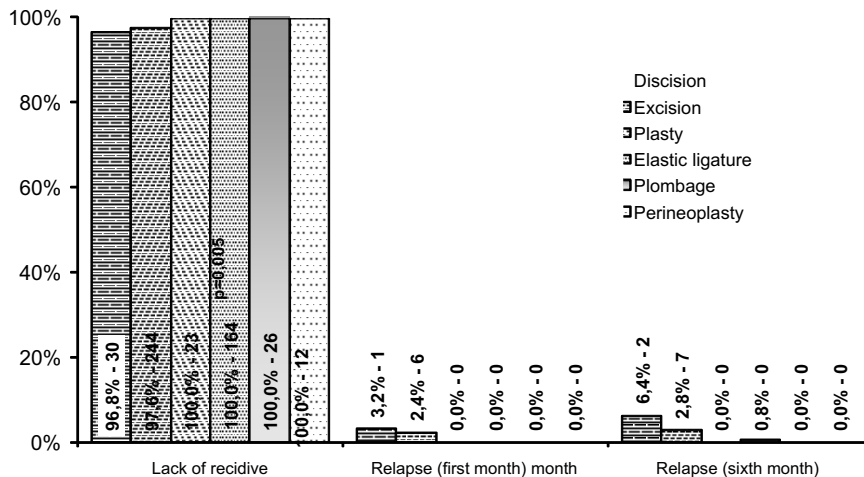


Figure 2. Operative method and relapse-distribution of clinical cases.

We established a statistically significant result, analyzing the type of applied operative technique and subsequent postoperative incontinence ($p=0.003$) with the method of Hippocrates-Thoma Jonescu. This operative method resulted in the

highest rate of postoperative incontinence - 15.9% (low degree) and 4.3% (average degree) by FIS1 (Figure 3).

Dependence between operative method, relapse and incontinence are presented on Table 3.

Table 3. Operative method, relapse and incontinence degree- distribution of clinical cases

Operative methods	Relapse rate (1st month)	Relapse rate (6th month)	Low degree incontinence	Moderate degree incontinence
Discision	3.2%	6.4%	6.5%	3.2%
Excision	2.4%	2.8%	11.6%	3.2%
Mucosal flap plasty	0%	0%	0.7%	0%
Elastic ligature	0%	0.8%	15.9% ; $p=0.005$	4.3%
Fibrin glue plombage	0%	0%	0%	0%
Perineoplasty	0%	0%	8.3%	8.3%

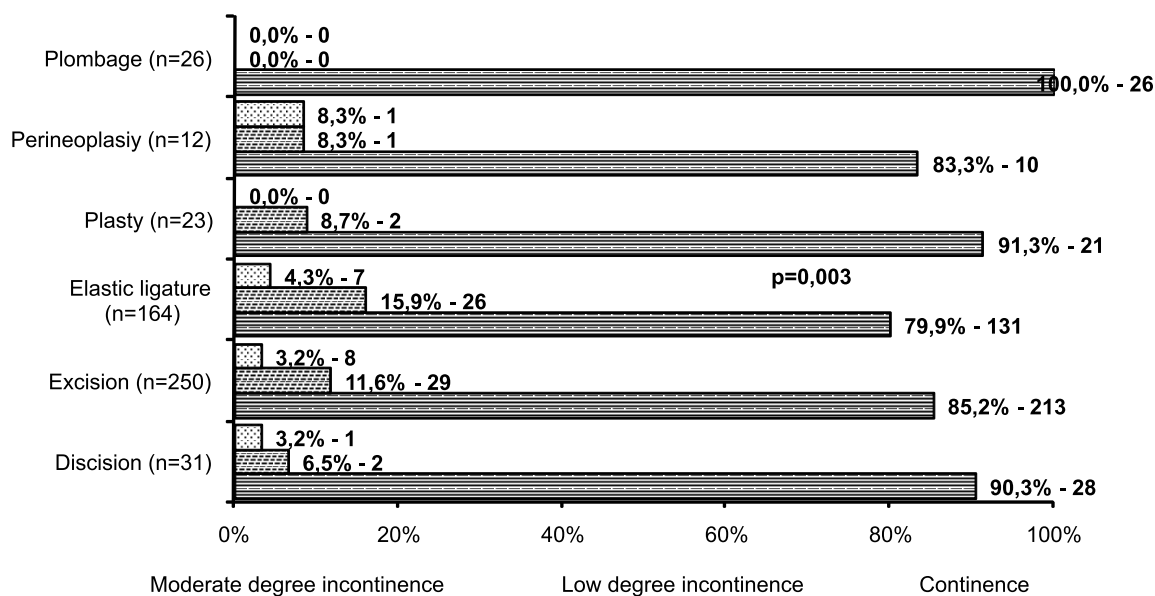


Figure 3. Operative method and degree of incontinence by FISI- distribution of clinical cases

The lowest degree of relapse-cases after application the ligature method (0.8%) was established but here the postoperative incontinence was high - 15.9% (low degree), which is statistically significant ($p=0.005$).

Discussion

In our study we found relapses, occurred postoperatively, and postoperative anal incontinence depended on the operative method. When the dependence between the type of operative treatment and relapse was analyzed, we established a statistically significant result regarding the method of Hippocrates-Thoma Jonescu ($p=0.005$): relapses reported after the sixth postoperative month accounted for 0.8% of the cases. Relapses on the sixth month after discision and excision were 6.4% and 2.8%, respectively. No relapses were registered after the sixth postoperative month in the group in which filling with fibrin glue, or in the group with plasty by proximal mucous flap.

Our results are comparable with the results from studies carried out by Christensen [6], McCortney [7] and Lentner [8], who reported low relapse rates after the treatment applied. In the series of Cankov C. reported relapses after ligature method account for 4% of the cases, and anal incontinence is transitional [9, 10].

Routine surgical techniques applied nowadays result in anal sphincter apparatus

disruption, with subsequent transitional or permanent anal incontinence. Bennet [11, 12] reported high rate (up to 55%) of postoperative anal incontinence, especially in treatment of horseshoe-shaped fistules. Joy and Williams [13] have presented patients who would not readily report incontinence. However, when asked specific questions, 10% of these patients would admit having incontinence problems after surgical treatment for anal fistules. In a “confidential conversation”, after breaking the “protective armor”, the rate rose to 50%. Abcarian [14] reported incontinence after fistulotomy in 30% of cases. Recent studies have reported low relapse rate and varying rates of disruption of anal continence [6-8].

Analyzing the type of applied operative technique and subsequent postoperative incontinence, we established a statistically significant result for Hippocrates-Thoma Jonescu method ($p=0.003$). This type of treatment yielded the highest rate of postoperative incontinence by FISI: 15.9% of low-degree incontinence and 4.3% of average-degree incontinence. The postoperative incontinence rates reported after excision of the fistule were as follows: low-degree – 11.6% and average degree – 3.2%. After discision, the incontinence reported was low degree (6.5%) and average degree (3.2%). After proximal flap plastic surgery, low degree of incontinence was reported in 8.7% of the cases, and there were no

cases average degree incontinence. No postoperative incontinence was reported in the cases in which fibrin glue had been injected in the channel of the fistula.

Conclusion

Success of treatment of anal fistules implies a balance between excellent results, relapse rates and anal incontinence degree. Relapse of an anal

fistula is the lesser problem for the patient than subsequent incontinence after surgery. When both relapse and incontinence recur, subsequent treatment is rarely successful, sometimes even impossible. Hippocrates-Thoma Jonescu method has proved its efficiency in the treatment of anal fistules but it should be applied after reliable evaluation of the functional state of the anal sphincter apparatus.

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