

The meta analysis on the hemorrhoid artery ligation for the treatment of hemorrhoids sickness under doppler ultrasound guided.

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Abstract

Objective: Through the Meta analysis of the present randomized controlled trial to doppler ultrasound guided hemorrhoid artery ligation combined the curative effect of TCM treatment of hemorrhoids sickness.

Methods: To collect 1990 ~ 2015 multiple databases meet the criteria for the 5 randomized controlled trials for Meta analysis. Detection of the main indicators include postoperative bowel movement for the first time, the incidence of postoperative week's stool, postoperative pain and edema, a grade, urine retention and complications.

Results: The five randomized controlled trial of postoperative bowel movement for the first time, the incidence of postoperative week bloody significantly higher than that of traditional Chinese and western medicine group ($P<0.01$). The postoperative pain and edema scores of Chinese and western medicine group was obviously lower compared group ($P=0.004$). Chinese and western medicine group of patients with urinary retention rate and the control group was no significant difference ($P=0.236$), postoperative complications of Chinese and western medicine group and control group was no significant difference ($P=0.672$).

Conclusion: The Doppler ultrasonic guided hemorrhoid artery ligation combined treatment of traditional Chinese medicine hemorrhoid disease is superior to the traditional methods of surgical treatment.

Keywords: Hemorrhoid artery ligation, Hemorrhoids sickness, Doppler ultrasound, Meta-analysis.

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Introduction

Hemorrhoids sickness for common frequently-occurring disease, many patients need surgery. Inside the outer shell of traditional art has good curative effect, also has such problems as large trauma and a lot of complications. Morinaga, etc in 1995 in Doppler guided accurately find hemorrhoid artery, and joint treatment of hemorrhoids disease [1]. Multicenter prospective case-control study, the author compared the Doppler ultrasound guided hemorrhoid artery ligation and stripping outside haemorrhoidectomy clinical application of safety and effectiveness, and make preliminary evaluation the clinical application of the former. Hemorrhoids sickness for common frequently-occurring disease, most patients need surgery. Traditional external strip internal tied in curative effect is better, but more trauma, pain, complications, recovery time for up to 1 month [2]. With the deepening of the understanding of nature of hemorrhoids, anal cushion saved, rubber band ligation, copper ion therapy, PPH surgery and other retention

anal cushion is on the rise, and each has its advantages and disadvantages. In China carried out the surgery, through further clinical observation, found at the same time of hemorrhoid artery ligation for relaxation mucosa line seam fixed can obviously improve the curative effect [3]. Therefore, this research through the Meta analysis of Doppler ultrasound guided hemorrhoid artery ligation combined the curative effect of TCM treatment of hemorrhoids sickness, aims to provide reference for clinical practice and further research.

Data and Methods

Literature into and exclusion standard

1) The object of study for the surgical treatment of patients, which is mainly composed of hemorrhoids and mixed hemorrhoid, limit has been made to hemorrhoids staging; 2) must be the original published randomized controlled studies (randomized controlled trials, RCT); Treatment group (3)

literature using Doppler ultrasound guided hemorrhoid artery ligation combined treatment of traditional Chinese medicine and the control group used the traditional inside the outer shell pierced surgery; 4) ruled out multiple published literature and the literature information provided is incomplete.

Data collection methods

Retrieval of electronic databases including PubMed (1990 ~ 2015), EMBASE (1980 ~ 2015), the Cochrane library (12), 1 - December, 2014) and science citation index (1975 ~ 2015), search keywords for "hemorrhoid artery ligation (hemorrhoidal artery ligation)", "Chinese medicine" and "inside the outer shell pierced (external ligation stripping)".

The retrieval results

Reading to retrieve the initial literature, literature to eliminate obviously unqualified, 2 by the evaluators in strict accordance with the literature into the screening and excluding standard independently literature, inconsistent results for review and expert review, please.

The data extraction

By the evaluators extracted respectively from the included studies needed information system evaluation, including basic information, research characteristics, and the results measured data. The results of intraoperative and postoperative, including postoperative bowel movement for the first time, the incidence of postoperative week's stool, postoperative pain and edema, a grade, urine retention and complications [4], and so on and so forth.

Table 1. Into the Meta analysis of randomized controlled studies of basic information.

Literature	Methods	The average age (years old)	Hemorrhoids type		Follow-up time (Month)
			Simple hemorrhoids	Mixed hemorrhoid	
Huang Zhaojian	Chinese and western medicine group	45.8 ± 8.9	28	47	12
	Control group	46.5 ± 9.2	30	45	
Qin Pengpai	Chinese and western medicine group	48.3 ± 13.8	72	88	6
	Control group	47.3 ± 13.0	70	90	
Tan Jianxiong	Chinese and western medicine group	60.4 ± 6.3	46	50	6
	Control group	59.4 ± 4.5	48	48	
Qin Haonan	Chinese and western medicine group	53.7 ± 6.3	62	84	6
	Control group	48.9 ± 5.8	63	83	

Discussion

Hemorrhoid is the most common and frequent clinical rectal benign diseases. The causes of hemorrhoids sickness has been a lack of a clear, there are two kinds of the commonly used for clinical theory, namely "varicose veins theory" and "anal cushion down theory", both can only explain part of the cause

The research of quality evaluation

Using the Jadad composite score evaluation into the research of quality standard. 1) whether there is a selection bias, that is, whether patients with truly random; 2) the existence of bias, that is, in addition to intervention measures of research, other measures in the two groups are consistent; 3) whether or not a blind method to judge the curative effect; 4) if there is a lost to bias, baseline data are comparable, etc. [5].

Statistical processing

Using Cochrane provide Review Manager Software (version 4.2.10, Oxford, UK) complete statistical analysis. Count data effect index using odds ratio (odds ratio, OR), the difference between the measurement data using the weighted mean differences (weighted mean difference, WMD) OR standardized mean difference (standardized mean difference, SMD), and calculate the 95% confidence interval (95% CI), included in the meta-analysis research heterogeneity inspection first, if $P > 0.05$, using fixed effect model; If $P < 0.05$, then a random effects model.

Results

The initial search determines the study 10 patients. After screening the five RCT were included in this meta-analysis. All five studies the basic characteristics of the patients with difference between two groups has no statistical significance ($P > 0.05$). In one of the main features of the study Chinese and western medicine group and control group each index of Meta analysis results are shown in Table 1.

of hemorrhoids sickness, of which "anal cushion down theory" to explain the cause of hemorrhoids. Although cause not clear, but we have a consensus hemorrhoid is always a blood vessel as the main component of organization, both blood too much input, and slow blood flow is likely to be a cornerstone of its congestion or hypertrophy.

The meta analysis on the hemorrhoid artery ligation for the treatment of hemorrhoids sickness under doppler ultrasound guided

At present, the bleeding as the main symptoms reported in the literature of the minimally invasive surgical treatment of hemorrhoids sickness with hardener injections, Doppler guided hemorrhoid artery ligation, copper ion electrochemistry therapy, laser therapy, etc, the hardener injections, Doppler guided hemorrhoid artery ligation is the present domestic clinical more common method of minimally invasive surgery. Hardener injections is hardener into a hemorrhoids, local aseptic inflammation, protein denaturation, vascular occlusion, and make the fibrosis of the surrounding tissues in mild-to-moderate, strengthen down anal pad attachment relationship with the surrounding tissue Doppler guided hemorrhoid artery ligation by Doppler probe accurately find the anus and vessel ligation, blocking blood flow, make the hemorrhoids atrophy, necrosis, achieve hemostasis.

In the years after the first put forward the concept of anal cushion, as people of hemorrhoid delve into the anatomy, etiology, further more on the essence of hemorrhoid. Formulated in our country of the tentative standard of diagnosis and treatment of haemorrhoids are defined as "hemorrhoid is anal cushion pathologic hypertrophy, shift and crissum's subcutaneous vascular plexus clogged blood flow to form clumps". The surgery of Chinese medical association branch of anorectic surgery group than made clear that the new hemorrhoid should include the concept of "hemorrhoids is anal pad of anal canal vascular pad support structure, the vascular plexus and anatomizes of pathological change and abnormal or shift. External piles are a rectal venous collateral branch under the venous plexus under the dentate line distal skin outspread and thrombosis. Mixed hemorrhoid is hemorrhoids by rich vein plexus and the corresponding parts of the external hemorrhoid venous plexus."

After the success of the anesthesia, with 0.5% iodine volts routine disinfection b. cleanse the skin, sterile towels single shop. Refers to examining and enlarge anal, specially the anus mirror in the disinfection and ultrasonic Doppler hemorrhoid artery detection diagnosis instrument connection after placing anorectic anal mirror, put Doppler ultrasound probe in the dentate line 2-3 cm, along the canal straight intestinal longitudinal axis rotation, a week in Doppler ultrasound hemorrhoid guided by detecting instrument for looking for hemorrhoid artery, receive the doppler ultrasonic signal in the obvious place, reoccupy iodine volts sponge and disinfection of the anus mirror operation within the window (each into the needle must be sterilized before), through the window with a 2-0 absorbable sutures and strong 1/2 turn hemorrhoid artery for 8 suture, with the help of the pushing device to ligation suture of blood vessels, complete all the testing rotating anus mirror again after hemorrhoid artery ligation effect, seam again for not satisfied with place, anus mirror out of o. 5 cm repeat the above operation, but should guarantee the ligation point distance of tooth line at least 0.5-1.0 cm, complete all the hemorrhoid artery ligation after exit doppler ultrasound anus mirror, use finger to check the position of the suture [6-10].

Obsessed with the "negundo hemorrhoid house, with small rope, cutting with a knife..." Is has been found that the earliest

human about a ligation therapy, DG - HAL can be seen as an extension of the traditional ligation therapy, is a traditional ligation therapy to upgrade. DG - HAL is simple, the main artery more accurate positioning, a more direct, hemostatic effect is exact, blocking blood flow to the recent suspension action, less intraoperative complications, and can be carried out under local anesthesia and even in the absence of anesthesia, it is further reduced the waist skeleton possible side effects of anesthesia, compared with the traditional ligation therapy, shows a larger advantage in some ways.

DG - child HAL operation mechanism mainly has the following aspects: (1) after ligation arteries, block into the bloodstream of hemorrhoids, does not affect the venous return at the same time, the inflows/outflows than decreased, hemorrhoids will shrink; (2) with the reduction of tension connective tissue will regenerate, thus promotes the contraction of hemorrhoids; (3) caused by partial ligation of chronic inflammation, resulting in a tissue fibrosis, make the film and the lower adhesion of diamond film fixed, shrinking hemorrhoid disappeared, improve hemorrhoids prolapsed; (4) high ligation of the parts, and save the most anal cushion organization, therefore, significantly reduce the postoperative reaction.

Conclusion

The Doppler ultrasonic guided hemorrhoid artery ligation combined treatment of traditional Chinese medicine hemorrhoid disease is superior to the traditional methods of surgical treatment.

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