

Patient information from the BMJ Group

Haemorrhoids

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Haemorrhoids

If you see bright red blood after going to the toilet, particularly if it's on the toilet paper, you probably have haemorrhoids (piles). Haemorrhoids are swollen veins around your anus. They aren't dangerous, and often go away on their own. But if your haemorrhoids become more troublesome, there are treatments that can help.

We've brought together the best research about haemorrhoids and weighed up the evidence about how to treat them. You can use our information to talk to your doctor and decide which treatments are best for you.

What are haemorrhoids?

Haemorrhoids are swollen blood vessels around your anus and inside your rectum. They're sometimes called piles.

We don't know exactly what causes haemorrhoids. Experts think they occur when the small blood vessels (veins) in the lining of your rectum become wider and swollen with blood. ^[1]

Here are some reasons why you may get haemorrhoids.

- You strain when you go to the toilet, perhaps because you're **constipated**. You may not be eating enough **fibre**.
- If you are a woman and you're pregnant, pressure from your baby may restrict the flow of blood around your anus. And changes in your **hormones** may affect your veins.
- You are also more likely to get haemorrhoids if the walls of your veins are weak. You can inherit this from your parents in your **genes**.

You can get haemorrhoids either inside your rectum or outside, under the skin around your anus. ^[2] Your anus is the opening from your rectum.

Doctors put haemorrhoids into four categories, depending on how bad they are. ^[3]

Haemorrhoids

- **First degree:** These are small swellings on the inside of your rectum. You can't see them or feel them from outside. They may bleed when you go to the toilet, but your symptoms are mild.
- **Second degree:** These are larger swellings. They may partly push out (**prolapse**) from your anus when you go to the toilet. But they soon spring back inside again.
- **Third degree:** The swellings hang out from your anus. But you can push them back inside with a finger.
- **Fourth degree:** The swellings become quite large. They are permanently outside your anus. You can't push them back inside.

To diagnose haemorrhoids, your doctor will need to do a physical examination. They will look for swollen blood vessels around your anus. Your doctor may use a **proctoscope** (a hollow tube with a light) to look for haemorrhoids inside your rectum.

What are the symptoms of haemorrhoids?

Haemorrhoids don't always cause troublesome symptoms. Small haemorrhoids may cause only mild discomfort. But large haemorrhoids can be irritating and itchy.

The most common symptom is bright red blood on the toilet paper or in the toilet bowl. Other symptoms are: ^[4]

- Swellings hanging out of your **anus** (called a prolapse)
- Itching
- Leaking mucus from your anus (this may irritate your skin)
- Pain, which you usually only get when the swellings are prolapsed (hanging down outside your anus).

You may also get a blood clot (**thrombus**) in the haemorrhoid. This isn't common, but it can be very painful.

How common are haemorrhoids?

Haemorrhoids are common. Lots of people have trouble with them at some time in their life.

We couldn't find much information to tell us exactly how common haemorrhoids are. Many people don't see a doctor when they get them, so it's hard to know.

In the United States, at any one time, about 1 in 20 people have haemorrhoids. ^[5]

Haemorrhoids

What treatments work for haemorrhoids?

If your symptoms are mild, there are creams and ointments that you can use yourself to treat your haemorrhoids. But if your symptoms are more troublesome, you may choose to have an operation.

You might be worried that the bleeding is caused by something serious. For more information, see [What else can cause bleeding?](#) If your doctor can tell you that your bleeding is definitely caused by haemorrhoids, it may put your mind at rest. Once you know there's nothing seriously wrong, you can decide whether you'd rather try simple treatments or have an operation.

The kind of treatment your doctor suggests will depend on how bad your haemorrhoids are. For a description of the categories of haemorrhoids, see [What are haemorrhoids?](#)

- **First degree:** There are things you can try yourself to treat mild haemorrhoids. These include avoiding constipation and not straining on the toilet. If you get a lot of bleeding, you may need treatment to shrink your haemorrhoids. You could have injections, infrared treatment, or banding.
- **Second degree:** This type of haemorrhoid can be treated with banding, injections, or infrared treatment. Banding is the most common method. Doctors use a rubber band to cut off the blood supply to your haemorrhoid.
- **Third degree:** If you have a prolapsed haemorrhoid (it hangs down outside your anus), you can have banding at first. But you may need an operation to cut away the haemorrhoid.
- **Fourth degree:** If you feel treatment is necessary, you'll need an operation to have this type of haemorrhoid cut away.

Treating yourself

Simple things, such as changing the foods you eat, may help with haemorrhoids. And there are creams and ointments you can buy from a pharmacist or get from your doctor.

We haven't looked at the research on these treatments in the same way we have for the other treatments. But we've included them because they're often the first things people try.

To read more, see [Haemorrhoid treatments you can try yourself](#).

For the rest of the treatments we cover here, we've looked at the best research and given a rating for each treatment according to how well it works.

Treatment Group 1

Treatments for haemorrhoids

Treatments that work

- [Banding](#)

Treatments that are likely to work

- [Haemorrhoidectomy \(an operation to cut away your haemorrhoids\)](#)
- [Infrared treatment](#)
- [Stapled haemorrhoidectomy](#)

Treatments that need further study

- [Tying the arteries](#)
- [Injections](#)
- [Treatment using radio energy](#)

What will happen to me?

Your haemorrhoids might disappear without any treatment. You may find they come and go. There are several treatments to get rid of them, but haemorrhoids sometimes come back after treatment.

Haemorrhoids usually settle down if you simply: ^[3]

- Avoid constipation
- Are careful not to strain on the toilet
- Make sure you eat plenty of fibre and drink lots of fluids.

If you do need further treatment, the outlook is still very good. Haemorrhoids rarely cause any serious problems. But you may get haemorrhoids again from time to time.

Treatments:

Banding

In this section

Haemorrhoids

If you have this treatment, your doctor will place a rubber band around the base of your haemorrhoid. The band cuts off the blood supply, and the haemorrhoid drops off within a few days.

You may hear this treatment called **rubber band ligation**.

Banding is the most common treatment for second degree haemorrhoids. For a description of the categories of haemorrhoids, see [What are haemorrhoids?](#)

- Usually, banding is done by a surgeon in a hospital outpatient department.
- It only takes a few minutes and mostly it isn't painful, so you probably won't need an **anaesthetic** to numb the area.
- Up to three swellings can be treated at one time using this method.

There's a small risk of complications with banding. But these are less serious than the side effects you might get from [an operation to cut away your haemorrhoids](#).

In one study, almost 8 in 10 people were free of symptoms a month after having banding treatment.^[6] Another study looked at about 200 people with second degree haemorrhoids.^[7] About four years after banding treatment, almost half the people still had no haemorrhoids.

Banding may work better than treating haemorrhoids with [injections](#).^[8] ^[9] ^[10] Banding may be better at:

- Reducing pain
- Avoiding the need for more treatment
- Preventing a prolapse (when haemorrhoids hang down outside your anus)
- Reducing bleeding.

But banding may cause more side effects straight after treatment than injections.

Banding may not work so well if you have more serious haemorrhoids. An operation to cut away your haemorrhoids might be better.^[11]

You are less likely to get side effects after banding than after an operation to get rid of your haemorrhoids using [staples](#).^[11] One study looked at how many people got side effects after having banding or surgery. It found that about 8 in 100 people had side effects after banding treatment, but 16 in 100 people who had surgery had side effects. The problems you could get include:

- Bleeding

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- Pain
- Difficulty passing urine.

Haemorrhoidectomy

In this section

An operation to cut away your haemorrhoids is called a **haemorrhoidectomy**. Your doctor may recommend this operation if you have third or fourth degree haemorrhoids. For a description of the categories of haemorrhoids, see [What are haemorrhoids?](#)

If you have a haemorrhoidectomy, you'll probably only need to stay in hospital for a few hours.

- You'll be given an anaesthetic. You will have either a **general anaesthetic** so that you are asleep during the operation or a **local anaesthetic** to numb the area.
- Your surgeon will cut away your haemorrhoids with a scalpel or surgical scissors.
- They will then either close your wound with stitches or leave it to heal naturally.

If you have stitches, it's called a **closed haemorrhoidectomy**. If the wound is left to heal by itself, it's called an **open haemorrhoidectomy**.

It doesn't seem to make much difference whether you have stitches or not. Both operations seem to work about as well as each other.^[12] Your wound might heal slightly more quickly if you have stitches, but it won't affect how long you'll need to stay in hospital.

The research shows that an operation to get rid of your haemorrhoids works well.^[13] ^[14] In one study, all the people who had an operation were still free of haemorrhoids one year later.^[14] Another study found that about 8 in 10 people still had no haemorrhoids a year after their operation.^[13]

There's also a newer operation that uses [staples](#) to reduce the blood supply to your haemorrhoids and shrink them.

There's a small risk of complications with an operation to remove your haemorrhoids. You may have:^[15] ^[16]

- Bleeding
- Problems passing urine
- Problems passing stools.

Infrared treatment

In this section

Doctors can use an infrared device to burn haemorrhoids away. This treatment is sometimes called **infrared coagulation**. It will probably relieve the symptoms of first or second degree haemorrhoids. For a description of the categories of haemorrhoids, see [What are haemorrhoids?](#)

Infrared treatment seems to work just as well as [banding](#) or [injections](#).^{[6] [17] [18] [19] [20] [21]} Between about 6 in 10 and 8 in 10 people who have infrared treatment get rid of their haemorrhoids with infrared treatment. But it isn't used as often as other treatments.

One study found that people who had infrared treatment were more likely to be free of symptoms three months later than people who had injections.^[18] People also had less pain straight after the treatment.

People who have infrared treatment may be less likely to have pain than people who have banding.^[6] But one study showed that infrared treatment might not be as good at controlling bleeding.^[22]

Stapled haemorrhoidectomy

In this section

This is a newer operation. It's used mainly for internal haemorrhoids. It's sometimes called a **stapled haemorrhoidectomy**.

In this operation, your surgeon will use a circular stapling device to remove a ring of the lining of your rectum. This helps to lift your haemorrhoids higher inside your rectum where they're less likely to cause you trouble. It also reduces the blood supply to your haemorrhoids, which helps to shrink them. The idea is that the surgery is done inside your rectum, rather than on the sensitive skin around your anus. So you should have less pain.

You'll usually have a general anaesthetic, so you'll be asleep during the operation. But you may only need to stay in hospital for a few hours after this type of surgery.

This operation works well. More than 9 in 10 people are still free of haemorrhoids a year after their operation.^{[23] [24]}

Researchers have compared this operation with the older ways of removing haemorrhoids. One summary of the research (called a **systematic review**) found that people who had an operation using staples were able to go home from hospital about a day sooner than those having other haemorrhoid operations.^[25]

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We don't know whether your haemorrhoids are more likely to come back after an operation with staples or with older types of surgery. One review found that more people need further surgery after an operation with staples, because their haemorrhoids had come back. ^[25] However, the difference between staple surgery and other types was small enough to be down to chance. So, we can't say which operation is best for making sure your haemorrhoids don't come back.

One of the reviews also found that prolapse (when the haemorrhoids hang outside your anus) was more common after an operation using staples. ^[26] However, another review didn't find much of a difference. ^[27]

There are some advantages to an operation using staples. You'll probably have less pain, although the results on pain vary between studies. ^[25] One study found that about 4 in 10 people got a problem after an operation using staples, compared with about 9 in 10 people who had an operation to cut away their haemorrhoids. ^[24] You may also get back to normal more quickly, by around 12 days. ^[25]

However, you may be more likely to get bleeding after an operation with staples. ^[25]

There are also worries that you might get some serious complications from an operation that uses staples. These complications could be dangerous. The stapler could damage your anus or the wall of your rectum. Doctors need special training to do this operation. ^[28]

Serious problems are rare, but it's possible that this operation could cause:

- A blockage in your rectum
- A hole (perforation) in your rectum
- An infection around your rectum.

After surgery, some people find it difficult to urinate. In some studies, around 13 in 100 people got this problem. ^[29]

Tying the arteries

In this section

A doctor can tie the **arteries** that supply blood to your haemorrhoids. This operation may relieve your symptoms. But we need more research to find out how well it works.

We only found one small study. ^[15] It showed that tying the arteries worked just as well as an [operation to cut away haemorrhoids](#). More than 8 in 10 people were still free of their haemorrhoids a year later.

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People who'd had their arteries tied didn't need to stay in hospital as long as people who'd had their haemorrhoids cut off (a haemorrhoidectomy).^[15] People who'd had their arteries tied also had fewer complications. In one study, about 1 in 10 people had a problem after their arteries were tied.^[15] But 5 in 10 people had a problem after an operation to cut away their haemorrhoids.

Injections

In this section

Injections can be used to try to shrink first or second degree haemorrhoids. But we need more research to know for certain whether this treatment works. For a description of the categories of haemorrhoids, see [What are haemorrhoids?](#)

If you have this treatment, your doctor will inject a chemical into the swollen **vein** in your haemorrhoid. The chemical causes the vein to collapse inwards. Then your haemorrhoid should drop off within 7 to 10 days. You'll get some bleeding as this happens.

One study compared having injections with advice from a nurse on toilet habits. It showed that having injections didn't help people any more than being given advice on toilet habits from a nurse. The bleeding reduced and other symptoms improved for people who had the injections in much the same way as for people who got advice from a nurse.

Three other studies found that injections didn't work as well as [banding](#) in the long term. People who had injections:^[8] ^[9] ^[10]

- Had more pain
- Needed more treatment more often
- Were more likely to have a prolapse (where haemorrhoids hang down outside the anus)
- Were more likely to have bleeding.

But people who had injections did have fewer side effects straight afterwards.^[8] Only 1 in 50 of these people had pain and bleeding after the injection. But more than 5 in 50 people who had banding had these problems.

People who had injections were also less likely to have:^[10]

- Discomfort
- Nausea
- Severe pain

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- Bleeding
- Problems passing urine.

Treatment using radio energy

In this section

This operation uses a surgical instrument that generates radio energy to produce heat. This destroys your haemorrhoids. It's a bit like the heat from a microwave. The technique is called **radiofrequency ablation**.

Radiofrequency ablation is a fairly new treatment, and there's not a lot of research on it. The studies we found didn't say how good this treatment is at actually getting rid of haemorrhoids. One study found it might not work as well as [banding](#).^[30] Banding worked for about 9 in 10 people, and radiofrequency treatment worked for around 8 in 10 people.

Two studies found that people who had radiofrequency ablation had shorter hospital stays than people who'd had an operation to cut away their haemorrhoids (a haemorrhoidectomy).^[31] ^[32] Radiofrequency ablation also caused less bleeding and pain.

Further informations:

What else can cause bleeding?

Several conditions can cause bleeding from your rectum. The bleeding you get from haemorrhoids usually appears separate from your stool, either on the toilet paper or in the toilet bowl. But some conditions can cause you to get blood mixed in with your stools.

Having blood mixed in with your stools can be a symptom of [bowel cancer](#). If your doctor thinks it might not be haemorrhoids, other possible causes of bleeding will have to be ruled out.

Make sure you see your doctor if you:

- Are worried about the bleeding for any reason
- See blood mixed in with your stools, rather than on the toilet paper or separate from the stool
- Need to go to the toilet more or less often (especially if you get diarrhoea)
- Lose weight for no obvious reason.

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Your doctor can order a colonoscopy to check for any problems inside your large bowel (colon). In this test, your doctor puts a flexible tube with a light inside your rectum. We've prepared some extra information for people thinking of having this test.

Haemorrhoid treatments you can try yourself

If you have haemorrhoids, there are several simple treatments you can try yourself. If these help, you might not need any other treatment.

Avoiding constipation and straining on the toilet

You should try to reduce the pressure on your haemorrhoids by keeping your stools soft. This means you won't need to strain when you go to the toilet. Not needing to strain may prevent your haemorrhoids protruding and reduce symptoms such as bleeding and itching. Your symptoms will also be less likely to keep coming back. To keep your stools soft, you can try these things.^[3]

- Eating plenty of fibre. Fruit, vegetables, wholemeal bread, and grains are good sources of fibre. Your doctor may suggest a supplement, such as ispaghula husk (one brand name is Fybogel) or methylcellulose (Celevac), if a high-fibre diet isn't helping you.
- Having lots to drink. Drinking plenty of water can soften your stools. You must also make sure you're drinking enough water if you're taking a fibre supplement.
- Changing your habits. You should go to the toilet as soon as you feel the need. Waiting can mean you get harder stools that are more difficult to pass. Haemorrhoids may cause a feeling of fullness in your rectum, and it's tempting to strain. But it's important to try not to. And don't sit on the toilet for any longer than you need to.

Some people also find that regular exercise helps.

Ointments, creams, and suppositories

You can buy several treatments for haemorrhoids in a pharmacy, or get a prescription from your doctor. We haven't looked at the research on these treatments, but you may find that they help.

- You can buy ointments, creams, and suppositories in a pharmacy. (Suppositories are medicines that you insert into your rectum.) Most of these products contain soothing agents to relieve pain. Some also contain a local anaesthetic. But you should only use these for a few days, because the anaesthetic may irritate the skin around your anus. Brand names include Anacal, Anusol, Germoloids, Hemocane, and Preparation H.

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- Your doctor may prescribe a cream, ointment, spray, or suppositories containing corticosteroids (often called steroids for short). These are not the same as the anabolic steroids used by some athletes and bodybuilders. They aim to reduce inflammation. You shouldn't use them for longer than a week at a time. Brand names include Anugesic-HC, Anusol-Plus HC, and Xyloproct. You can also buy some brands containing steroids over the counter.

If you get pain, you might find a warm bath is soothing. But very painful haemorrhoids aren't common.

Glossary:

constipated

When you're constipated, you have difficulty passing stools (faeces). Your bowel movements may be dry and hard. You may have fewer bowel movements than usual, and it may be a strain when you try to go.

fibre

Fibre is all the parts of food that the body can't absorb. This is why foods that are high in fibre make you have more bowel movements. When your body can't absorb something, it leaves your body in your stools. Foods high in fibre include wholemeal bread and cereals, root vegetables and fruits.

hormones

Hormones are chemicals that are made in certain parts of the body. They travel through the bloodstream and have an effect on other parts of the body. For example, the female sex hormone oestrogen is made in a woman's ovaries. Oestrogen has many different effects on a woman's body. It makes the breasts grow at puberty and helps control periods. It is also needed to get pregnant.

genes

Your genes are the parts of your cells that contain instructions for how your body works. Genes are found on chromosomes, structures that sit in the nucleus at the middle of each of your cells. You have 23 pairs of chromosomes in your normal cells, each of which has thousands of genes. You get one set of chromosomes, and all of the genes that are on them, from each of your parents.

prolapse

A prolapse is when a part of your body slips out of its normal position.

anus

The anus, which is at the end of the rectum, is where stools leave your body when you go to the toilet. Part of the anus is a muscle that helps you hold in the stool until you are on the toilet.

thrombus

A thrombus is a blood clot that forms inside a blood vessel. It can be dangerous if it blocks the blood supply to a major organ such as your heart or brain. If you get a thrombus, it means you have an illness called thrombosis.

diarrhoea

Diarrhoea is when you have loose, watery stools and you need to go to the toilet far more often than usual. Doctors say you have diarrhoea if you need to go to the toilet more than three times a day.

local anaesthetic

A local anaesthetic is a painkiller that's used to numb one part of your body. You usually get local anaesthetics as injections.

steroids

Steroids are a type of chemical. Your body naturally produces steroids, which play a part in many of its processes. For example, steroids are involved in how your immune system, reproductive system and metabolism work. Steroids can also be given as medicines and are used for a number of different conditions: including asthma, rheumatoid arthritis and eczema. Corticosteroids are not the same as the steroids used by some body builders and athletes. Those steroids are called 'anabolic steroids'.

inflammation

Inflammation is when your skin or some other part of your body becomes red, swollen, hot, and sore. Inflammation happens because your body is trying to protect you from germs, from something that's in your body and could harm you (like a splinter) or from things that cause allergies (these things are called allergens). Inflammation is one of the ways in which your body heals an infection or an injury.

anaesthetic

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An anaesthetic is a chemical that blocks the ability to feel sensations like pain or heat. A local anaesthetic blocks the feeling in a specific area of the body. For example, your dentist uses a local anaesthetic like lignocaine in your gums so that you don't feel the pain of having a cavity filled. A general anaesthetic makes you completely unconscious and is usually used only in a carefully controlled environment like an operating room.

general anaesthetic

You may have a type of medicine called a general anaesthetic when you have surgery. It is given to make you unconscious so you don't feel pain when you have surgery.

systematic reviews

A systematic review is a thorough look through published research on a particular topic. Only studies that have been carried out to a high standard are included. A systematic review may or may not include a meta-analysis, which is when the results from individual studies are put together.

arteries

Arteries are the blood vessels that take blood that is rich in oxygen and food away from your heart. The arteries carry this blood to all the tissues in your body.

veins

Veins are blood vessels that carry blood back to your heart after your blood has delivered oxygen and food to the tissues.

Sources for the information on this leaflet:

1. Thomson WH. The nature of haemorrhoids. *British Journal of Surgery*. 1975; 62: 542-552.
2. National Institute of Diabetes and Digestive and Kidney Diseases. Hemorrhoids. November 2013. Available at <http://digestive.niddk.nih.gov/ddiseases/pubs/hemorrhoids> (accessed on 18 July 2014).
3. Brisinda G. How to treat haemorrhoids. *BMJ*. 2000; 321: 582-583.
4. Brisinda G. How to treat haemorrhoids. *BMJ*. 2000; 321: 582-583.
5. Johanson JF, Sonnenberg A. The prevalence of hemorrhoids and chronic constipation: an epidemiologic study. *Gastroenterology*. 1990; 98: 380-386.
6. Poen AC, Felt-Bersma RJF, Cuesta MA, et al. A randomized controlled trial of rubber band ligation versus infra-red coagulation in the treatment of internal haemorrhoids. *European Journal of Gastroenterology and Hepatology*. 2000; 12: 535-539.
7. Jensen SL, Harling H, Arseth-Hansen P, et al. The natural history of symptomatic haemorrhoids. *International Journal of Colorectal Disease*. 1989; 4: 41-44.
8. Greca F, Hares MM, Nevah E, et al. A randomized trial to compare rubber band ligation with phenol injection for treatment of haemorrhoids. *British Journal of Surgery*. 1981; 68: 250-252.
9. Sim AJ, Murie JA, Mackenzie I. Comparison of rubber band ligation and sclerosant injection for first and second degree haemorrhoids: a prospective clinical trial. *Acta Chirurgica Scandinavica*. 1981; 147: 717-720.
10. Kanellos I, Goulimaris I, Christoforidis E, et al. A comparison of the simultaneous application of sclerotherapy and rubber band ligation, with sclerotherapy and rubber band ligation applied separately, for the treatment of haemorrhoids: a prospective randomized trial. *Colorectal Diseases*. 2003; 5: 133-138.
11. Peng BC, Jayne DG, Ho YH. Randomized trial of rubber band ligation vs. stapled hemorrhoidectomy for prolapsed piles. *Diseases of the Colon and Rectum*. 2003; 46: 291-297.
12. Ho YH, Buettner PG. Open compared with closed haemorrhoidectomy: metaanalysis of randomized controlled trials. *Techniques in Coloproctology*. 2007; 11: 135-143.
13. Arbman G, Krook H, Haapenniemi S. Closed vs open hemorrhoidectomy - is there any difference? *Diseases of the Colon and Rectum*. 2000; 43: 31-34.
14. Arroyo A, Perez F, Miranda E, et al. Open versus closed day-case haemorrhoidectomy: is there any difference? Results of a prospective randomised study. *International Journal of Colorectal Disease*. 2004; 19: 370-373.

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15. Bursics A, Morvay K, Kupcsulik P, et al. Comparison of early and 1-year follow-up results of conventional hemorrhoidectomy and hemorrhoid artery ligation: a randomized study. *International Journal of Colorectal Disease*. 2004; 19: 176-180.
16. Racalbuto A, Aliotta I, Corsaro G, et al. Hemorrhoidal stapler prolapsectomy vs. Milligan-Morgan hemorrhoidectomy: a long-term randomized trial. *International Journal of Colorectal Disease*. 2004; 19: 239-244.
17. Ambrose NS, Morris D, Alexander-Williams J, et al. A randomized trial of photocoagulation or injection sclerotherapy for the treatment of first- and second-degree hemorrhoids. *Diseases of the Colon and Rectum*. 1985; 28: 238-240.
18. Walker AJ, Leicester RJ, Nicholls RJ, et al. A prospective study of infrared coagulation, injection and rubber band ligation in the treatment of haemorrhoids. *International Journal of Colorectal Disease*. 1990; 5: 113-116.
19. Templeton JL, Spence RA, Kennedy TL, et al. Comparison of infrared coagulation and rubber band ligation for first and second degree haemorrhoids: a randomised prospective clinical trial. *BMJ*. 1983; 286: 1387-1389.
20. Marques CF, Nahas SC, Nahas CS, et al. Early results of the treatment of internal hemorrhoid disease by infrared coagulation and elastic banding: a prospective randomized cross-over trial. *Techniques in Coloproctology*. 2006; 10: 312-317.
21. Ricci MP, Matos D, Saad SS. Rubber band ligation and infrared photocoagulation for the outpatient treatment of hemorrhoidal disease. *Acta Cirurgica Brasileira*. 2008; 23: 102-106.
22. Gupta PJ. Infrared coagulation versus rubber band ligation in early stage hemorrhoids. *Brazilian Journal of Medical and Biological Research*. 2003; 36: 1433-1439.
23. Bikhchandani J, Agarwal PN, Kant R, et al. Randomized controlled trial to compare the early and mid-term results of stapled versus open haemorrhoidectomy. *American Journal of Surgery*. 2005; 189: 56-60.
24. Hasse C, Sitter H, Brune M, et al. Haemorrhoidectomy: conventional excision versus resection with the circular stapler: prospective, randomized study. *Deutsche Medizinische Wochenschrift*. 2004; 129: 1611-1617 [in German].
25. Shao WJ, Li GC, Zhang ZH, et al. Systematic review and meta-analysis of randomized controlled trials comparing stapled haemorrhoidopexy with conventional haemorrhoidectomy. *British Journal of Surgery*. 2008; 95: 147-160.
26. Jayaraman S, Colquhoun PH, Malthaner RA. Stapled versus conventional surgery for hemorrhoids (Cochrane review). In: *The Cochrane Library*. Wiley, Chichester, UK.
27. Lan P, Wu X, Zhou X, et al. The safety and efficacy of stapled hemorrhoidectomy in the treatment of hemorrhoids: a systematic review and meta-analysis of ten randomized control trials. *International Journal of Colorectal Disease*. 2006; 21: 172-178.
28. National Institute for Health and Care Excellence (NICE). Interventional procedure guidance [IPG34]. Circular stapled haemorrhoidectomy. December 2003. Available at <http://www.nice.org.uk/ipg34> (accessed on 18 July 2014).
29. Van de Stadt J, D'Hoore A, Duinslaeger M, et al. Long-term results after excision haemorrhoidectomy versus stapled haemorrhoidopexy for prolapsing haemorrhoids; a Belgian prospective randomized trial. *Acta Chirurgica Belgica*. 2005; 105: 44-52.
30. Gupta PJ, Gupta Pravin J. Radiofrequency coagulation versus rubber band ligation in early hemorrhoids: pain versus gain. *Medicina (Kaunas)*. 2004; 40: 232-237.
31. Gupta PJ. Randomized trial comparing in-situ radiofrequency ablation and Milligan-Morgan hemorrhoidectomy in prolapsing hemorrhoids. 2003; 70: 93-400.
32. Gupta PJ. A comparative study between radiofrequency ablation with plication and Milligan-Morgan hemorrhoidectomy for grade III hemorrhoids. *Techniques in Coloproctology*. 2004; 8: 163-168.

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