Abstract  Haemorrhoidal disease has been in limelight again due to emerging newer modalities of treatment over the last decade. The range varies from simple rubber band ligation to stapled rectopexy. But a rational and ideal approach is still unclear. This study aims to analyze the ideal modality in today’s scenario of managing haemorrhoidal disease. A prospective study on 12 patients, was carried out over 24 months in a surgical unit of a tertiary care hospital. The pain, bleeding, rectal discharge, anal stenosis were observed. Results show that the Cryoplication procedure had no anal stenosis, minimal bleeding, less pain and cost was effective. When compared with other contemporary modalities it has lesser complications and short and easy learning curve.

Keywords  Haemorrhoidal disease - Cryoplication

Introduction

Haemorrhoidal disease is one of the most common among benign diseases known since Egyptian era. The first surgical treatment was described in the Hippocratic Treatises of 460B.C. But the aetiopathogenesis of hemorrhoids is still unclear [1]. Approximately 60–80% of people in western countries experience haemorrhoidal complaints at least once during their lifetime, which is attributed mainly to diet and life-style pattern. Incidence increases with age and 10% of above group will need surgical treatment. Scenario is no better in India despite our diet being richer in fibers.

According to Thomson, haemorrhoids are “anal cushions” which assist in continence of air and liquid by providing a final seal of the anal canal. This is a typical “angiocavernous structure” with arterial-venous shunts allowing the blood volume regulation which increases and decreases their size to provide a “watertight” seal [1]. The emptying and filling is believed to be controlled by receptors, which detect the presence of gas and liquid in the anal canal. There are three main haemorrhoids at places of origin of rectal veins i.e. 3, 7 and 11 o’clock position with the patient in lithotomy position. Starting with submucosal channels these vessels ascend through muscle layer and ultimately become subserosal. When a person with constipation strains during defecation these vessels get pinched by muscle ‘pinch valve action’ and venous return during the period of straining practically stops while arterial flow continues. Thus pooling and formation of dilated, capacitated channels occurs over a period of time known as haemorrhoids. Moreover these vessels have no valves and backpressure in the portal venous systems will therefore fill the haemorrhoidal plexus.

With many treatment modalities being available and none being labeled as Gold standard, it is difficult for
surgeons to make a decision [2]. In this article different modalities of haemorrhoidal disease treatment are compared with cryoplication.

Material and methods

Twelve consecutive patients of symptomatic hemorrhoids were studied, of whom 4 opted for open hemorrhoidectomy and 8 underwent cryoplication procedure.

Pre-operative period

All patients were prepared for surgery on an outpatient basis. Relevant investigations included ultrasound abdomen especially for portal hypertension, in addition to routine hematological and biochemical investigations. All patients were admitted a day prior to surgery.

Anaesthesia and patient position

All patients were given spinal anesthesia and positioned in lithotomy position.

Surgical technique

Prophylactic antibiotic (cefoperazone + sulbactum) 1 gm was given intravenously. Manual anal stretching (Lord’s procedure) was performed till the sensation of giving way (accommodating 4 fingers easily) was achieved. Cryosurgical probe was applied on the haemorrhoidal mass and the mucosal aspect of anal verge. Ice ball formation 2–3 times i.e. cryo exposure for approximately 10–15 seconds was followed by plication ligation of haemorrhoidal mass (cryoplication). This was performed at 3–4 places using ‘000’ Chromic Catgut interrupted sutures. The mucocutaneous deformities or anal tags were removed and haemostasis achieved with electrocautery. Gentle anal packing with xylcocaine jelly coated pack was performed (Figs. 1–6).

Post-operative period

Oral intake was resumed four hours following surgery. A second dose of antibiotic was repeated intravenously after 12 hours. Subsequently the patients were switched over to oral ciprofloxacin-Tinidazole combination b.i.d. for 5 days. Anal pack was removed on post op day 1 and xylcocaine jelly 2% applied locally. Patients were put on Sitz bath, fiber diet and mild laxatives for next 14 days at the time of discharge on post op day 1 (Fig. 7).

Follow-up

The study protocol included analysis of degree and duration of post-operative pain, bleeding, discharge per rectum, stay

Fig. 1 External piles

Fig. 2 Primary piles at 3, 7, 11 O’clock position and small secondary piles mass at 7 O’clock position