

Radio Frequency Removal of Hypertrophied Anal Papillae and Fibrous Anal Polyps

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Objective: The presence of hypertrophied anal papillae and fibrous anal polyps is mostly ignored while dealing with chronic anal fissures. However, anal papilla tends to produce a discharge resulting in a sodden perianal skin with itching and discomfort. Similarly, polyps can prolapse, bleed or traumatize. This study is aimed to assay the impact and utility of attending to these two conditions concurrently while dealing with cases of fissure in ano.

Method: A prospective study was carried out in 100 patients of chronic anal fissure with concomitant hypertrophied anal papillae or fibrous anal polyp. Radio frequency surgical technique was employed to destroy the papillae and polyps after a lateral sphincterotomy. Associated complaints like pruritus, pricking sensation, wetness, crawling in the anus etc. were subjected to comparison before and after removal of the papillae or polyps by an independent observer.

Results: At a follow up of one month, anoscopy conducted on the patients showed total eradication of the treated papillae. The associated symptoms were reduced significantly and there was a marked decline in the primary complaints of pain and bleeding. At 24-month follow-up, 2% patients had recurrence of fissure, but none was found to have the papilla or polyp.

Conclusion: Hypertrophied anal papillae and fibrous anal polyps encountered during surgical treatment of chronic fissure in ano should be removed to improve patient compliance. Radiofrequency procedure can tackle these associated pathologies effectively.

Key words: *Hypertrophied anal papilla, fibrous anal polyp, radio frequency surgery, fissure in ano.*

Anal papillae (1), which are also called as anal fibroma, papillitis hypertrophicans, or "cat tooth", are the fine points of projections of extreme upper end of the anal canal skin at the mucocutaneous junction, and are regarded as normal structures.

In certain patients, however, one or more of the papillae hypertrophies and elongate. The enlargement of the existing anal papillae is a consequence of a chronic inflammatory process and fibrotic proliferation within the range of the Linea dentate, the ano rectal zone, and the distal rectal mucosa. (2-4).

The hypertrophied anal papillae at times undergo considerable fibrous thickening and acquire a rounded expanded tip, which is then known as a fibrous polyp (5).

Occasionally the occurrence of hypertrophied anal papillae is reported after operational interference in the anal region (6).

Dilated veins, white areas, and a large hypertrophied anal papilla are often found in prolapsing types of hemorrhoids (7). In the literature, the prevalence of these papillae varies between 6% and 60% of all proctologically examined patients (8). It is found in both the sexes equally (9).

When inflamed, papillae can cause cryptitis or papillitis, which produces tenesmus, defecation discomfort and bleeding. Subsequently, a toxic irritative anal eczema may develop (10). Nevertheless, there is no report of these structures turning malignant (11).

These papillae and polyps should be differentiated from subanodermal anal venous thrombosis, condyloma, and rectal adenoma by clinical examination (12).

They are a frequent finding in patients with chronic anal fissure (5). Patients, being operated for anal fissure but left with these structures, continue to complain of pruritus, wetness, or an intermittent pricking sensation in the anus. A case of giant hypertrophied anal papilla complicated by massive anal bleeding and prolapse is reported (13).

The opponent of removal of the papillae reported no better results after the procedure for anal fissure (14) while there are studies showing good outcome in patients undergoing removal of anal papillae and polyps during fissure surgery (15).

Keeping this controversy in mind, our study aimed at evaluating the clinical benefits to the patients after removal of hypertrophied anal papillae and fibrous anal polyp along with anal sphincterotomy.

Material and Method

This study was conducted at Gupta Nursing Home, Nagpur, India, between December 2000 and January 2003.

Patients of chronic fissure in ano having associated anal papillae or fibrous polyps or both were selected. This was irrespective of the age, sex, or duration of pathology. The presence of papillae or polyp was noted by inserting a well-lubricated pediatric anoscope to avoid the discomfort to the patients.

Patients suffering from fissure but not having hypertrophied papillae or polyp were excluded from the study. Similarly, patients having associated sentinel piles were also not considered for the study.

An informed consent was obtained. The study was approved by the local ethical committee and was performed in accordance with the declaration of Helsinki.

No special pre operative preparation was carried out. All the patients received a dose of laxative on the prior night.

Conventionally, anal papillae and polyps are snipped with scissors or are shaved by scalpel or electrocautry after being crushed (14). We instead, used a radiofrequency device to tackle these pathologies.

The Principle of radio surgery: Radio frequency surgery involved cutting or coagulation of tissues by using a high frequency alternate current. This is achieved by the heat produced by tissue's resistance to the passage of high frequency wave. The heat makes the intracellular water boil and increases the cell inner pressure to the point of breaking it from inside to outside (explosion). This phenomenon is called as cellular volatilization.

The Equipment: In this procedure, we used the radio frequency generator Ellman Dual Frequency 4MHz by Ellman International, Hewlett, N.Y, USA.

The unit is supplied with a handle to which different inter changeable electrodes can be attached as per the requirement (16). In our study, a ball electrode for coagulation and a round loop electrode for shaving the desired tissue were extensively used.

Procedure: A lateral subcutaneous internal sphincterotomy was carried out under a short general anesthesia to relieve the anal spasm (17). This technique is favored due to the simplicity of the procedure, minimal anesthesia requirement, and good results (18,19). This was followed by anoscopy to locate the anal polyp or papillae.

Smaller papillae were directly coagulated with a ball electrode of the radiofrequency unit kept on the coagulation mode. The base of large papillae and fibrous polyp were circumferentially coagulated by ball electrode first and then were excised or shaved off by using the round loop electrode kept on cutting mode. Minor bleeding when encountered, was coagulated by touching them with ball electrode on a coagulation mode. This whole procedure took less than two minutes to complete.

The patients were given analgesics (Diclofenac sodium 50 mg twice daily) for a week and were prescribed a stool softener (Fybogel) for 1 month. They were reviewed after 30 days.

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

Results

One hundred patients of chronic fissures in ano with hypertrophied anal papillae or fibrous polyp were studied. All these patients had hypertrophied anal papillae. The numbers of papillae were ranging from 2 to 4. The papillae, which were felt digitally, were considered 'large', while those, which were not palpable and seen only on anoscopy, were termed as 'small' papillae.

In 14 of these patients, anal polyp was also found in association. Out of these, eleven polyps were prolapsing type.

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

Eleven (11%) patients complained of postoperative bleeding which was minor, streaking the stool and lasted for a maximum of four days.

The mean analgesic requirement was 11 tablets of Diclofenac sodium 50 mg (range 9-16 tablets).

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 some amount of edema and mild elevation at the site of destruction, but were free of the associated symptoms.

The comparisons of these findings are given in Fig.1.

Follow up:

Eight patients (8%) were lost to a subsequent follow up after 24 months.

Two patients developed recurrence of fissure but in none of the patients, there was any recurrence of papillae or polyp. The patients were asked about the effectiveness of treatment in terms of relief from symptoms. Symptomatic relief was noted down. This is expressed in percentage of satisfied patients in Fig. 2.

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.

A patient with chronic anal fissure usually presents with pain during and after defecation, bleeding, external swelling and urinary symptoms. However, symptoms like crawling sensation in the anus, prolapse, discharge and wetness around anus and pruritus (20), are attributable to the presence of hypertrophied anal papillae or fibrous anal polyps.

Anal papillomata tend to produce a discharge resulting in a sodden perianal skin with itching and discomfort. Wallis (21) believed that hypertrophied anal papillae played an important part in the etiology of pruritus ani. 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

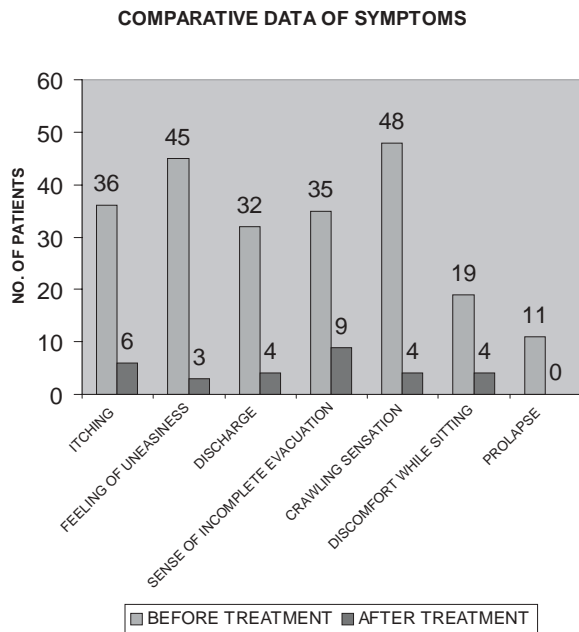


Figure 1. Comparison of symptoms before and after the removal of hypertrophied anal papillae and fibrous anal polyps

anal irritation or infection (22).

Routinely, these pathologies are not given much importance. There is only a brief account of this entity in the standard textbooks and other references.

However, if it is a case of hypertrophy and the papillae starts projecting in the anal canal, it does require attention and appropriate treatment. In such cases, these may cause increased mucus leak resulting in an increased anal moisture. They are liable to trauma during the passage of stool and may become inflamed. In addition, if they convert into a fibrous polyp, they give rise to symptoms by projecting themselves at the anal orifice during defecation requiring digital repositioning. Secondary goals of fissure surgery sometimes require the removal of hypertrophied papilla and skin tag (23) as well as the removal of inflammatory and fibrotic tissue surrounding the fissure.

Traditionally, for symptomatic papillae or polyp, its removal is suggested by crushing the base, excision after ligation or electrocauterization. We instead, have used the radiofrequency device to tackle these pathologies successfully.

While a traditional cautery causes damage similar to 3rd degree burns, the tissue damage that does occur in radio frequency surgery is superficial and is comparable to that which occurs with lasers (24). Histologically, it has been shown that tissue damage with radio frequency surgery is much less than that of a conventional scalpel and practically equals the cold scalpel (25).

The radio frequency device offers several unique advantages over conventional surgical modalities. It

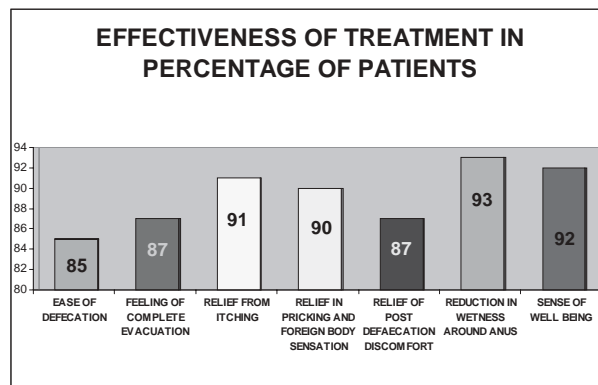


Figure 2. Data showing effectiveness of the treatment after removal of fibrous anal polyps and hypertrophied anal papillae.

provides for a controlled balance in simultaneously achieving cutting and coagulation with a single instrument (26).

We, nevertheless, admit that the associated symptoms found in patients of anal fissure are partly due to the primary disease itself which get alleviated after the treatment of fissure. A prospective and randomized comparative study between removal and no removal of the papillae and polyps would have been conclusive to support this contention. But after comparing the symptoms before and after removal of the papillae and polyps, it seems that these pathological lesions too were responsible for the minor but disturbing complaints (27). Their removal had therapeutic benefits that result in improved patient satisfaction (28).

The reliability of the clinical data collected in this study and the method of collection are important issues to be considered while determining the validity of the conclusions drawn. The possibility of bias in our data collection was negligible as the investigator was masked and a standardized set of questionnaire was given to all the patients under study.

In the present study, we have specifically excluded those patients of chronic fissure in ano who had sentinel tags or piles, as they are known to cause few of the similar symptoms found associated with hypertrophied papillae or fibrous anal polyps.

Conclusion

This study shows that hypertrophied anal papillae and fibrous anal polyps are important anal pathologies associated with chronic anal fissure and are responsible for symptoms like pruritus, discharge, heaviness etc. Their removal needs to be made an essential part of treatment of chronic fissures in ano. Persistence of these structures leaves behind a sense of incomplete treatment and thereby reducing the overall satisfaction on the part of the patients. Radio frequency procedure has been found effective in eradication of these concomitant pathologies.

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