Compression stockings in addition to low-molecular-weight heparin to prevent venous thromboembolism in surgical inpatients requiring pharmacoprophylaxis: the GAPS non-inferiority RCT

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Plain English summary

The GAPS RCT

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Plain English summary

Why did we conduct this research?

People undergoing operations are at risk of developing blood clots in their legs, which is known as a deep-vein thrombosis. Blood clots occur for several reasons, such as not being able to move around after an operation, changes in the blood or damage to the veins in which blood travels.

To decrease the risk of getting deep-vein thrombosis, patients having operations are given tight elastic socks to wear called graduated compression stockings. They are also given blood thinning medicine to prevent clotting.

There is little evidence that wearing elastic socks in hospital will reduce the risk of blood clots if blood thinners are also given. Many patients say that the socks can hurt or cause bruising and can be difficult to put on.

The graduated compression as an adjunct to thromboprophylaxis in surgery (GAPS) trial investigated whether or not patients having an operation would benefit from wearing elastic socks as well as getting blood thinners, or if blood thinners on their own prevented blood clots.

What did we do?

A total of 1905 patients who were having operations at seven hospitals in England agreed to take part. They were randomly assigned to different treatments by a computer program. Half of the patients were given elastic socks plus blood thinners, and the other half were given the blood thinners alone.

What did we find?

There was no significant difference in the number of people who had a blood clot in either study group. This could mean that blood thinners are as good at stopping blood clots as blood thinners and elastic socks for patients having operations.

What could be carried out next?

The NHS spends around £63M per year across England on elastic stockings. This research indicates that patients might not get extra benefit from wearing them if they have taken blood thinners.

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This report

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