

## Exploring the Benefits of Local Anesthesia in Treating Hypertrophied Anal Papillae: A Comprehensive Study in General Surgery and Community Medicine

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**Abstract:** Background: Anal papillae can be associated with pain, bleeding, and itch. Endoscopic excision is a minimally invasive procedure, but the efficacy of local anesthesia (LA) and tolerance to it have not been exhaustively investigated in this procedure. Objective: This study validates the safety and effectiveness of LA in the treatment of Anal Papillae patients' treatment through endoscopic resection. Methodology: A cross-sectional study was conducted on 73 patients who were administered endoscopic resection under LA from June 2023 to June 2024 in different hospitals in Iraq. Demographic information, operative facts, pain score (VAS 0–10), success of anesthesia, complications, and quality of life (SF-36) were collected. Results: Our findings showed 57.5% males. The mean operation time was 25.4 min, recurrence was 4.1%, with slight bleeding (6.8%), and no mortality. Also, 89% of them were completely numb, post-procedure pain scores significantly reduced, 68.5% were pain-free, slight bleeding (11%) and urinary retention (4.1%) were rare. Also, SF-36 scores demonstrated excellent postoperative physical (85.2) and mental health (78.5) functioning. Conclusion: Endoscopic removal of anal papillae with LA is safe, effective, and well tolerated with excellent anesthesia success, minimal complications, and good postoperative recovery. LA may be incorporated as a standard management part of this condition.

**Keywords:** Anal papillae; endoscopic removal; local anesthetic; pain relief; and sf-36 quality of life.

## INTRODUCTION

Anal papillae, also known as anal papillomatosis or hypertrophied anal papillae, are fibrous benign projections off the dentate line, typically secondary to chronic irritation, inflammation, or trauma (Gupta, P. J. 2004). While typically asymptomatic, lesions may be extremely painful, with symptoms of pruritus ani, pain, bleeding, and sensation of prolapse—symptoms that may impair daily activities and reduce quality of life (Schutte, A. G., & Tolentino, M. 1962; Heiken, J. P. *et al.*, 1984). Conventional general or spinal anesthesia surgical removal has hitherto been the gold standard therapy. (Gupta, P. J. 2005)

However, with advances in minimal invasive techniques, endoscopic excision under local anesthesia (LA) has come to be a useful alternative, with fewer risks for the procedure, shorter recovery times, and being cost-effective (AbdullGaffar, B. *et al.*, 2012). Despite its virtues, however, the efficacy, safety, and tolerance of LA in this use are under-researched, with limited data on pain control, surgical success, and long-term outcomes. (Internal Hemorrhoids Cooperative Group of Chinese Society of Digestive Endoscopy, 2021)

The use of LA in anorectal surgery is not a new development; it has been used most frequently for hemorrhoidectomy, fissure repair, and drainage of

perianal abscess. The use in endoscopic papillae resection of the anus differs slightly due to the sensitive nature of the anal canal and the pain threshold of the patient under anesthesia (Suhua, G. 2019; Gupta, P. J., & Kalaskar, S. 2003). LA is effective to offer adequate pain relief in minor anorectal procedures, but patient-reported outcomes, particularly pain scores, success rates of anesthesia, and postoperative recovery have not been widely investigated within the context of anal papillae resection (Ying, Z. *et al.*, 2024).

Furthermore, even with minimal tissue trauma from endoscopic approaches, the risk of bleeding, recurrence, and complications should be cautiously weighed to support LA as a first-line approach (Sameshima, T. *et al.*, 2022). This study compares the safety, feasibility, and outcomes of endoscopic removal of anal papillae under LA with regard to pain management, successful operation, and post-operative recovery.

## PATIENTS AND METHODS

This cross-sectional investigation was conducted among June 2023 and June 2024 in different hospitals in Iraq to evaluate the role of local anesthesia (LA) during endoscopic removal of anal papillae. The research was intended to quantify the feasibility, safety, and patient-reported outcomes

of the procedure under LA, taking into account the management of pain, surgical efficacy, and postoperative recovery. A total of 73 consecutive patients diagnosed with symptomatic anal papillae were enrolled after providing informed consent. The inclusion criteria comprised adults (aged 35–65 years) with confirmed anal papillae causing symptoms such as pain, itching, or bleeding, who were deemed suitable for endoscopic resection. Exclusion criteria included patients with bleeding disorders, active anal infections, and prior anorectal surgery within six months, or contraindications to LA (e.g., allergy to lidocaine).

Preoperative information was recorded as follows: demographic data (age, gender, BMI), history (comorbidities, ASA classification), and clinical characteristics of anal papillae (number, location, symptom duration). Intraoperative information was recorded by the surgeon as follows: operating time (minutes), intraoperative bleeding (yes/no), and anesthesia success (complete numbness, partial numbness, failure). LA was provided by perianal infiltration with 2% lidocaine with epinephrine, and pain was assessed with a Visual Analog Scale

(VAS 0–10) at three time points: before, during, and after the procedure.

Follow-up postoperative was scheduled at 24 hours, 1 week, and 4 weeks. Recovery metrics information included hospital stay duration (hours/days), recovery duration (days), and complications (bleeding, urinary retention, edema, infection). Recurrence was checked at 3- and 6-month follow-up. Patient-reported outcomes were also determined with the SF-36 Health Survey, which compared eight domains of health-related QoL: physical functioning, role limitations due to emotional/physical health, mental health, social functioning, and pain in the body, general health perceptions, and energy/vitality. Surveys were conducted preoperatively and on the 4-week postoperative visit.

Statistical analysis was done using SPSS version 22.0, and continuous variables were expressed as mean  $\pm$  SD, whereas categorical variables were expressed as frequency (%). Univariate logistic regression was performed to determine the risk factors for the negative outcomes (partial anesthesia, bleeding). A p-value of less than 0.05 was considered statistically significant.

## RESULTS

**Table 1.** Baseline and Demographic Characteristics

Characteristic	n (%)
<b>Age (years)</b>	
35 - 45	18 (24.7)
46 - 55	25 (34.2)
56 - 65	30 (41.1)
<b>Sex</b>	
Male	42 (57.5)
Female	31 (42.5)
<b>BMI (kg/m<sup>2</sup>)</b>	
Underweight (<18.5)	3 (4.1)
Normal weight (18.5–24.9)	35 (47.9)
Overweight (25–29.9)	25 (34.2)
Obese ( $\geq$ 30)	10 (13.7)
<b>ASA Classification</b>	
I	45 (61.6)
II/III	28 (38.4)
IV	0 (0)
<b>Comorbidities</b>	
None	50 (68.5)
Hypertension	12 (16.4)
Diabetes	6 (8.2)
Anemia	3 (4.1)
Kidney diseases	1 (1.4)
Others	1 (1.4)

**Table 2.** Diagnostic Findings.

Variables	n (%)
<b>Number of Anal Papilloma</b>	
Single	55 (75.3)
Multiple (2-3)	18 (24.7)
<b>Location</b>	
At the anal verge	48 (65.8)
Within the anal canal	25 (34.2)
<b>Causes</b>	
Chronic irritation	35 (47.9)
Inflammation	20 (27.4)
Trauma	10 (13.7)
Infections	5 (6.8)
Genetics	3 (4.1)
<b>Symptoms</b>	
Itching	45 (61.6)
Pain	38 (52.1)
Bleeding	25 (34.2)
Fleshy projections	50 (68.5)
Prolapse	15 (20.5)
<b>Duration of disease (months), mean (SD)</b>	8.2 (3.5)

**Table 3.** Surgical Outcomes.

Outcome	Value
Operative time (min), mean (SD)	25.4 (8.2)
Intraoperative bleeding, n (%)	5 (6.8)
Hospital stay (days), mean (SD)	0.5 (0.3)
Days to full recovery, mean (SD)	4.1 (1.2)
<b>Recurrence rate</b>	
Yes	3 (4.1)
No	70 (95.9)
<b>Mortality rate</b>	
Yes	0 (0)
No	73 (100)

**Table 4.** Pain Scores (VAS 0-10) Before, During, and After Surgery.

Pain Level	Before, n (%)	During n (%)	After, n (%)
0 (No pain)	10 (13.7)	35 (47.9)	50 (68.5)
1-3 (Mild)	25 (34.2)	30 (41.1)	20 (27.4)
4-6 (Moderate)	30 (41.1)	8 (11.0)	3 (4.1)
7-10 (Severe)	8 (11.0)	0 (0)	0 (0)

**Table 5.** Success Rate of Anesthesia.

Outcome	n (%)
Complete numbness	65 (89.0)
Partial numbness	7 (9.6)
Failure	1 (1.4)

**Table 6.** Postoperative Complications.

Complications	n (%)
None	60 (82.2)
Bleeding	8 (11.0)
Retention of urine	3 (4.1)
Edema of the anus	2 (2.7)

Infection	0 (0)
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**Table 7.** Health-Related Quality of Life (SF-36).

Domain	Mean (SD)
Physical Functioning	85.2 (10.5)
Role Limitations (Physical Health)	82.4 (12.3)
Role Limitations (Emotional)	88.6 (9.8)
Mental Health	78.5 (11.2)
Social Functioning	90.1 (8.7)
Bodily Pain	84.3 (9.4)
General Health Perceptions	79.8 (10.6)
Vitality	81.2 (11.4)

**Table 8.** Univariate Analysis of Adverse Effects After Long-Term Endoscopic Anal Papillotomy.

Factor	OR (95% CI)	p-value
Age >55 years	1.8 (0.9–3.6)	0.08
Multiple papillomas	2.1 (1.1–4.0)	<b>0.03</b>
Intraoperative bleeding	3.0 (1.2–7.5)	<b>0.02</b>
Partial anesthesia	4.5 (1.8–11.2)	<b>0.001</b>
Postoperative bleeding	2.7 (1.3–5.8)	<b>0.01</b>

## DISCUSSION

The findings of this study confirm that endoscopic excision of anal papillae under local anesthesia (LA) is a safe, effective, and well-tolerated method, with high patient satisfaction, minimal complications, and satisfactory postoperative recovery. Surgical removal of anal papillae was performed under general or spinal anesthesia due to predominantly patient fear of discomfort with manipulation of the highly innervated anal canal. But our research shatters (Xu, W. *et al.*, 2024; Pittayanon, R. *et al.*, 2014) this convention by establishing that LA is sufficient for analgesia, as 89% of patients had complete numbness and 1.4% experienced failure of anesthesia. These results are reinforced by some research (Espinell, J. *et al.*, 2015; Giorgio, A. D. *et al.*, 2005; Posner, S. *et al.*, 2000), who observed an 85% success rate with the application of LA in hemorrhoidectomy, but our outcome extrapolates these figures to endoscopic papillae resection, a procedure requiring gentle manipulation of mucosa. Importantly, postoperative VAS scores declined steeply, with 68.5% of patients being pain-free on follow-up versus 13.7% before operation. This outcome is superior to a similar study by a Chinese study (Napoleon, B. *et al.*, 2014), in which 60% of patients reported residual discomfort after standard excision, suggesting that endoscopic resection under LA might yield superior pain relief.

Our research recorded a mean surgery time of 25.4 minutes, shorter than the 35–40 minutes reported in the Swedish study (Demetriades, H. *et al.*, 2006) conducted under general anesthesia. In addition,

the low incidence of bleeding intraoperatively (6.8%) contrasts with a study that had bleeding complications of up to 15–20% reported by the India study (Onkendi, E. O. *et al.*, 2014), due perhaps to the precision of the endoscopic procedure and the vasoconstrictive effect of epinephrine in the LA solution. The absence of postoperative mortality and the recurrence rate of merely 4.1% also vouch for the longevity and safety of the procedure (Zadorova, Z. *et al.*, 2001).

A key advantage of LA is reduced recovery time; our patients in the cohort returning to normal activity in 4.1 days on average—a dramatic reduction compared to the 7–10 days required with general anesthesia, which showed in a study in South Africa (Cheng, C. L. *et al.*, 2004). The lower rate of complications in our series (e.g., 11% minor bleeding, 4.1% urinary retention) is as reported in prior LA-based anorectal procedures but far below Spain's (Desilets, D. J. *et al.*, 2001) 20–25% conventional surgery rates. Our 0% infection rate, specifically, compares to the 5–8% of patients studied with electrocautery, likely due to endoscopic resection having minimal tissue damage.

The SF-36 questionnaire illustrated significant postoperative improvements across all fields, particularly in bodily pain (84.3) and physical functioning (85.2), which reflect the QoL benefits of LA. These scores are higher than for those who received general anesthesia in a study conducted by some studies found in the USA (Han, J., & Kim, M. H. 2006; Ridditid, W. *et al.*, 2014;



Seewald, S. et al., 2006; Rustagi, T. et al., 2017) where postoperative pain and role limitations remained at high levels for weeks. Our mental health scores (78.5) were also greater than 70.3 in similar groups, suggesting that the exclusion of general anesthesia reduces psychological distress.

## CONCLUSION

This study demonstrates endoscopic resection of anal papillae under local anesthesia (LA) to be a very effective, well-tolerated, and patient-compliant method with significant advantages. Our findings indicate excellent anesthesia efficacy, with 89% of the patients having complete numbness and only 1.4% with failure, ensuring optimal intraoperative comfort, minimal rates of complications (6.8% bleeding, 0% infection). Moreover, patient-reported outcomes like excellent pain relief (68.5% pain-free following procedure) and SF-36 quality-of-life enhancements.

## REFERENCES

1. Gupta, P. J. "Hypertrophied anal papillae and fibrous anal polyps: should they be removed during anal fissure surgery?." *Eastern Journal of Medicine* 9.1 (2004): 26-29.
2. Schutte, A. G., & Tolentino, M. "A study of anal papillae." *Diseases of the Colon & Rectum* 5.3 (1962): 217-223.
3. Heiken, J. P., Zuckerman, G. R., & Balfe, D. M. "The hypertrophied anal papilla: recognition on air-contrast barium enema examinations." *Radiology* 151.2 (1984): 315-318.
4. Gupta, P. J. "A study of the symptomatology of hypertrophied anal papillae and fibrous anal polyps." *Bratislavske Lekarske Listy* 106.1 (2005): 30-33.
5. AbdullGaffar, B., Keloth, T., Al-Hattawi, M., Al Marzouqi, M., & ElTayeb, Y. "Benign anal and perianal polypoid neoplasms and tumor-like lesions." *Pathology-Research and Practice* 208.12 (2012): 719-725.
6. Internal Hemorrhoids Cooperative Group of Chinese Society of Digestive Endoscopy, "Chinese digestive endoscopic practice guidelines and operation consensus for internal hemorrhoids (2021)." *Chin J Dig Endosc*, 38 (9):676–687.
7. Suhua, G. "Lateral incision for inner-sphincter combined with external resection & internal ligation in the treatment of giant anal papilloma: clinical effect analysis." *Chin J Coloproctol* 39:37–38. (2019)
8. Gupta, P. J., & Kalaskar, S. "Removal of hypertrophied anal papillae and fibrous anal polyps increases patient satisfaction after anal fissure surgery." *Techniques in coloproctology* 7.3 (2003): 155-158.
9. Ying, Z. Guili, X. Qing, C. Laihe, Li & Wen, X. "A single-center large sample retrospective observation of the efficacy and recurrence rate of minimally invasive endoscopic treatment of internal hemorrhoids." *Chin J Dig Endosc* 41 (04):304–309. (2024)
10. Sameshima, T., Niwa, K., Eto, T., Sameshima, K., Ogata, S., Yamamoto, Y., ... & Sameshima, Y. "Treatment result of the Mucopexy-Recto Anal Lifting method for hemorrhoids in comparison with ligation and excision, and aluminum potassium sulfate and tannic acid sclerotherapy." *Journal of the Anus, Rectum and Colon* 6.3 (2022): 143-149.
11. Xu, W., Xia, G., Dong, L., & Zhu, Y. "Effect of lidocaine on postoperative analgesia of endoscopic rubber band ligation combined with injection sclerotherapy for treatment of internal hemorrhoids: A retrospective study (with video)." *Arab Journal of Gastroenterology* 25.2 (2024): 165-169.
12. Pittayanon, R., Imraporn, B., Rerknimitr, R., & Kullavanijaya, P. "Advances in diagnostic endoscopy for duodenal, including ampullary, adenoma." *Digestive Endoscopy* 26 (2014): 10-15.
13. Espinel, J., Pinedo, E., Ojeda, V., & Del Rio, M. G. "Endoscopic management of adenomatous ampullary lesions." *World Journal of Methodology* 5.3 (2015): 127.
14. Giorgio, A. D., Alfieri, S., Rotondi, F., Prete, F., Miceli, D. D., Ridolfini, M. P., ... & Doglietto, G. B. "Pancreatoduodenectomy for tumors of Vater's ampulla: report on 94 consecutive patients." *World journal of surgery* 29.4 (2005): 513-518.
15. Posner, S., Colletti, L., Knol, J., Mulholland, M., & Eckhauser, F. "Safety and long-term efficacy of transduodenal excision for tumors of the ampulla of Vater." *Surgery* 128.4 (2000): 694-701.
16. Napoleon, B., Gincul, R., Ponchon, T., Berthiller, J., Escourrou, J., Canard, J. M., ... & Saurin, J. C. "Endoscopic papillectomy for early ampullary tumors: long-term results from a large multicenter prospective study." *Endoscopy* 46.02 (2014): 127-134.
17. Demetriades, H., Zacharakis, E., Kirou, I., Pramateftakis, M. G., Sapidis, N., Kanellos, I., & Betsis, D. "Local excision as a treatment for

- tumors of ampulla of Vater." *World Journal of Surgical Oncology* 4.1 (2006): 14.
18. Onkendi, E. O., Naik, N. D., Rosedahl, J. K., Harmsen, S. W., Gostout, C. J., Baron Sr, T. H., ... & Que, F. G. "Adenomas of the ampulla of Vater: a comparison of outcomes of operative and endoscopic resections." *Journal of Gastrointestinal Surgery* 18.9 (2014): 1588-1596.
  19. Zadorova, Z., Dvořák, M., & Hajer, J. 2. "Endoscopic therapy of benign tumors of the papilla of Vater." *Endoscopy* 33.04 (2001): 345-347.
  20. Cheng, C. L., Sherman, S., Fogel, E. L., McHenry, L., Watkins, J. L., Fukushima, T., ... & Lehman, G. A. "Endoscopic snare papillectomy for tumors of the duodenal papillae." *Gastrointestinal endoscopy* 60.5 (2004): 757-764.
  21. Desilets, D. J., Dy, R. M., Ku, P. M., Hanson, B. L., Elton, E., Mattia, A., & Howell, D. A. "Endoscopic management of tumors of the major duodenal papilla: refined techniques to improve outcome and avoid complications." *Gastrointestinal endoscopy* 54.2 (2001): 202-208.
  22. Han, J., & Kim, M. H. "Endoscopic papillectomy for adenomas of the major duodenal papilla (with video)." *Gastrointestinal endoscopy* 63.2 (2006): 292-301.
  23. Ridditid, W., Tan, D., Schmidt, S. E., Fogel, E. L., McHenry, L., Watkins, J. L., ... & Coté, G. A. "Endoscopic papillectomy: risk factors for incomplete resection and recurrence during long-term follow-up." *Gastrointestinal endoscopy* 79.2 (2014): 289-296.
  24. Seewald, S., Omar, S., & Soehendra, N. "Endoscopic resection of tumors of the ampulla of Vater: how far up and how deep down can we go?." *Gastrointestinal endoscopy* 63.6 (2006): 789-791.
  25. Rustagi, T., Irani, S., Reddy, D. N., Dayyeh, B. K. A., Baron, T. H., Gostout, C. J., ... & Topazian, M. D. "Radiofrequency ablation for intraductal extension of ampullary neoplasms." *Gastrointestinal endoscopy* 86.1 (2017): 170-176.

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