

Clinical Analysis of Endoscopic Resection of Anal Papilloma

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1. Abstract

1.1. Objective: To explore the clinical effect and method of endoscopic resection of anal papilloma.

1.2. Method: A series of retrospective case studies were used to analyze the data of 40 patients with anal papilloma who underwent endoscopic resection or traditional surgical resection in our hospital. They were divided into two groups: endoscopic treatment group (n = 19) and surgical treatment group (n = 21). The clinical efficacy, postoperative pain and complications, operation time, hospitalization time and cost of each group were analyzed and compared.

1.3. Results: Compared with the surgical group, the incidence of postoperative complications in the endoscopic group was 15.8% (3 cases / 19 cases) and 28.6% (6 cases / 21 cases) within one week after operation. There was no significant difference between the two groups (p = 0.457). Three months after operation, 2 cases (10.5%) in endoscopic group and 1 case (4.8%) in operation group recurred, but there was no significant difference in recurrence rate between the two groups (p = 0.596). The operation time, hospitalization time and hospitalization cost of endoscopic group were significantly lower than those of the operation group (p < 0.05).

1.4. Conclusion: Endoscopic resection of anal papilloma is effective, minimally invasive, with few complications, fast recovery and light economic burden.

2. Introduction

Along with the irregular daily lifestyle and the increase of unclean daily diet of people in China, it has shown a significant trend of

increasing clinical reports of the incidence of human anal diseases, which has caused extremely serious adverse effects on the quality of life of relevant people. A survey found that, the positive rate of anorectal diseases in healthy people is 68.2% high with no age limit, among which anal papilloma is one of the most common types, so as the early diagnose and intervention is recommended [1]. Anal papilloma, also known as hypertrophied anal papilla or anal papilla fibroma, grows at the junction of the rectum and anus, the surface is covered with skin, mostly white, and the texture is relatively hard [2]. It is a benign tumor of connective tissue hyperplasia that the normal anal papilla fiber caused by chronic inflammation stimulation, which tends to become malignant, and very few cases of malignant transformation have been reported [3]. Anal papilloma has a high incidence rate and is a common anorectal disease second to hemorrhoids, which can be single or multiple. The onset is insidious and the progress is slow. In the early stage, it is mainly manifested by anal fissure or anal sinusitis. In the case of hypertrophy, if the papillae start to protrude into the anal canal, it needs attention and appropriate treatment [4]. With the course of the disease progresses, there will be a foreign body sensation, prolapse from the anus during defecation, probably with pruritus, pain, pricking, a sense of incomplete evacuation and heaviness in the anal region, and occasionally with hematochezia [5]. It can cause increased mucus leakage, which would lead to increased anal moisture. They are easily traumatized and may become inflamed during a bowel movement. Moreover, when the papillae are prone to undergo considerable fibrous thickening to obtain a rounded dilated tips, would be transformed into fibrous polyp,

symptoms such as prolapse can occur, which may require frequent manual repositioning, anal bleeding also turned to be more frequency, which affect patients' daily life [6]. The traditional treatment of anal papilloma is ligated or resected via an anoscope under local or spinal anesthesia. In recent years, endoscopy has become a routine examination method for the diagnosis and treatment of anorectal diseases. The Endoscopy Center of our hospital used colonoscopy to treat anal papilloma with endoscopic resection.

3. Cases and Methods

3.1. Cases: From October 2017 to October 2019, patients who were hospitalized in our hospital and underwent endoscopic treatment or traditional surgical treatment of internal hemorrhoids combined with anal papilloma were collected. Finally, 40 cases were included for retrospective summary, including 19 cases of endoscopic

treatment (endoscopic treatment group) and 21 cases of traditional surgery (traditional surgery group). Among them, prolapse of anal mass was the main complaint in 29 cases, hematochezia and anal discomfort were the main complaint in 7 cases, and diarrhea and constipation were the main complaint in 4 cases.

3.2. Inclusion Criteria: (1) Colonoscopy confirmed anal papillae or anal papilloma; (2) The patients had completed endoscopic treatment or traditional surgical treatment, and had regular postoperative follow-up; (3) The case information is complete.

3.3. Exclusion Criteria: (1) Patients with inflammatory bowel disease; (2) Patients with colorectal tumor; (3) Patients with incomplete case data; (4) Patients who did not complete follow-up. The two baseline data of the patients were comparable ($p>0.05$), see (Table 1) for details.

Table 1: Comparison of general clinical data between the two groups (or cases (%))

GROUP	CASE	AGE (year)	Course of disease (month)	Number of anal papilloma (number)	Sex		Combined Internal Hemorrhoids	
					MALE	FEMALE	WITH	WITHOUT
Endoscopic Group	19	47.9±7.8	1.8±0.4	2.4±0.8	7(36.8)	12(63.2)	6(31.6)	13(68.4)
Surgery group	21	48.3±8.5	2.0±0.6	2.6±0.5	9(42.9)	12(57.1)	5(23.8)	16(76.2)
t/χ ²	-	0.155	1.226	0.958	0.15		0.302	
P	-	0.878	0.228	0.344	0.698		0.583	

3.4. Endoscopic Equipment and Instruments: endoscopic host and endoscopic CF-H290 (OLYMPUS, Japan), multi-ring mucosal resection device (COOK, United States), high-frequency electric generator (ERBE, Germany).

4. Methods

Both groups received intestinal preparation before operation, followed by postoperative dietary guidance and local physiotherapy.

4.1. Control Group: The patients were anesthetized successfully, and the lithotomy was placed on the operating table. After the operation area was disinfected and sterile towels were laid, the perineal area was disinfected again and the rectal cavity was disinfected. The lobed anoscope enters the rectum and expands the anus to fully expose the cavity tissue. The base of the anal papilloma was clamped, ligated with 10# silk thread, and the anal papilloma was removed, packed with hemostatic gauze. Patients with polyps underwent polypectomy under colonoscopy before surgery.

4.2. Observation Group Endoscopic Center: Endoscopic anal papilloma resection: the patient is placed in the left lateral position, first a transparent cap is installed on the lens end, the Olympus gastroscope is upright or inverted to observe and evaluate the anal papilla, with the help of the transparent cap, snare the base of the anal papilloma and resect by electrocoagulation. There were 6 cases of endoscopic resection of colonic polyps followed by anal

papillae resection.

5. Indicators of Observation

5.1. Anal Papilloma Clinical Cure Standard: symptoms and signs disappear.

5.2. Effective Criteria for Clinical Treatment of Anal Papilloma: Both symptoms and signs are improved, or one of the two is improved, and there is no need for reoperation.

5.3. Ineffective Criteria for Clinical Treatment of Anal Papilloma: Symptoms and signs did not change, requiring reoperation.

5.4. Comparison of operation time, hospital stay and hospital cost between the two groups.

5.5. Visual analogue scale (VAS) was used to evaluate the pain degree of all patients before and after treatment, ranging from 0 to 10 points. The more obvious the pain degree was, the higher the score was.

5.6. Comparison of complication rate between two groups, including the incidence of urinary retention and bleeding within 1 week of the perioperative period and the follow-up after 3 months of treatment, and the long term complications and recurrence of the two groups were compared. Recurrence and/or neonatal rate: the reappearance of anal papilla at the original operation site or within 45 degrees left and right is called recurrence; the anal papilla reap-

pearing at or outside or around 45 degrees of the original operation site or around is called newborn.

6. Data Processing and Analysis

6.1. Read the case data of each group of patients in detail, and the observation indicators for extracting data include operation time (based on the anesthesia record sheet), postoperative hospital stay and hospital expenses, and evaluate clinical efficacy, postoperative complications, postoperative Symptom improvement, follow-up, etc.

6.2. Statistical Methods: Data were processed by SPSS 17.0 software package, measurement data were represented by (\bar{x}), comparison between groups was by t test, count data were expressed by frequency and percentage, categorical data were compared by χ^2 test or Fisher's exact probability method, graded data were

compared Rank sum test, $P < 0.05$ was regarded as a statistically significant difference.

7. Result

7.1. Clinical Efficacy of the Two Groups: In the endoscopic group, 10 cases were cured and 8 cases were effective, with a total effective rate of 94.7%. In the surgery group, 8 cases were cured and 11 cases were effective, with a total effective rate of 90.5%. Although there was no statistical significance between the treatment group and the control group (See (Table 2) for detail), the endoscopic group showed more effective in clinical outcome.

7.2. Perioperative Period: Operation time (16.7 ± 3.5 vs 21.5 ± 4.3 , $p < 0.001$), length of stay (4.3 ± 1.5 vs 6.8 ± 1.9 , $p < 0.001$) and hospitalization costs (4589.4 ± 584.5 vs 8760.2 ± 656.0 , $p < 0.001$) were statistically significant (see (Table 3) for details).

Table 2: Comparison of clinical efficacy (cases (%))

Endoscopic Group	19	10 (52.6)	8 (42.1)	1 (5.3)	94.70%
Surgery group	21	8 (38.1)	11 (52.4)	2 (9.5)	90.50%

Table 3: Comparison of surgery-related indexes between the two groups ($\bar{x} \pm s$)

GROUP	CASE	Operation time (min)	Postoperative VAS score	Hospital stay (day)	Cost (yuan)
Endoscopic Group	19	16.7 ± 3.5	3.2 ± 0.9	4.3 ± 1.5	4589.4 ± 584.5
Surgery group	21	21.5 ± 4.3	3.6 ± 1.1	6.8 ± 1.9	8760.2 ± 656.0
t	-	3.846	1.251	4.585	21.139
P	-	<0.001	0.219	<0.001	<0.001

7.3. Comparison of Postoperative Complications and Recurrence: Within 1 week after surgery, in the endoscope group, there were 2 cases of blood in the stool and 1 case of anal edema, and the incidence of postoperative complications was 15.8% (3 cases /19 cases); in the operation group, there were 3 cases of blood in the stool, 2 cases of urine retention, 1 case of anal edema, and the incidence of postoperative complications was 28.6% (6 cases /21 cases). Even there was no significant difference in the incidence of

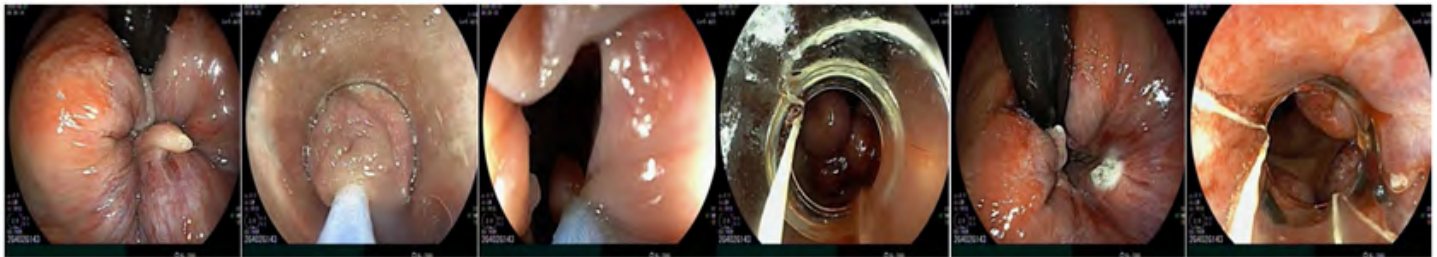
complications between the two groups (Fisher exact probability method, $p = 0.457$) (See (Table 4) for details), the endoscope group had less postoperative complications. Re-examination 3 months after surgery showed recurrence in 2 cases (10.5%) in the endoscopic group and 1 case (4.8%) in the surgery group, but there was no significant difference in the postoperative recurrence rate between the two groups (Fisher exact probability method, $p = 0.596$) (See (Table 5) for details) (Figure 1).

Table 4: Comparison of complications within 1 week after surgery (cases (%))

GROUP	CASE	Bloody	Retention of urine	Edema of anus	Total complications
Endoscopic Group	19	2(10.5)	0(0)	1 (5.3)	3 (15.8)
Surgery group	21	3 (14.3)	2(9.5)	1(4.8)	6 (28.6)

Table 5: Comparison of recurrence within 3 months after operation (cases (%))

GROUP	CASE	Recurrence
Endoscopic Group	19	2(10.5)
Surgery group	21	1 (4.8)

**Figure 1:** Endoscopic treatment of anal papilloma

8. Conclusion

Anal papillae are often found as part of the classic triad of a chronic fissure, which includes the hypertrophied papilla above, the fissure, and a skin tag below [4]. Dilated vein, white area, and a large hypertrophied anal papilla are often found in prolapsing types of hemorrhoids [4]. The formation of anal papilloma is mostly due to repeated stimulation of inflammation. It is generally believed that once the anal papilla occurs, it will not disappear by itself, but generally small, asymptomatic hypertrophied anal papilla may not be treated. Generally, the following situations require surgical resection: ① Hypertrophied anal papilla presents polypoid thin bands or cylindrical prolapse outside the anus; ② Obvious varicose veins at the base; ③ Complicated with other anal diseases requiring surgical treatment; ④ Diameter > 0.5 cm, often caused by fecal mass friction.

The treatment of anal papilloma can be surgical intervention or endoscopic ligation therapy. Due to the continuous elastic binding force of the rubber ring, the blood supply of the anal papillae is blocked, so as to cause the progress of the inflammatory reaction, fibrosis and scar formation of the local tissue. Ligation of hypertrophied anal papillae causes less trauma, and avoids damage to the dental line and excessive impact on the fine sensory function of the anus, and has fewer postoperative complications. After ligation of the anal papilloma, the lifting effect of the ligation device

can promote the retraction of the mucosa, and the prolapse of external hemorrhoids can also be improved in a certain extent. This study found that the postoperative resection rate and recurrence rate of endoscopic treatment are equivalent to those of traditional surgery, while the incidence of postoperative complications such as pain and blood in the stool is low, and it shortens the length of operation, hospitalization time, and hospitalization costs. The postoperative pathology of the anal papilla is mostly squamous epithelium covered with mucosa, submucosal fibrous tissue hyperplasia, and lack of blood vessels and nerves. In theory, ordinary endoscopic resection can be tried, but further confirmation is needed. As hypertrophied anal papilla always occurred with hemorrhoids, endoscopic treatment has a good field of vision and can solve polyps with other problems at one time. However, for external hemorrhoids that need to be resect, endoscopic treatment has certain limitations, and it is not an indication for endoscopic treatment for the time being. In summary, endoscopic treatment of anal papilloma has definite clinical curative effect, with short operation time, less pain, fewer postoperative complications, quick recovery, and can solve multiple problems at the same time, which is worthy of clinical application.

9. Source of Funding

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10. Conflict of Interest

All authors have read and agree with the contents of the manuscript. The authors declare no conflict of interest.

References

1. Xiaobin F, Chenrong H. Investigation on the incidence of anorectal diseases in healthy population [J]. Chinese Annals of Endemic Disease Control. 2014; 29(S2): 73.
2. Lenhard B. Guideline on the disease picture of hypertrophic anal papilla. Hautarzt. 2002; 53(2): 104-5.
3. Lu H, He X, Wang Q, Zheng D. MicroRNA let-7b-regulated epidermal stem cell proliferation in hypertrophied anal papillae. Mol Med Rep. 2015; 12(4): 4821-8.
4. Gupta PJ. A study of the symptomatology of hypertrophied anal papillae and fibrous anal polyps. Bratisl Lek Listy. 2005; 106(1): 30-3.
5. Gupta PJ, Kalaskar S. Removal of hypertrophied anal papillae and fibrous anal polyps increases patient satisfaction after anal fissure surgery. Tech Coloproctol. 2003; 7(3): 155-8.
6. Lenhard B. Guideline on the disease picture of hypertrophic anal papilla. Hautarzt. 2002; 53(2): 104-5.