

## CLINICAL STUDY

## A study of the symptomatology of hypertrophied anal papillae and fibrous anal polyps

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**Background:** The presence of Hypertrophied anal papillae and fibrous anal polyps are often ignored in proctology practice. But the experience is that they tend to produce minor but disturbing symptoms. This study is aimed to assay the impact and utility of attending these two conditions concurrently while dealing with cases of fissure in ano.

**Patients and methods:** The study was carried out in 136 patients with chronic anal fissure having concomitant hypertrophied anal papillae or fibrous anal polyps. After relieving sphincter spasm by sphincterotomy, the polyps or papillae were destroyed using the radio frequency device. A comparison was made for the associated complaints like pruritus, pricking sensation, wetness, crawling sensation in the anus etc. before and after the removal of papillae or polyps by an independent observer blinded to the procedure.

**Results:** After one month of the procedure, the associated symptoms were reduced to a significant extent along with a nearly total decline in the primary complaints of pain and bleeding. There was significant reduction in pruritus ( $p=0.0003$ ), discharge per anus ( $p=0.0006$ ), crawling sensation in the anus ( $p=0.0004$ ) and that of incomplete evacuation ( $p=0.001$ ) At the follow up after 18 months, only 9 % of patients had recurrence of either anal fissure or symptoms like pruritus.

**Conclusion:** This study establishes that removal of hypertrophied anal papillae and fibrous polyps should be carried on a routine basis during surgical treatment of anal fissure. This would add to the effectiveness and completeness of the procedure. (Tab. 1, Ref. 20.)

**Key words:** hypertrophied anal papilla, fibrous anal polyp, radio frequency, anal fissure, sphincterotomy.

Anal papillae (1), which are also referred to as anal fibroma, papillitis hypertrophicans, or “cat tooth”, are the fine points of projections of the extreme upper end of anal canal skin at the mucocutaneous junction.

Small Papillae usually remain asymptomatic. Elongated anal papillae associated with pain and/or bleeding at defecation are sometimes encountered in infancy. Hemorrhage hypertrophied anal papillae can cause sudden rectal pain. Prolapsed papillae may become nipped by contraction of the sphincter mechanism after defecation (2). Occasionally, a red edematous papilla is encountered with local pain and a purulent discharge from the associated crypt. This condition (2) is referred to as “papillitis” with “cryptitis”.

The enlargement of the existing anal papillae is a consequence of a chronic inflammatory process and fibrotic proliferation within the range of the Linea dentata, the ano rectal zone, and the distal

rectal mucosa. Hypertrophied anal papillae are prone to undergo considerable fibrous thickening to acquire a rounded expanded tip, which is then known as a fibrous polyp (3). Occasionally the occurrence of hypertrophied anal papillae is reported after operational intervention in the anal region.

Dilated vein, white area, and a large hypertrophied anal papilla are often found in prolapsing types of hemorrhoids (4). According to literature, the prevalence of these papillae varies between 6 % and 60 % of all anoscopically-examined patients (5). They are equally found in both the sexes. After having hypertrophied or converted into anal polyps, anal papillae can produce a

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foreign body sensation and discharge from the anus. Subsequently, toxic irritative anal eczema may develop.

Histologically, the papillae consist of edematous, loose, fibrotic connective tissue, namely in parts with dense capillary contents. Occasionally akantosis and widened disk epithelium may be seen, but they never proceed to malignant degeneration (6).

Papillae and polyps should be differentiated from subnodular anal venous thrombosis, condyloma, or rectal adenoma (7).

Patients with fibrous polyps complain of projection of something inexplicable from the anus. A case of giant hypertrophied anal papilla complicated by massive anal bleeding and prolapse is reported (8).

The motto of this study was to demonstrate that hypertrophied anal papillae and fibrous anal polyps are responsible for complaints of minor disturbance of patients and hence should necessarily be attended and removed during surgical treatment of anal fissure, as well as to indicate that they can be conveniently removed by the radio frequency surgical device.

### Materials and methods

This non-randomized study was conducted at Fine Morning Hospital and Gupta Nursing Home, Nagpur, India, during the period from July 1999 to December 2000.

A total of 136 patients of chronic fissures in ano with hypertrophied anal papillae and/or fibrous polyp were studied. All of the patients under study had hypertrophied anal papillae. The numbers of papillae were ranging from 2 to 4 (mean of 3.2). The papillae that were felt on digital examination, were considered to be "large". Papillae, which were not palpable, and were visible only on anoscopy, were referred to as "small" papillae.

In 17 of the studied patients, anal polyps were found in association. 16 of these patients had single polyps while in one patient, there were two. Out of these, 11 patients had polyps of prolapsing type, which used to project out during defecation and get reduced spontaneously after the act. The remaining 6 were of non-prolapsing type.

### Exclusion criteria

Only patients with chronic fissure in ano who had associated anal papillae or fibrous polyps or both were selected. This was done irrespective of their age, sex, or duration of pathology. Patients suffering from fissure but not having hypertrophied papillae or polyps were excluded from the study. This assessment was carried out using a pediatric anoscope after instilling a 5% lidocaine ointment in the anal canal to reduce the pain during examination. Similarly, patients having associated sentinel piles, internal bleeding hemorrhoids were not considered.

An informed consent was obtained from all the patients. No special pre operative preparation was carried out. The study was approved by the local ethics committee and was carried out according to the Helsinki declaration. All of the patients received a dose of laxative (Lactulose 20 ml) on the night before the procedure.

### Radio frequency surgery for the hypertrophied anal papillae and fibrous anal polyps

Some few surgeons perform the removal of papillae or polyps by snipping them off with scissors or shaving them off with scalpel or electrocautery after being crushed (9). We, instead, have used the radio frequency technique to destroy these papillae and polyps effectively.

Radio frequency surgery is a method of simultaneous cutting and coagulation of the tissues (10). We used a dual radio frequency generator 4 MHz from Ellman International, Hewlett, N.Y. for this procedure.

An interchangeable ball electrode for coagulation and a round loop electrode for shaving off the target tissue were extensively used in the procedure.

### Procedure

As to begin with, lateral subcutaneous internal sphincterotomy was done in a short general anaesthesia containing muscle relaxant to relieve the spasm. This was followed by anoscopy to locate the anal polyp or papillae. Small papillae were directly coagulated with the ball electrode kept on the coagulation mode of the radio frequency unit.

The commonest sites where the papillae were seen were at 3, 7 and 11 o'clock positions with the patient in a lithotomy position. The next common sites were at 1, 5 and 9 o'clock.

The base of large papillae and fibrous polyps were circumferentially coagulated by the ball electrode and then excised by the round loop electrode of the radio frequency surgical unit. Minor bleeding, when encountered, was coagulated by touching the source with the ball electrode. This additional procedure of removal of papillae or polyps took a mean period of 2 minutes to complete.

The patients were given analgesics (Ketoprofen 250 mg twice a day) for a week and were prescribed a stool softener (Lactulose 15 ml at bed time) for a month. All the patients were discharged within 12 hours after the procedure. They were reviewed after 30 days.

### Comparative study

An independent observer, blinded to this study entered the symptoms into a questionnaire form especially prepared for this study. This included symptoms like itching, feeling of uneasiness in the anal canal, discharge, sensation of incomplete evacuation, crawling sensation and prolapse. These complaints were entered by each of the patients before and after the procedure.

### Statistical analysis

Data were entered into a database and analyzed using statistical software (Graph pad Software, San Diego, CA). An unpaired student's *t*-test was used to measure pre and postoperative parameters. The level of statistical significance between groups was set at 5 per cent.

## Results

After one month, anoscopy showed total absence of these papillae. The fissures were healed and there was no sphincter spasm. Patients who were treated for fibrous polyps did have mild oedema and elevation at the site of destruction.

17 patients (12.5 %) complained of postoperative bleeding which has been minor, streaking the stool, and had lasted for a maximum period of four days.

The comparison of findings gained at a follow up after 1 month is given in Table 1.

### *Subsequent follow up after 18 months*

18 patients (13 %) failed to appear for the follow up. In the remaining 118 patients, 3 patients (2.5 %) had recurrence of the fissure. 7 patients (6 %) complained of pruritus. Out of these, 4 patients were found to have developed anal papillae. But none of the patients treated for anal polyps had any recurrence. Most of the associated complaints like feeling of uneasiness, discharge, and sense of incomplete evacuation, crawling sensation, and prolapse were reported as being absent.

## Discussion

Anal papillae are present in almost 50–60 % patients examined. Usually, these are small, cause no symptoms, and could be regarded as normal structures (11).

However, if it is a case of hypertrophy and if the papillae start to projecting into the anal canal, it requires attention and suitable treatment. In such cases, it may lead to an increased mucus leak resulting in increased anal moisture. They are liable to cause trauma during the passage of stool and may become inflamed. In addition, when papilla is converted into a fibrous polyp, it gives rise to symptoms like prolapse, which may require frequent manual repositioning. The polyp is considered as one of the differential diagnosis of rectal prolapse (12). Symptoms like pruritus (13), foreign body sensation, pricking, a sense of incomplete evacuation and heaviness in the anal region have also been reported by the patients.

In routine practice, these pathologies are not given any importance (14). There is a very brief account of this entity in standard textbooks and other references. Secondary goals of fissure surgery sometimes require the removal of hypertrophied papilla and skin tag as well as the removal of inflammatory and fibrotic tissue surrounding the fissure (15). Customarily, for symptomatic papillae or polyps, their removal by crushing the base, excision after ligation or electrocauterization has been suggested. We have instead, used the radiofrequency device to tackle these pathologies successfully.

Radio frequency surgery, which is not to be confused with electro surgery, diathermy, spark-gap circuitry, or electrocautery, uses very high frequency radio waves.

Unlike electrocautery or diathermy, the electrode releasing radiofrequency waves remain cold. This is possible because of using a very high frequency current of 4 MHz, as compared to

**Tab. 1. Symptom comparison before and after treatment of anal fissure and hypertrophied anal papillae and fibrous anal polyps.**

Symptoms	Before Treatment	After Treatment	p
Itching	36 (26.4%)	6 (4.5%)	0.0003
Feeling of uneasiness	45 (33%)	3 (2.2%)	0.0001
Discharge per anus	32 (23.5%)	4 (2.9%)	0.0006
Sense of incomplete evacuation	35 (25.7%)	9 (6.6%)	0.0004
Crawling sensation in the anus	48 (35.2%)	4 (2.9%)	0.001
Prolapse during defecation	11 (8%)	Nil	0.0023

Percentage of patients in parentheses.

p<0.05 Student's unpaired t-test

0.5 to 1.5 MHz used in electrocautery, which produces extensive tissue alteration. In contrast to true cautery causing damage similar to 3rd degree burns, the tissue damage that occurs in coincidence with radio frequency surgery is superficial and is comparable to that occurring with Lasers. Histologically, it has been shown that tissue damage with radio frequency surgery is much less extensive than that of a conventional scalpel and practically equals the one caused by cold scalpel (16).

The radio frequency device offers several unique advantages over conventional surgical modalities. It provides for a controlled balance in simultaneously cutting and coagulating through a single instrument (17). Since it is used in direct contact with tissues, the surgeon gets the tactile feedback and continues to exert the same familiar and confident control over the job as is experienced during the traditional knife technique. The technique has a self-sterilizing effect and leaves behind a bacteria free zone around the place of application. The radiofrequency device allows cutting and coagulation of tissues in an atraumatic manner, contrary to the electric bistoury. The advantages of radiofrequency over electrocautery and laser energy surgery reside in its precision in ablating tissues and in its control of operation. With radiofrequency, the targeted tissue temperatures stay localized within a 60–90 °C range thus limiting heat dissipation and damage to adjacent tissue. In contrast, electrocautery, diathermy, and laser temperatures are significantly higher (750–900 °C) resulting in significant heat propagation in excess of the desired therapeutic need. These differences allow for radiofrequency being found more accurate, minimally invasive and less morbid without compromising the treatment efficacy and durability.

While techniques using conventional scalpel apparently works in an atraumatic way, the prominence of bleeding from the wound forces the surgeon to coagulate the bleeders with traditional electrocautery or diathermy more frequently than radiofrequency. The radio waves can seal the small blood vessels without creating any char, whereas the cautery or electrosurgical instruments create heat at the tip of the instruments to seal the affected portion with transferred heat, and in the process invariably damage the adjacent healthy tissues, which consequently cause more edema and postoperative pain.

Anal papillomata tend to produce a discharge resulting in a sodden perianal skin with itching and discomfort. Wallis believed that hypertrophied anal papillae played an important part in the etiology of pruritus ani. A large papilla that projects at the anus might conceivably interfere with proper anal closure and thus predispose to leakage of mucus, which could lead to pruritus. Hypertrophied anal papilla should be included in the differential diagnosis of a smooth mass located near the anal verge, especially in a patient with a history of chronic anal irritation or infection (18). The presence of a fibrous anal polyp is shown to have a statistically significant association with operative treatment (19).

Though we have used the radiofrequency equipment to tackle these pathologies, we do not intend to promote the same. The procedure can also be carried out with sharp excision with scissors or electrocautery. The equipment used by us is significantly more expensive than other methods.

We, nevertheless, admit that the associated symptoms found in patients of anal fissure are partly due to the primary disease itself and partly in result of getting alleviated after the treatment of fissure. A prospective and randomized comparative study between removing and not removing the papillae and polyps would have been more conclusive of this contention. But after comparing the symptoms before and after the removal of papillae and polyps, it seems that also these pathological lesions were responsible for complaints of minor disturbance. Their removal had definite therapeutic benefits (20) resulting in improved patient satisfaction.

In our opinion, the removal of hypertrophied anal papillae and polyps encountered during surgical treatment of chronic fissure in ano would contribute add to the efficacy of the procedure and compliance at patients as well as increase the feeling of job satisfaction.

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