Experience of Rubber Band Ligation with Suction Gun in the Management of Haemorrhoids at Mayo Hospital, Lahore

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Hundred patients suffering from second degree and early third degree haemorrhoids were managed by rubber band ligation with suction gun on outpatient basis. Ninety one percent (91%) patients were symptom free after six weeks of treatment and remained so for one years. Seven percent (7%) patients had partial improvement in their symptoms, but two percent (2%) patients did not improve at all. It was concluded that rubber band ligation is best suited to the most patients with second degree and early third degree haemorrhoid. This procedure is effective, comfortable for the patient and can be easily carried out as outpatient. Moreover, it should be treatment of choice as palliation for severely bleeding third degree haemorrhoids, elderly unfit patients and pregnant women.
Key words: Haemorrhoids, non-operative treatment, rubber band ligation

Haemorrhoids is one of the common diseases of mankind. Buie (1960) quoted by Anthony (1971) reported an incidence of haemorrhoids of 52% in a large series of unselected proctoscopically examined patient[1]. Particularly in Western population the condition is related to the low residue diet.

Haemorrhoids cause great physical and psychological trauma in our set up because of apprehension due to fresh blood loss. A large number of patients seek advice from quacks in order to get remedy of their symptoms.

A number of non-operative treatment modalities are in practice for non prolapsing and early prolapsing haemorrhoids.

Conservative measures form the basis of treatment for early haemorrhoidal complaints. Rubber band ligation, Cryocoagulation, infra-red coagulation and injection sclerotherapy are treatment modalities which are effective and safe as an outpatient procedure[2]. Although it has been claimed that 90% of the first, second and third degree haemorrhoids can be managed by rubber band ligation[3], it seems more reasonable that rubber band ligation should be attempted only on second and early third degree haemorrhoids, since with first degree haemorrhoids especially in early cases there is insufficient tissue available to pull into the suction gun to make the method worthwhile.Since there are other techniques of application of rubber bands. In our experience use of Suction gun for rubber band ligation is safe, comfortable and effective method.

Patients and methods

During the period of two years starting from February 1995 to February 1997 rubber band ligation was carried out on one hundred patients suffering from second degree and early third degree haemorrhoids. Patients were examined after 6 weeks of application of rubber bands and were followed up for one year for any recurrence of symptoms.

Out of 100 patients included in the study 82 were male and 18 were female, with age ranging from 18-72 years. Seventy two percent (72%) have history of fresh rectal bleed during and after defaecation, 18% had symptoms of perianal irritation and soiling, 7% patients were elderly and had prolapse of haemorrhoids as a major problem along with minor bleed and 3% of patients did not have any relevant symptoms at the time of initial examination. After physical and local examination, proctoscopy was carried out in each patient. The patients were then planned for rubber band ligation in East Operation Theatre of Mayo Hospital, Lahore on out patient basis.

The instrument (suction gun) consisted of small cylindrical pistol shaped device to which suction machine could be attached via a connecting tube. To the end of suction gun rubber band were loaded with the help of a cone. Patient was placed in left lateral position. A proctoscope was introduced and the patient asked to strain gently to display the haemorrhoids. Suction gun was introduced through the proctoscope and brought close to the mucosal part of the most prominent haemorrhoid. Suction was applied. When the haemorrhoidal tissue was sucked into the suction gun, the trigger was pushed and rubber band was slipped over the pedicle of haemorrhoid taking care that the bands were applied above the dentate line. In 33% of cases after application of rubber band 1-2cc of 1% bupvicain was infiltrated distal to the neck of pile to achieve analgesic effect and also security of rubber band. The haemorrhoid first becomes congested, oedematous than ischaemic and later on sloughed out in about one week time alongwith rubber band, resulting in fibrosis of the haemorrhoids which causes further shrinkage of residual haemorrhoidal tissue. Two or three haemorrhoids were dealt with at the same session.

After rubber band ligation, the patients were discharged and were advised.

1. To avoid straining at stools for at least 24 hours.
2. To take stools softeners e.g. Syp. Agarol or Liquid Paraffin and Ispaghula Husk to avoid constipation.

3. To take non-steroidal anti-inflammatory drugs (NSAIDS) as and when required.

Patients were advised to come for follow up at 6 weekly intervals for three months and then at 6 monthly intervals for a period of one year.

Results

Out of 100 patients who were managed initially 85 patients were available for follow up. Out of these 78(91.7%) patients were completely cured and were symptom free for one year. Out of other 15 patients 7 patients required one more session of rubber band ligation after 6 weeks of initial application.

In two patient rubber bands were accidentally applied below the dentate line which were very painful. Therefore they were immediately removed. These patients were excluded from the study.

One patients developed secondary haemorrhage after one week of rubber band ligation who was hospitalised and treated by packing and transfusion. He underwent haemorrhoidectomy later on.

Remaining four patients included in the study had prolapsing third degree haemorrhoids with repeated episodes of severe bleeding were managed palliatively by rubber bond ligation till they were fit enough to undergo haemorrhoidectomy.

Discussion

Haemorrhoids are known as disease entity since centuries. Its incidence in both sexes is considerably ;high, though exact statistics are not known. A patient may be having haemorrhoids but no symptoms which could be attributed to the haemorrhoids, while majority of patients ofr haemorrhoids, are symptomatic. Sir Edward Hughes (1983) had emphatically recommended definitive treatment only for symptomatic haemorrhoids[4].

There are many treatment modalities in addition to conventional haemorrhoidectomy for prolapsing internal haemorrhoids. Most of them are performed as outpatient procedure. Rubber band ligation is simpler than all other outpatient procedures because equipment required is easily available and cheaper as compared to other methods in which specific and relatively costly instrument, e.g. cryoprobe set in cryotherapy. Bipolar diathermy and plastic proctoscope in bipolar diathermy coagulation and infra-red coagulater for photocoagulation of haemorrhoids are required.

In a study "Comparison of rubber band ligation and haemorrhoidectomy for second degree haemorrhoids". Murie (1980) had concluded that rubber band ligation should be considered as the first line of treatment for second degree haemorrhoids[5]. The results of our study are comparable to that of Liang CL et al who reported success rate of more than 90% after follow up of at least one month for second and third degree haemorrhoids treated by rubber band ligation[3].

Mathana et al however reported that long term results were good in 71% of patients treated by rubber band ligation[6].

The main criticism of rubber band ligation is that it does nothing to remove skin covered component of haemorrhoid or an associated skin tag. However, the lower remaining portion of the haemorrhoids may undergo some shrinkage, once the mucosal part has been dealt with rubber band ligation. The bothering skin tags may be removed under local anaesthesia as an outdoor procedure later on.

Secondary haemorrhage which may be life threatening is another problem which may occur at home as the patient is treated on outdoor basis. Out of 100 cases in the present study one patient (1%) suffered from secondary haemorrhage at home requiring return to hospital. Bledy et al reported that delayed haemorrhage was seen in 2.4% patients in this series[7].

As far as the complications of this method are concerned, secondary haemorrhage, urinary retention, pain and fever, perianal abscess, perianal fistula, band related mucosal ulcer and priapism has been reported in the literature[8].

Conclusion

Keeping in view the simplicity and effectiveness (91%) :of the procedure, it is concluded that rubber band ligation should be the treatment of choice for second degree and early third degree haemorrhoids. This procedure is ideal for pregnant women suffering from symptomatic haemorrhoids, elderly patients and those patients unfit for surgery on medical grounds.

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