

A COMPREHENSIVE REVIEW ON HEMORRHOIDS A RECTO ANAL DISORDER

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Abstract

Hemorrhoids are common disorder of gastro intestinal tract also known as piles or tissue clumps in the rectum. In the anus the piles are composed of bulged rectal blood vessels, muscle and elastic fibres. They can cause symptoms like constipation, itching, severe pain, bleeding in the anus. Diet, life style and straining during defecation seems to be a major risk factors for the occurrence of disease. The disease can cause severe discomfort to the persons effected, deviate them from their routine duties and work schedule. The disease effects the people around the age group 50-55 decrease their quality of life. Majority of the people will experience the disease at least once in their life time. People maintain secrecy about this disease due to social stigma in the initial stage. In chronic stage haemorrhoids become worse characterized by destructive changes of rectal blood vessels and anal cushions. Hemorrhoidal patients at this stage look for several interventions and sometimes there is a need for surgery, represent the disease severity in the society. The disease founds to be recurrent and needs new treatment modalities. The current review discusses about the prevalence, clinical features, diagnosis pathophysiology and management of haemorrhoids to create some awareness to the reader about this social disease.

Keywords: Hemorrhoids, piles, rectal bleeding, rectal veins.

Introduction

Hemorrhoids are abnormal dilated masses of blood vessels with swollen tissue in the anus. Hemorrhoids are noticed internally and externally around the anal canal [1]. It is one of the common gastrointestinal disorder. In the anus hemorrhoidal plexus which are arterial and venous blood vessels of rectum are affected [2]. The name haemorrhoids are derived from Greek word Haema means blood and rhoos means flowing [3]. Most of the common people call them as piles [2]. The term piles is derived from the Latin word Pila a ball [3]. Aristocracy calls them as haemorrhoids. French call them as fig [2]. People with this disorder express the symptoms like pain, prolapse of effected tissue from anus, bleeding, itching and thrombosis [4].

Earlier definition of haemorrhoids states that they are the varicosities of the veins from hemorrhoidal plexus. But this theory become obsolete in some patient studies, patients with portal hypertension and varicose veins does not increase the incidence of disease [2]. Hemorrhoids are developed due to downward displacement of anal cushions.

They are found as enlarged blood vessels in the anus, confined to the lower portion of rectum. In the rectum they are covered by epithelial lining of anal canal. They also represent arteriovenous communications between the terminal branches of superior rectal and superior hemorrhoidal arteries .and to some extent the branches of inferior and middle hemorrhoidal arteries and surrounding connective tissue. This structural arrangement in the anus is called as anal cushions. Anal cushions are usually normal structures. They help in closure of anus during evacuation of stools.[5] Anal cushions are referred as piles or hemorrhoids when they bleed [6].

In general there are three major anal cushions. They are present above the dentate line located at right anterior, right posterior and left lateral often with some minor accessory cushions noticed between them [7]. They presnt clinical manifestations of the disease [8]. They are also

present as external and intenal hemorrhoids in the anus [9].

The disorder is affected by socio economic factor where many of the people show reluctant to seek medical advice [10]. Dentate line acts as a anatomic border for haemorrhoids in the anus which classify haemorrhoids into external, intenal and mixed haemorrhoids. Hemorrhoids developed above the dentate line are called as intenal haemorrhoids. Hemorrhoids developed below the dentate line are classified into external haemorrhoids. Besides this haemorrhoids are also classified into mixed

Hemorrhoids when developed from both above and below the dentate line are called as mixed hemorrhoids Internal hemorrhoids are classified based on the degree of prolapse of haemorrhoidal tissue from the anus.They are classified into Grade I, Grade II, Grade III, Grade IV this system of classification is called as Golighar's classification of haemorrhoids [11].

Grade I Anal cushion bleed but do not prolapse on straining.

Grade II Anal cushions prolapse on straining but reduce spontaneously

Grade III Anal cushions prolapse on straining and exertion but requires manual reduction in anal canal.

Grade IV Anal cushions prolapse stay out at all time and they are irreducible [12]. Hemorrhoids are classified into fourth degree when they become thrombosed and incarcerated [13].

The disorder seems to be a global problem affecting different parts of the world like Korea, Austria, and United States etc [12]. High incidence of these disorder is noticed in Caucasians affecting the quality of their life.¹⁴ In India nearly 75% of the population was affected with haemorrhoids [16].The prevalence is found to be very high in India .It is estimated that nearly 55% of population would have piles at some time in their life, by the time they come across the age 50. The earlier data states that 5% of population suffer from haemorrhoids at any given point of time [16]. Adults are mostly affected genders both men and women with age fifty experience the symptoms atleast once in their life time [17].

It is found that diet play a major role in the prevalence of the disease, where vegetarians are less affected compared to non vegetarians. Some conditions like poor bathroom habits, interruption of venous blood flow, body mass, genetic factor can have potential to develop this disorder. Raised intra abdominal pressure which produce prolonged forceful valsalva defecation can have impact on the disease [18]. The disease prevalence is also noted more in the pregnant women and postpartum period, 33% of these group people suffers with hemorrhoids. Pregnant women reported at 11,14,24,37 gestational weeks may develop painful external haemorrhoids [19], but their exact incidence is not known. The incidence of haemorrhoids in middle aged group is found to be very high and mostly male preponderance is noticed [20]. Development of haemorrhoids is multifactorial. These factors are spicy food intake, food rich in fat, life style changes like smoking, alcohol, lack of physical activity, spending a lot of time in toilet can promote the disease [21,22]. Constipation by the formation of dry stools can aggravate the disease.²³ High high blood pressure, inflammation, infections, chronic diarrhea had a role in the development of disease [24,25]. In different cases several gastro intestinal disorders are the cause for haemorrhoids [26].

Methods

The scientific data for the review was gathered from variuos standard Jounals, books and websites. Nearly some 160 research and review papers are referred to present the review. Data is also obtained from the people in the society who experience this disease. References of those scientific approach is also given.

Clinical features

Most of the people remain asymptomatic. Approximately 4-5% of the people produce symptoms [26]. Symptoms usually appears when the anal cushions displace from their positions [27]. Symptoms produced depends upon the type and grade. Mostly internal haemorrhoids are painless and linked with bleeding blood is bright red in colour and usually coats the stools. Where as external haemorrhoids are thrombosed and

produce pain [14]. Hemorrhoidal patient report abdominal pain, bloating a feeling of lump in the anus. They remains socially disturbed cannot concentrate to perform their routine task [28]. Prolapse of anal cushions out the anus is observed which usually produce mucous discharge from the anus. Some times there is a need for manual reduction of anal cushions into the anus [29]. These clinical conditions cause more discomfort to the patient. Skin tags commonly appeared in the disease can produce hygiene problems and secondary irritations. Blood bright red in colour appears due to oxygen tension developed in the arteriovenous communications in the anal cushions [30]. Intemal haemorrhoids remains totally prolapsed and expanded in the anal canal and are pain less. External haemorrhoids retains extend close to the anus they are painful, thrombosed and can be ruptured [1].

Pathogenesis of Hemorrhoids

Hemorrhoids are abnormal engorgement of anal cushions. They are present as cushions surrounding the anastomoses between the rectal veins. Even though anal cushions are normal structures in the anus, the term haemorrhoid is used to describe the pathologic process of these normal structure [14]. Hemorrhoids develop in the anus at the anatomical position classified into 3 o' clock 7o'clock and 11 o' clock position [31]. They are present in the mucosa of anal canal and intemal anal sphincter. To discuss about the anal canal it is anterior posterior slit around 2.5 cm to 5cm long. Anoderm which is a modified squamous epithelium lines the anus and highly innervated by somatic sensory nerves. It is also supplied by Inferior hemorrhoidal system [32]. The proximal end contains the valves and distal end contains ampulla. The upper portion is lined by columnar epithelium, sub epithelial tissue also represents sub mucosal arterial and venous plexus. The anal column shows a terminal radical of superior rectal artery and vein those vessels are largest in left lateral, right posterior and right anterior quadrants of wall of anal canal. The subepithelial tissue present here expands to form three anal cushions. Anal cushions serves in sealing the anal canal and helps to maintain continence to flatus and fluid [33].

Hemorrhoidal vasculature is a part of anal cushions which is well shaped, hemispherical purple masses they can protrude towards the lumen of upper anal canal [34]. Anal cushions are supported by smooth muscle connective tissue encircles internal and external sphincter assists in anal closure by its contraction, failure of these mechanism leads to downward displacement of anal cushions the disorder is now called as haemorrhoids [35]. Internal hemorrhoids arise from the internal hemorrhoidal plexus, while external hemorrhoids arise from the external plexus. The anatomical boundary that divides the internal from the external hemorrhoidal plexus is the dentate line [34]. The dentate line is the point at which the squamous anoderm meets the columnar mucosa of anus and typically lies about 3 cm above the anal verge [32]. Hemorrhoidal plexus which are the blood vessels network in the anal cushions are the branches of superior rectal arteries (SRA) middle rectal Arteries (MRA) which form plexus just behind the rectal artery this kind of plexus commonly produce 3 principal terminal branches which terminate and penetrate into rectum and leads in to the rectal wall at three positions, sub mucosally in the anus above the dentate line at left lateral, right anterior, right posterior. Venous drainage from internal hemorrhoidal plexus is through three veins superior rectal vein (SRA) Middle rectal vein (MRA) Inferior rectal vein (IRV) Blood in the anal cushion moves into the sinusoids, which are blood vessels that lack muscle wall oxygenates the non vascular part of anal cushion [34]. The non vascular portion of anal cushion is formed by epithelium, connective tissue, elastic, collagenous tissue and treitz muscle. Structural alteration of these components is observed in the disease hemorrhoids [36].

Several theories are postulated in the earlier studies to explain the pathophysiology of haemorrhoids. They are varicose vein theory for years has been stated that varicose veins and portal hypertension in the anal canal causes haemorrhoids but now it is not accepted, it has been identified that they are not developed by portal hypertension and varicose veins [37].

The second theory is most widely accepted theory to explain the pathophysiology of

haemorrhoids, is sliding anal canal theory. It states that haemorrhoids occurs when supporting connective tissue of anal cushions disintegrate and deteriorate. The major anal cushions and some minor anal cushions located in various regions right anterior, right posterior and left lateral positions of anal canal are damaged. The quality and quantity of collagen in anal cushion is found to be effected [38]. They are found to be abnormally displaced downwards from anal canal [35]. Reduced collagen in anal cushions decrease the mechanical stability of cushions. Some factors like ageing, repeated passage of hard stools due to constipation may deteriorate the connective tissue of anal cushions. Those factors can impair venous return and cause engorgement of blood vessels in hemorrhoidal plexus [39,10]. The third theory states that decrease of venous return from sinusoids of anal canal to superior and middle rectal veins during defecation can develop haemorrhoids. The fourth theory reflects that blood stagnation with dilated plexus causes haemorrhoids [34]. Anal continence in several cases, has been implicated in the pathogenesis of the disease [40].

Earlier studies revealed that physical factors had a role in the etiology of disease. Connective tissue maintain the size and position of anal cushion above the dentate line. Also attaches the anal cushion to internal anal sphincter. Treitz muscle and conjoined longitudinal muscle supports internal, external anal sphincter and attaches ano rectum to pelvis. Failure of this physical supporting mechanisms are observed in the pathogenesis of disease.³⁴ Treitz muscle during defecation is responsible for retraction and elevation of anal sphincter and maintain their normal position along the connective tissue. Due to continuous stress produced by patient during constipation there occurs rupture of treitz muscle and prolapse of hemorrhoidal tissue [41]. Defects in treitz muscle, longitudinal muscle, stretch and continuous elongation of anal sphincter during defecation can elevate the disease. They are also responsible for advance advanced stage symptoms of hemorrhoids which include prolapse of anal cushions that cannot revert back into the anus [42].

Strenuous exercise and long time spent on toilet can raise intra abdominal pressure [14]. Raised intra abdominal pressure and absence of valves in rectal veins can impede venous drainage from sinusoids of hemorrhoidal tissue leads to abnormal dilation of arteriolar-venular anastomoses of hemorrhoidal plexus. Chronic abdominal pressure can cause abnormal distortion and dilation of anal vessels can lead to the progression of disease [43]. Some conditions like human erect position, obesity can induce external thrombosed hemorrhoids [44].

Among various pathogenic mechanism which can induce haemorrhoids vascular tone, vascular hyperplasia are found to be the cause of disease, but cannot be totally accepted. Corpus cavernosum tissue which maintain rectal incontinence hyperplasia of this tissue is implicated in the development of haemorrhoids [45].

Neovascularisation the mechanism is attributed for the development of hemorrhoids. Presence of vascular endothelial factor in hemorrhoidal tissue. Identification of proliferative neovascularisation marker endoglin that binds to TGF-BETA supports the angiogenesis of hemorrhoidal tissue [46]. We can also expect the role of inflammatory reactions in this disease which effects the rectal blood vessel wall and connective tissue. This inflammatory reactions cause ischemic lesion in the mucosa of anus and forms the vascular thrombosis thus allows the downwards displacement or protrusion of mucosa along the anus. The above said changes are observed in nearly 100 surgical specimens of hemorrhoidectomies [47]. Some inflammatory mediators like cytokinins generated in hemorrhoidal disease are tumor necrosis factor, (TNF Alpha) interleukin, (IL-6) Inetrleukin-beta, C reactive protein, neutrophils, nitric oxide, there levels in the serum are found to be high indicating their potential to cause haemorrhoids.

Inflammatory cells have the role in activation of resident macrophages, fibroblast, endothelial cells and mast cells. Biological cells are affected by oxidation especially lipids in the cells are affected by lipid peroxidation. Superoxide anions (O_2^-) is a significant free radical can cause lipid peroxidation in the organism [43]. Presence of these free radicals direct the role of oxidative stress most preferentially

in developing this disease. Some kind of enzymes and proteins can also play a role in the development of disease those can be matrix metallo proteinase (MMP) they can degrade the extracellular proteins like fibmectin, collagen, elastin. The over expressions of MMP9 MMP2 by plasmin and thrombin results in promotion of angioproliferative property of transforming growth factor Beta (TGF- β), vascular endothelial growth factor which may now responsible for dilation or hypertrophy of hemorrhoidal tissue [48]. Comorbidities like intestinal cancer, spinal cord injuries and inflammatory bowel diseases are also some times remains to be the disease pathogenic factors [49]. From the earlier studies it have found that genetical factors has associated in the development of hemorrhoids, miRNA (Micro RNA) had a role in the occurrence of disease. The large and complex miRNA gene regulatory network has incorporated in the pathogenesis. Changes in the expression of Some miRNA will change the expression of group of target genes. It is hypothesised that the formation of hemorrhoids is linked with imbalances in target genes that are involved in endocytosis and synaptic vesicle cycle pathway which are usually regulated by miRNAs. The disease development is also due to aberrant responses to physiological or non physiological stress signals generated in the body. It is also noticed that body's response to external stress are maintained by miRNA's, aberrant miRNA and may be associated with the development of hemorrhoids. Aberrant miRNA transcription causing aberrant target gene expression may also involve in imbalances in some signal transduction pathway and solely the reason for the occurrence of disease [50].

Diagnosis

The disease pathology is found to be wide hence a clear examination is essential to confirm haemorrhoids. To identify the disease patient is lied in a knee chest prone, jack knife or lateral positions, and the patient anus or perianal region is examined for presence of skin tags. Some based on the position developed they also represent fissure like disease [51]. Internal haemorrhoids and their position can be identified by digital examination of rectum [52]. Bright red painless rectal bleeding observed during defecation is the most common

presentation of haemorrhoids [44]. Sometimes the disease symptoms are confusing similar to other gastro intestinal disease like rectal prolapse, fissures, inflammatory bowel disease and neoplasia etc [53]. As a part of diagnosing the disease there is a need to rule out patient history like rectal bleeding, skin tag in the anus, pain severity, duration of symptoms, presence of constipation, details of time spent during defecation and other comorbidities. The above information helps the physician in clear identification of the disease [54].

It is the internal haemorrhoids are painless, bloody and prolapsed while those of external haemorrhoids are usually bleed and painful when they are thrombosed. Strangulation and mucous discharge is also the other character for diagnosis of disease [51]. Internal haemorrhoids can be identified by the help of endoscopy, this is particularly useful in case patient having colon cancer or chron's disease. The current scenario is like most of the patient fails to seek medical opinion because most of the symptoms are treated by them self by the use of topical application. They only approach the physician when the symptoms become worse and intolerable [55]. Proctological examination should be done if necessary, because it helps in evaluating anal verge. Examination of structure of anal verge helps to exclude anorectal abscess and distal rectal mass. In some conditions anoscopy serves the condition [56].

Management of hemorrhoids

Management of haemorrhoids can be done various modalities that may range from operative to non operative procedures [57]. The major targets in the treatment of haemorrhoids is to reduce disease manifestations. Treatment also aims to reduce recurrence and subside complications like damage of anal sphincter to prevent sphincter stenosis, bleeding etc [58]. The treatment procedures available can be defined as conservative and office based procedures [59].

Office based procedures that are applied for treating haemorrhoids are also called as non operative procedures such as scleropathy, cryopathy, infrared coagulation, radiofrequency

ablation and rubber band ligation. Operative Procedures that are employed for management of haemorrhoids are known as hemorrhoidectomy, plaction, DGHAL Stapled hemorrhoidectomy [60,13].

Dietary life style changes are a part of conservative changes reduce constipation, straining during defecation helps in the management of hemorrhoids [59]. Dietary fibre along with the fluid may produce beneficial effects for management of early stage haemorrhoids [61]. Increased fluid intake will significantly helpful in reducing disease symptoms by decreasing hardy stool formation, constipation helps in immediate evacuation [62]. Bathing in warm water also a conservative procedure produce soothing effect on anus. Topical applications that are employed for haemorrhoids are categorised into anaesthetics, astringents, antiseptics can be beneficial on long term utilisation can cause allergy [63]. Topical application of creams, suppositories can suppress pain, irritation makes the person temporarily free and took long time for producing beneficial effects.

Non operative Procedure

This office based procedures are suitable for Grade I & II haemorrhoids sometimes even for Grade III haemorrhoids To perform this there no need of using anaesthesia [64]. The present review also briefed about these beneficial procedures.

Sclerotherapy

It is a simple palliative treatment for haemorrhoids. In this therapy a sclerosing agent 5 % phenol, almond oil is used for hemorrhagic haemorrhoids This sclerosant injection is injected into submucosal tissue at lower level of intenal haemorrhoids.⁶⁵ The sclerosant injection now can develop fibrosis and contraction of submucosal anal cushion fixing anal cushion in it anatomic position also it aids in relieving venous plexus engorgement. Treatment becomes more successful when injected to exact location [66,67]. In some studies it is showed that 50% glucose water is efficient as phenol in olive oil solution when compared between two types of sclerosing solutions.

Rubber band ligation (RBL)

Blaisell 1958 in 1950 described this procedure for ligation of internal haemorrhoids. This procedure is carried out in office without any necessary of hospitalisation. In this technique a simple rubber band is used to ligate hemorrhoidal tissue [68]. This technique sometimes employ multiple ligations to hemorrhoidal tissue [69]. Rubber band ligation over hemorrhoidal tissue causes fibrosis, fixation, retraction of hemorrhoidal cushions [70]. Rubber band around hemorrhoidal tissue causes ischemic necrosis which helps in slough off hemorrhoidal tissue and forms a small ulcer this will be healed fixing remnant mucosal lining to wall of anal canal. It is suitable for treatment of first to third degree internal haemorrhoids. Bleeding usually noticed in this technique after 10-14 days due to slough of ligated haemorrhoids [71]. The draw back of this technique is found to be hemorrhage, thrombosed external haemorrhoids, rubber band slippage, sepsis of pelvis and fournier's gangrene [72,73].

Infrared Coagulation (Irc)

It is non operative technique a protoscope is used to perform this technique. In this technique 3-4 pulses of IRC is applied at the bottom of hemorrhoidal tissue for 1.5 seconds. It uses infrared energy which generate thrombosis, submucosal fibrosis of hemorrhoidal tissue. This therapy causes develops scarring, mucosal fixation and reduction of mass of hemorrhoidal tissue [74]. This procedure needs subsequent days exposure of hemorrhoidal tissue to light by which tissue can slough off. This method is more suitable to treat small hemorrhoidal mass [75].

Cryotherapy

It is non surgical procedure a cryoprobe (Key Me Cryosurgical probe FT 400) is applied to inner component of each pile and complete wrapping of pile is made around the probe. Liquid nitrous oxide -70°C was administered till then the pile was frozen solid. This technique causes irreversible cell damage followed by necrosis and sloughing of the pile area [76].

Radiofrequency ablation

This method can be employed for the treatment of Grade II and Grade IV haemorrhoids. By using Radio frequency scalpel which generates high frequency waves can simultaneously cut and coagulate the hemorrhoidal tissue [77]. This technique can cause fibrosis shrinkage of anorectal cushions [78]. Pain and defecation problem with this technique is less but recurrence of prolapse is noticed [79].

Surgical Intervention

Bleeding piles in the anorectal region are mostly carried for surgery. Hemorrhoidectomy is mostly done for third and fourth grade haemorrhoids [80]. Fredrick Salmon in 1888 enlarged surgical procedure for hemorrhoids. In current days existing surgical procedures, Ferguson and Milligan-Morgan methods are modifications of Salmon's technique [81]. Hemorrhoidectomy causes excision of hemorrhoidal cushions. This is one of the surgical procedure for treatment of both internal and external haemorrhoids which causes its resection and ligation of main supplying rectal vessels [82,83]. Ferguson closed and Milligan-Morgan (MM) open hemorrhoidectomy remains to be most important types of surgical treatment for haemorrhoids [84,85]. Open hemorrhoidectomy or Milligan Morgan technique is called as open technique because in this technique after removal of underlying anal sphincter haemorrhoids mucosal defects are left opened [86]. Where as in case of Ferguson technique it is called as closed since mucosal defects are completely closed by means of continuous sutures [87]. Now a days Various surgical hemorrhoidectomy procedure are used for treating hemorrhoids They are

Stapled Hemorrhoidectomy (SH)

In this procedure a circumferential ring of mucosa 3 - 4 centimetres above the dentate line is stapled by the utilisation of circular stapler. This stapling of haemorrhoids tissue disrupts superior hemorrhoidal plexus and allows in getting back the hemorrhoidal tissue to its normal original anatomic position [88]

Hemorrhoidectomy by Diathermy

In this procedure hemorrhoidal tissue is subjected to high frequency electric current which

causes coagulation of hemorrhoidal tissue and tissue elements are fused to form homogenous mass. Hemorrhoidal under this technique is removed by using anaesthesia [89].

Hemorrhoidectomy By Bipolar Diathermy

This method is done at the region of hemorrhoidal intramuscular area by using bipolar electrocautery at 1 sec pulses at 20 watts with a 2.2-mm penetration. It is suitable for treatment of Grade 3, Grade 4 internal and early stage haemorrhoids [90].

Hemorrhoidectomy by Ligature

A modified electric signal device is used to remove the hemorrhoidal tissue. This method can be called as vessel sealing system. A diathermy energy is applied to clear pile mass. This method has an advantage of minimum lateral spread of current or heat. This is a suture less technique [91]

Plication of haemorrhoids

Plication is defined as strengthening and shortening body part. Plication can be applied to treat hemorrhoids by absorbable sutures with continuous pattern provide better results [92] Plication begins at the distal end of haemorrhoid at anal verge moved towards the pedicle knotted at the pedicle helps in fixing the hemorrhoidal tissue.

Dropler Guided Hemorrhoidal Artery Ligation (Dghal):

A new procedure elaborated to treat hemorrhoids is Dropler Guided Hemorrhoidal Artery Ligation (DGHAL). This mode of treatment contains ligation of hemorrhoidal artery by a dropler instrument. The main objective of this method is to decrease enlarged hemorrhoids by ligation. It also helps in regaining of normal anatomical position of prolapsed hemorrhoids [93]. This method involves ligation of distal branches of superior rectal arteries so that it can reduce blood flow to hemorrhoidal tissue and decongestion of hemorrhoidal plexus leading to the formation of fibrosis. The method possesses an advantage instead of excision of hemorrhoids the method causes reduction of enlarged hemorrhoids [94]. It is the best method for treatment of Grade-II and Grade-III hemorrhoids.

Ancient Method of Treatment of Hemorrhoids

Various procedures applied for the management of hemorrhoids today are principles of ancient history of medicine. Hippocrates at his time performed surgical procedures like Ligature operation, excision and cautery. Still the same procedures are operated with minor little modifications. People at ancient period also applied some conservative procedures like regulating the flow rate of blood, Surface application of juice of parsley and salt powder have burnt to stop bleeding from thrombosed piles. They made pills by moistening wheat flour with juice of milfoil to take three or four times daily, followed by blood withdraw from basilica vein of the arm, saphenous vein of outer ankle and from tibial saphenous vein to divert hemorrhoidal plexus which can permanently restrain pile [95]

Herbal Remedies For Treatment Of Haemorrhoids

There are various pharmacological therapies available for management of hemorrhoids like anaesthetics, corticosteroids, calcium dobesilate some of these agents act as a venotonic agent. These pharmacological interventions used for the treatment of hemorrhoids cannot properly treat them and may even lead them to surgery. Chronic use of these agents can cause damage to skin [96] Synthetic drugs or pharmaceuticals produce adverse and side effects and in some instances they also responsible for deaths and hospitalisation [97]. These disadvantages arise by the use of pharmaceutical agents made for looking into traditional medicines as an alternative therapy for hemorrhoids. They also thought to be potential source to develop new drug. Accordingly some medicinal plants reported for treating hemorrhoids exhibit anti-inflammatory, analgesic property [98]. They are tolerable effective and found helps to increase microcirculation, vascular tone, support GIT functions and provide strength to hemorrhoidal connective tissue [99,96].

Novel Methods for Treatment of Hemorrhoids

Anal cushion lifting method (**ACL**) which does not require excision. This procedure consists of dissection of anal cushion from internal sphincter muscle where anal cushion is lifted and restored in its normal position. The procedure involves suturing of anal cushion from its middle portion to cranial

side by the help of single stitches. This technique was suitable for treatment of Grade III and worsened hemorrhoids. No necrosis and anal stenosis noticed in this technique due to preservation of arterial supply [100]. It is most of the general hemorrhoidectomy procedures involves ligation of feeding artery decreasing blood supply to anoderm, perianal tissue and makes the tissue necrotic [101]

Diode Laser For Treatment Of Hemorrhoids

This is a novel approach for treatment of hemorrhoids. This consists of treating hemorrhoids by application of laser but without their excision. It involves locating main hemorrhoidal blood vessels above the dentate line with the help of a probe and supplying of diode laser at 980 nm over located hemorrhoidal blood vessels. This procedure makes shrinkage of pile mass due to reduction of blood vessel. Advantage of this technique less post operative pain and recurrence. It is suitable for treating fourth degree piles.¹⁰²

Results

From the review made it was observed that hemorrhoids is simple disease. Mortality with disease is not observed. Prolapse of anal cushions can cause pain and discomfort. All the men and women are equally effected by the disease. Though there are several treatment procedures available for management of hemorrhoids. The decision making for the management of hemorrhoids remains to be hard and complex. It is affected by several variables like type and grade of hemorrhoids, pain, recurrence, post operative characters [102]. In most cases hemorrhoids can be managed by office based and conservative procedures.

Discussion

Hemorrhoids are common disorder of gastro intestinal tract that affects the anorectum. Of all the groups Caucasians are the mostly affected by hemorrhoids. Pain and rectal bleeding are the most common symptoms of the disease. The disease finds to be unique due to its Recurrence potential. Constipation is the risk factor can aggravate the disease. The disease is frequently noticed in adults of all genders, generally the age group of 45-50 are

affected. Low grade hemorrhoids can be managed easily by simple life style and conservative procedures if noticed in the initial stages. Most of the people at this stage fails to seek medical opinion due to social stigma. At advanced stage hemorrhoids are thrombosed, develop acute pain can be treated by office based and surgical procedures.

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