

## A Comprehensive Study and Management of Ano-Rectal Polyps w.s.r. to PCA Therapy

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### Abstract

Ano Rectal Polyp (ARP) is the local tissue malformations and polyp is a mass of tissue arising from the mucosa and protruding into the Gastro-intestinal lumen. It is a bright red/whitish glistening sphere usually of the size of a pea or more. The delay in approach of treatment becomes sometimes grave concern i.e. malignant transformation. Most of polyps are asymptomatic except for minor bleeding which is usually occult having no potential to be malignant. It is common in children's age. Though the exact cause for polyp is not known but physiologically the growth and division of new cells is usually regulated by wear and tear process of the body; but in some cases the new cells grow and divide before they are damaged and required. Such excess growth causes to form polyp. The risk factors commonly go to the persons of age over 50, over weight, uncontrolled type-II diabetes, history of- polyp suffering in past ovarian or uterine cancer and life style behaviors like smoking, drinking alcohol regularly, sedentary life style, consuming high fat diet regularly may contribute to growth of polyp. Fresh bleeding, mucous discharge per rectum is cardinal symptoms while prolapsed mass/polyp during defecation is alarming feature. Bleeding may cause anemic. In complication a rectal polyp very rarely initiates Intussusceptions. The surgical treatment is only option where the reoccurrence is possible, hence not successful. Finding the alternate, Para surgical- curable method, the PCA therapy becomes successful with follow up of 2 years having the treatment of 41 cases of polyps alone and 67 cases of polyps with multiple anal diseases. No adverse effect was noticed. The PCA therapy is safe, simple, low cost effective and noninvasive method.

**Keywords:** RP; PCA; Ksharasootra; SMS; KSS; KO; KSL; KST; SP; MRK; ST; Excision; Resection; Hemorrhoidectomy; EBH.

### Introduction

The Ano Rectal Polyp (ARP) comes under the group of local tissue malformations, having no potential to be malignant. Polyp is a mass of tissue

arising from the mucosa and protruding into the Gastro-intestinal lumen. It is a bright red glistening pedunculated sphere called as Cherry tumor, usually of the size of a pea. This Ano rectal polyp may be termed as Guda Uparvuda (GU) as it seems apparently similar structure of pile mass but delay in approach of treatment the consequence becomes sometimes grave concern i.e. malignant transformation. Most of polyps are asymptomatic except for minor bleeding which is usually occult. The incidence of this disease is commonly caused in children. At the age of five years, its incidence is very high. It becomes uncommon after fifteen years of age and very rare after the age of thirty. It is usually seen as single about 70% while often observed as multiple of 3 to 4 in number about 30%. The exact etiological factor for polyp is yet not known. However, it is considered that polyps are the result of abnormal tissue growth. To clarify it is said that the body

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periodically develops new healthy cells to replace old cells which are damaged or no longer required. Physiologically the growth and division of new cells is usually regulated. But in some cases the new cells grow and divide before they are required. Such type of excess growth causes to form polyp. The life style behaviors like smoking, regular drinking alcohol, continuous sedentary works with life style, eating high fat diet etc may be favorable for formation of polyp. The surgical treatments such as excision and short segmental resection are only option and conducted with required managements where the reoccurrence is possible, hence not successful. The reoccurrence and complicated cases inspired to find the alternate treatment. The Para surgical- methods-KSL for hemorrhoids, KST for Anal fistula, KSS for anal fissure, KSS for anal stricture becomes successful under the PCA therapy, hence to treat polyp, the KSL and Kshara ointment procedure had been taken for the purpose.

#### *Aim of the Study*

To evaluate the efficacy of the PCA therapy procedures in the treatment of polyps.

#### **Criteria for Dignosis**

1. Fresh rectal blood with or without the stool per rectum and rarely massive but usually occult
2. Mucous discharge Anal polyp
3. Anemic
4. Rectal polyp on a long pedicle sometimes prolapsed during defecation
5. Most frequent complaint of cramps, abdominal pain or obstruction

#### **Diagnosis Procedures**

Many types of examination were conducted to diagnose the polyp.

1. Digital Examination-polyp was palpated and reached well by index finger
2. Anal speculum examination also helped in viewing the polyps.
3. In some of cases the polyp was situated at a deeper position, not reachable with the index finger there sigmoid scope was required to visualize.
4. Colonoscopy was done to see the polyp in colon.
5. Barium enema, particularly double contrast or air-contrast helped to confirm the diagnosis.

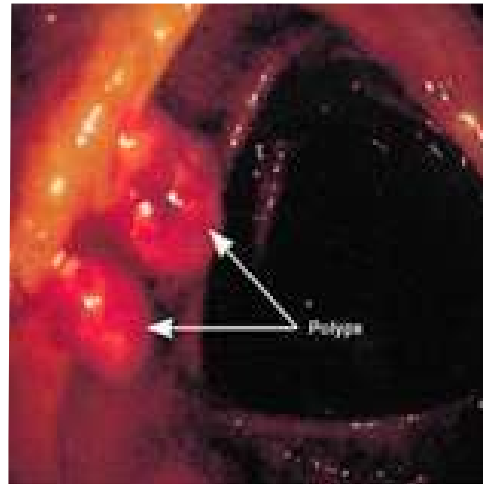


Fig. 1: Bleeding polyps

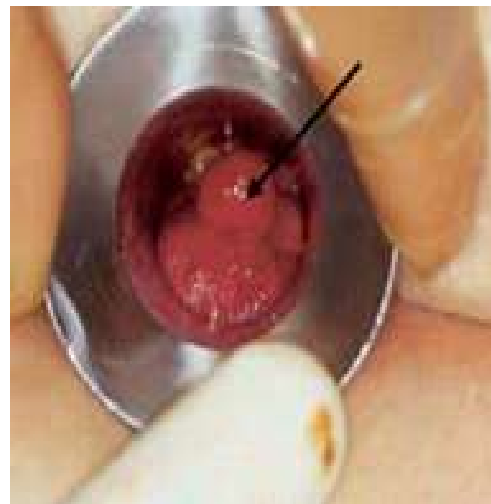


Fig. 2: Polyp in Proctoscope



Fig. 3: Inflamed bi polyps

6. Complete colonoscopy to the caecum was done as mandatory to exclude the rectal polyps which were often multiple and coexist with cancer.

## Materials and Methods

### *Selection of Patients*

The total 108 patients were collected from GAMH, Puri, Ano Rectum Care and Research Centre (CCARRISMA) working under the guidance of Indian Proctology Society, Puri and Bhubaneswar, Number of special Ano Rectal camps under Indian Proctology society, Odisha and Institute for Post Graduate Teaching and Research in Ayurveda (IPGTRA) Jamnagar Gujarat; CME training centers and Ashwini Ayurveda Medical college, Tumukuru Karnataka. The period of randomly collection was recorded from 1998 to 2008. All the patients were treated with PCA therapy. The subjects of the study were made 02 groups as group-A which were managed under KSL and Kshara ointment and another group-B having smallest size of uncatchable polyps were treated with Kshara Ointment.

### *Inclusion Criteria*

1. Patients suffering from-single polyp, multiple polyps, Piles with polyps, Anal fistula with polyp, Anal fissure with polyp, Piles, fissure in Ano, Fistula in Ano with polyps, Controlled Diabetic type-2 with polyp, Controlled hypertension with polyp
2. Enhancement in consumption of large doses of mild laxatives
3. Regularly/Occasional bleeding with or without mucous in chronic cases
4. Age from 5years to 70 years includes male female and children

### *Exclusion Criteria*

1. Patients suffering from type-1DM
2. Patients with the serious systemic diseases like tuberculosis, carcinoma, cardiac disease, advance stage DM and leprosy, HIV, Psychosis disorders, Dementia
3. Drug non responding in chronic constipate bowel
4. Age below 5 years and above 70 years
5. Obse patients as per standard weight guide
6. Patient suffering from Crohn's disease

## Pathology and other Investigations

Routine hematological examinations were conducted before and after treatment to rule out any pathological conditions and biochemical tests like diabetic profile includes fasting blood sugar (FBS), post pandal blood sugar (PPBS) Hemoglycosylated (HbIAC), lipid profile, renal function test (RFT), uric acid, liver function test (LFT), HIV and Biopsy.

## Treatment: Drugs and Posology

*Group A:* Under the A-group 67 patients were selected. Application of Ksharasootra ligation(KSL) and Kshara ointment (KO) in piles with polyps in 21 cases; Ksharasootra threading (KST) and KSL in Anal fistula with polyps in 11 cases ; Ksharasootra suture (KSS) and Kshara Ointment (KO) application in anal fissure with polyps in 19 cases and ; KSL with KST procedures applied in multiple Ano rectal disorders having Piles with polyps and, Anal fistula in 19 cases were done under the PCA therapy modality, once in one sitting, followed with adjuncts of Jaticarpa oil-one dose 10 ml, into anal canal-12 hourly, two doses for 2 weeks and administration of Shalaki Tablet (ST) of 500mg (analgesic) thrice daily 8 hourly followed by classical Maharasnadi Kasaya 15 ml (anti-inflammatory). Daily one dose classical Erandbhrishtharitaki (Laxative) of 5 gm was given with warm water at bed time to all patients after dinner for bowel clear.

*Group B:* This group was dealt with 41 numbers of only polyps patients. 27 cases had single polyp where as 17 cases had multiple polyps. In all of polyps' cases polyps, the application of Kshara Ointment (KO) was applied immediately after crushed the polyps and only application of KO was applied for another couple of days to remove the remnant of polyps mass in order to ensure the non-recurrence followed with posology and managements as mentioned in Group A.

*PCA Therapy:* PCA therapy denotes to Potential Cauterizing Agents/devices which is the translation and advanced applied technological name of Kshara karma which is one of the Para surgical procedures in Ayurveda science. It is an indirect cauterization potentiated by different caustic agents manufactured from herbs and shrubs having scientific background and comes under Para surgical category. There are various types of agents or devices or products like Kshara Powder, Kshara Granules, Kshara lotion, Kshara ointment, Kshara wick, Ksharasootra, Kshara swab etc; out of which Ksharasootra (surgico medicament

suture=SMS) is the chief device while the Kshara ointment has also vital role under this therapy to destroy the diseases. The products are used in the treatment of different diseases particularly Ano rectal disorders.

*Ingredients of Standard Ksharasootra (KS):* (Ligation medicated device) The standard Ksharasootra was prepared from Apamarga (*Achyranthes aspera* Linn) Kshara 7 times coating, 21 times smeared with Snuhi latex (*Euphorbia neruifolia* Linn.) and 3 times coated with curcuma (*Curcuma longa* Linn.) finest powder under the principles of pharmacopeia of India (API-10).

*Ingredients of Kshara Ointment (KO) [curettng & healing agent]*

1. Apamarga Kshara- 1 part,
2. Purified Tutha (cupper sulphate-CuSo4)-1 part,
3. Honey bees wax-5 parts,
4. Curcuma fine powder-3 parts
5. Shatadhaut ghritha as per requirement

*Preparation:* It was prepared under the pharmaceutical guidelines of ointment Ingredients of Shallaki Tablet (ST) (Analgesic effect)

1. Shallaki (*Bowellia serrata* Roxb.),
2. Nirgundi (*Vitex Nirgundo* linn),
3. Rasna (*Pluchea Lanceolata*); equal part from all drugs were taken.

*Preparation:* As per pharmaceutical guidelines 500 mg tablet was prepared and packed 50 tablets.

*Maharsnadi Kasaya (MRK)(Anti-inflammatory effect):* It is classical medicine having GMP certified medicine was brought from outside.

*Ingredients of Sphatikadi Powder (SP) (Antiseptic agent)*

- |  |           |
|--|-----------|
| 1. Sphatika-Potash Alum-                         | One part  |
| 2. Khadira-Acacia catechu Wild-                  | One part  |
| 3. Karanja Seed- Pongmia pinnata<br>Linn Pierre- | One part  |
| 4. Dry Neem Seed- Azadirechta<br>indica A.Juss-  | Half part |

*Preparation and use of SP:* All these drugs was powdered separately mixed afterwards and kept in well covered wide faced bottle or in any suitable pot. It was used in the warm water sitz bathe with a dose of 5 gm per sitting .This medicine mainly is having many folds of actions like anti-inflammatory, analgesic, cleansing, haemostatic,



Fig. 4: PCA-Kshara ointment



Fig. 5 Packed Ksharasootra (SMS)



Fig. 6 Sphatikadi powder

which helped to relieve pain ,local edema ,stop oozing, maintain local hygienic condition, and promoted speed recovery.

*Diets:* Normal regional diets having plenty of fiber vegetables, fruits, were advised with adequate drinking water and instructed to avoid all constipate food stuffs.

*Follow up:* The follow up period was carried out for 02 months after completion of the treatment to

see the longstanding effect of the innovative procedures and asked to report in the Ano-rectum research centre up to 02 years if any Ano rectal problem occurs.

### Methods of Treatment

#### Group-A-Technique for KSS, KSL and KST operative procedure

The Ksharasootra Suture (KSS) applied for anal fissure and anal stricture, Ksharasootra Ligation for piles, and Ksharasootra for anal fistulae are all innovative Para surgical research method under PCA therapy being practiced in number of cases by the surgeons of Indian Proctology Society and subsequently in post graduate levels and assessed the result clinically in different institutions. Generally in the cases, where the intervention of surgery is required and the reoccurred cases are selected for PCA therapy. The satisfactory result of this PCA therapy has inspired to transfer the technique from hand to hand surgery method.

*Pre-operative:* Generally all the pre-operative measures of hemorrhoidectomy procedure in piles operation case, was adopted for KSS, KSL, KST and KO.

*Anesthesia:* The required anesthesia was used in group-A for operations while the local anesthesia was used in group- B after testing

*Operative Procedures:* All the steps of KSL procedures for the treatment of piles are adopted like Catch hold, Transfixation and Ligation in the treatment of catchable polyps. The polyp mass was caught hold with the help of adjustable forceps. Then with too care, the mass was transfixed by passing the curved round body needle with Kshara sutra at its base. The transfixation was made according to the suitable position of polyp mass alone or if it is with pile mass then with pile was done After transfixation, polyp mass was ligated with Ksharasootra. Later, the ligated polyp mass was replaced inside the Ano rectal canal. Then warm water irrigation was done following to the "T" shape bandaging. In the next step patient was shifted to the post recovery room, adjacent to operation theatre for management in the cases of polyps, associated with other Ano rectal diseases. The ligated polyp/polyps had removed spontaneously after 24/48 hour or maximum 3 days during defecation while other polyps cases associated with piles or fissure were removed maximum within 5 days. After removal there was fresh wound made which was treated with Jatikalpa ghrita and Jatikalpa oil.



Fig. 7: K.S. ligation in piles and whitish polyp in one sitting

The wound was treated with healing ointment and immigration of oil. No slough or fibrosis was allowed to lodge Proper clean dressing was continued till healing with follow up of warm water sitz bathe.

#### Group-B-Technique for application of Kshara Ointment (KO)

The bowel was clearly evacuated. After ensuring complete evacuation of bowel, about 02-05 ml 2% Xylocaine injection was given under polyp mass to anesthetize, 2-5 minutes waited for the effect of anesthesia. The polyp/polyps mass were crushed with instrument followed with immediately application of Kshara Ointment. Then for another conjugative two days Kshara ointment was applied once daily morning followed with irrigation of Jatikalpa oil.

#### Post-Operative Cares

*Group A:* Daily dressing with warm water sitz bath 8 hourly, followed by Jatikalpa oil-10 ml irrigation into anus once 24 hourly and applied Jatikalpa ghrita 12 hourly with introduction of oil into anus after removal of the mass and used laxative Erandabhritharitkai 5gm with warm water at bed time

*Group B:* Daily dressing with warm water sitz bath and laxative followed by the above oil irrigation

*Criteria for Assessment of Results:* The overall effect was assessed as per the following criteria on the basis of relief in chief complaints as only subjective criteria.

Complete remission - 100%

Marked improvement - <100% > 75% relief

Moderately improvement -75%> 50% relief

Mild improvement -50%>25% relief

Unchanged -25%-0% relief

*Observation*

The study analysis revealed the incidence of sex, age, chronicity of disease, treatment factors etc. Out of 108 patients the maximum patients 78% were male while 22% were female patients and 69% belonged to age between 05 to 25 and 25% age between 26 to 46 where as 6-99% belonged to age between 46 to 70. The maximum 70% of cases were having 1 to 3 years of chronicity while 29.4% of cases were suffering from more than 5 years of chronicity. As regards of reoccurred cases after operation 36% were found, out of which 65.6% was male and 34.4% were female. The chief complaint was bleeding per rectum in case of maximum 59%; abdominal pain with mucous stool passing was 26%, anemic case was 6% where as 8-96% cases were having prolapsed polyp mass during defecation. In relation to nature of diet more patients 75% were found non-vegetarian following to constipation and irregular bowel habit with sedentary work schedules.

The majority 62.03% of patients in group A, treated with KSL, KST, KSS, and KO while 37.96% of cases in group B were treated with KO only. In treatment it was observed that maximum cases 70.73% had single polyp where as 29.26% of cases had the multiple polyps in group -B. In group -A there were maximum cases-31.34% had piles with polyp; 28.35% were fissure with polyp; 23.88% were piles, fissure with polyps and 16.41% were anal fistula with polyp. It was noted that maximum number 92.4% of patients had complete ambulation while 7.5% of patients had partial ambulation in the 1st week of treatment. The pain was relieved 99% of cases in group B on 2nd day where as 78% pain in group A in 1st week. The healing of anal wound was found 96.7% in group A while 75% was in group B in 2<sup>nd</sup> week. The study was keenly observed from all aspects with regard to the treatment, diet, social behavior, mental status etc.

*Identified the Structures of Polyps*

It was observed microscopically and also macroscopically with particular characters as per mentioned below. The macroscopically features were 1. Shape – oval and also spherical, with peduncle 2. Diameter – 3 to 10 mm. 3-Surface – smooth 4. Color – Reddish brown covered with mucous membrane while the microscopically characters were 1. Proliferation of glandular and stoma elements with marked vascularization 2. Infiltration of lymphocytes, polymorphs, plasma cells and eosinophils 3. Slender stalk, continuous with the adjacent mucosa covered with normal colonic mucosa. 4. Bulbous portion, covered with a single

layer of goblet cells, chronically inflamed and became ulceration

**Results**

The overall result was quite effective. The assessment of result in the group- A was 99.7% success and in the group- B it was 87.8% The group A treated with KO showed the maximum benefit to the patients due to integration procedure i.e. crushed with immediate application of Kshara ointment (KO) and followed by continuous action of Kshara to remove the polyp lesions from the anal area. Totally 94% cases were cured while 4.5% cases of group B marked improvement after 1<sup>st</sup> week of treatment and 1.4% cases of group-B had moderately improved while 1% of case got complication of abscess tending to sinus in group - B which was treated immediately under PCA therapy and got cured later on.

**Discussion**

Number of male and less than 25 years of age, the patients were more; the reason might be due to the age prevalent for suffering and awareness about the disease and consciousness towards health. Among male in comparison to female, the female patients are also shy and hesitate to consult a surgeon and neglect their health due to many factors. The chronicity of cases was found more in number, which may be a factor of unsuccessful results of treatment. The removal of polyp led to a fresh anal wound supporting to normal granulation and maximum patients showed wound healing after 1st week. Daily dressing with close observation helped to avoid the hyper or hypo granulation. Therefore this clinical study favors the principles of wound healing that the clean and healthy wound takes minimum 03 weeks or 21 days for complete healing. Moreover the anal wound is a restless wound and the area remains alert in action form. The warm water sitz bath with the addition of Sphatikadi powder and instillation of Jatikalpa oil and application of Jatikalpa ghrita in Ano rectal canal definitely helped to achieve the conditions of cleaning and healing of the wound. During the treatment period, the general health conditions with systemic disorder were maintained for well nourishment of the body.

The wound healing was found faster in group -B than group -A, because sphincter muscle spasm

became more relaxed in group-B due to only affection of polyp treated with integration. The application of KO acted to remove the polyp lesion immediately and allowed to develop the normal physiology which helped in early healing. In group-A cases of polyp were having association of other Ano rectal diseases which were treated with concerned procedures and KO producing more wound in Ano rectal region in comparison to group-B. Hence the wound healing was late. Maximum patients of group -A treated with KS sloughed out spontaneously on 4<sup>th</sup> postoperative day while fistula patients were instructed to change the KS on 5<sup>th</sup> day. The KS is an absolutely mechanical phenomenon and also the KO is a vital PCA agent to chemical cauterizing action. Bleeding was immediately stopped after KS and KO application in all patients which had provided a clean and healthy wound.

Every procedure including surgical and Para surgical has its own limitation with advantages and disadvantages. In 1% of case had complication with abscess led to sinus which was treated with Ksharasootra threading/tying (KST) procedure like the fistula treatment.

#### *Probable mode of action of Ksharasootra (KS) in KSL, KST and KSS procedure*

The patients of group -A were treated with various KS procedures. The Ksharasootra contains Apamarga Kshara, Snuhi latex and curcuma powder. The mechanical action of this medicated thread and chemical actions of the drugs smeared and coated collectively do the works, mainly cutting, curetting, and cleaning of the scar/fibrotic tissues from the various anal lesions, thus promotes healing of the anal wound. It also helps to act as antiseptic agent to induce healing. In fact, the healing process starts from the level of deeper tissues and moves towards the periphery.

#### *Probable mode of action of Kshara Ointment (KO)*

The Kshara ointment contains Kshara having the pH-8.5. It is least irritant and palatable pain reducing agent. All the patients in group-B were treated with KO procedure as per plan of the study. The ingredients of KO dissolved, scrapped the lesion of polyps with continuous effect and honey bees wax stimulated the part for healthy granulation and the Satadhauta ghrita supported the part for the flexibility of the anal way by its fat action. The KO maintained continuous aseptic condition, antispasmodic, neurologic nourishment to the anal sphincter muscle in case of hypertonic anal sphincter by regulating the tissues action due to the

best effect of Satadhauta ghrita. The sustainable fat action in ghee helped to grow the elasticity and permeability of the tissues which brought the normal tonicity of sphincter muscle.

#### *Probable mode of action of adjuvant drugs*

Shalaki tablet and Maharasnadi Kasaya contain analgesic anti-inflammatory, digestive and mild laxative drugs which helped to relieve not only pain, but also improved digestion followed by bowel evacuation. The laxative Erand bhrish haritaki (EBH) has been indicated for removal of constipation with reduction of anal spasm. Haritaki (*Terminalia chebula* Ritz) and Eranda (*Ricinus communis* Linn) have the laxative property and rendered an action of easy and smooth evacuation of stool by regulating neurological spasms. The Sphatikadi Powder was used for warm water sitz bath has antiseptic, haemostatic, anti-inflammatory and analgesic effect which helped to relieve pain, local edema, stopped oozing and maintained perianal hygiene. It promoted for cleaning and healing of the anal wound.

#### *Advantages of PCA therapy over other surgical procedures for anal Polyps*

This PCA therapy is simple and non-invasive and low cost effective; it can be affordable for all common people. The treatment option can be taken without fear and apprehension of postoperative complications like, recurrence and retention of urination. It takes less duration for complete wound healing. This therapy is ambulatory; hence no social burden to others. There is least complication like abscess, subcutaneous sinus/fistula which can be successfully treated without further adverse effect.

*Risk factors for polyp:* The persons of age over 50, body over weight, uncontrolled type-II diabetes, history of polyp suffering in past, positive history of suffering from polyp in family, history of ovarian or uterine cancer before age of 50 in case of female and life style behaviors like smoking, drinking alcohol regularly, sedentary life style, consuming high fat diet regularly may contribute to growth of polyp.

#### *Prevention*

1. Aspirin and COX-2 inhibitors may help to prevent the formation of new polyps in patients with polyps or colon cancer.
2. The life style behaviors as mentioned above should be addressed for the changes and to adopt suitable life managements for prevention

3. Use of Rasayana can help to develop the immune system by stimulating the immune modulator process for the aspect of prevention

### Conclusion

These Para-surgical procedures under PCA therapy for Ano rectal polyp are safe and bloodless treatment for early recovery which is a recent research development having less cost effective which can be practiced in minor set up operation theatre. It is an ambulatory therapy where social burdens are free. The disease is not reappeared due to its removal is done completely form base ground.

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