00:00:00,960 --> 00:00:04,460

*What does the catheter treatment for arterial stenosis or occlusion mean?*

00:00:04,560 --> 00:00:09,900

*Arterial stenosis or obstruction develops on the base of atherosclerosis, and when we encounter a severe form of it, causing significant symptoms, you may find that medication is no longer enough.*

00:00:19,920 --> 00:00:24,220

*This may involve so-called invasive treatments.*

00:00:24,320 --> 00:00:29,100

This may be done by using catheter or a so called open surgery.

00:00:29,200 --> 00:00:34,620

*Catheter treatment is most often done by puncturing the blood vessel through a few millimetre-wound.*

00:00:39,600 --> 00:00:43,980

It is less invasive for patients, it is a little more pleasant, if you can say so, because there is no big incision, there is no need for general anaesthesia and the recovery is faster.

00:00:51,520 --> 00:00:55,580

*However, not all conditions are suitable for treatment using catheters.*

00:00:55,680 --> 00:01:03,660

*The really severe symptoms can even lead to the loss of a limb, when the diseases is so severe that the limb does not receive enough blood.*

00:01:08,560 --> 00:01:14,860

*This is usually the area of the leg: the thigh, calf or foot.*

00:01:14,960 --> 00:01:19,980

*When this happens, the extremity is very cold, painful, white and can even wounds may appear and later becomes gangrenous, which can be life-threatening.*

00:01:23,680 --> 00:01:25,660

*So these are the situations where we use some kind of more invasive treatment instead of medicine.*

00:01:31,280 --> 00:01:35,580

*In practice, this is usually done by puncturing an artery at the groin or at the wrist, under an X-ray machine, i.e. fluoroscopy, then a catheter with a guide wire is inserted into the vascular system, and first we map the vascular system, and where there is an obstruction, we try to dilate and open it.*

00:02:01,360 --> 00:02:05,740

*The procedure itself does not involve significant pain.*

00:02:05,840 --> 00:02:10,860

*We use a bit of local anaesthetic where the puncture happens, or when we do the vascular* *imaging, there's a warm sensation, but we can talk to the patient about that, prepare them for what is going to happen.*

00:02:20,480 --> 00:02:24,520

*It's a completely tolerable test.*

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00:02:25,040 --> 00:02:29,740

*The other discomfort that may occur during the examination is that when we open or dilate the stenosis or blockage, there is a certain tightness, but that is also less pain than at a dental procedure.*

00:02:44,000 --> 00:02:46,620

*The catheter treatment itself, as I said, continues after the vascular imaging.*

00:02:48,880 --> 00:02:53,100

*We identify where the stenosis or blockage is located.*

00:02:53,200 --> 00:02:58,940

*This is passed through with a wire.*

00:02:59,040 --> 00:03:02,700

*We then thread a balloon on this wire and inflate it, thereby opening up this stenosed or blocked artery from inside.*

00:03:14,080 --> 00:03:19,020

*Then we make another vascular image and hopefully we can see that now the blood is flowing freely to the tissues and cells.*

00:03:25,200 --> 00:03:28,060

*It is possible that the result is not as perfect as we would like, or that the obstruction is so calcified and hard that it wants to recoil.*

00:03:34,000 --> 00:03:38,860

*In this case, a stent is implanted in the artery.*

00:03:38,960 --> 00:03:42,780

*A stent is a tube made of a metal wire mesh, which I would say looks like a spring in a ballpoint pen, it is similar to a tube with holes in its wall, so it is not a closed tube, but like a fence, a wire mesh, usually a kind of pitted grid.*

00:04:09,680 --> 00:04:14,700

*It is made of special metal alloys and will expand to a predetermined size*.

00:04:20,880 --> 00:04:25,420

*This is always chosen for the size of the blood vessel before or during the procedure.*

00:04:28,960 --> 00:04:33,900

*This wire mesh tube, the stent, can be re-inflated with a balloon to reach the size we want.*

00:04:40,080 --> 00:04:45,900

*In the latest procedures, special coatings can be applied to these stents, to prevent restenosis, i.e the restenosis of* the vessel.

00:04:53,680 --> 00:04:57,900

*Such coatings are also applied on the balloons that I mentioned earlier,* *so that we can use special drugs in the obstructions* *that may prevent restenosis or reocclusion later.*

00:05:12,560 --> 00:05:15,100

*At the end of the procedure, these devices, (wires, catheters) are removed and either a pressure dressing is placed at the puncture site, or now there are special devices that can be used to close the blood vessel through the skin.*

00:05:28,800 --> 00:05:33,500

*Then there is no need for pressure dressing and the patient can leave the hospital in a few hours.*