Vertebral artery stenting to prevent recurrent stroke in symptomatic vertebral artery stenosis: the VIST RCT

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Plain English summary

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About one-quarter of all strokes occur in the back of the brain, which is supplied by the vertebral and basilar arteries. An important cause of stroke is a narrowing, or stenosis, of these arteries. It is known that patients who have a minor stroke due to narrowing of a vertebral artery (VA) have a high risk of a further stroke: as much as 30% in the next year. Stenosis of the VA can be treated with stenting, in which a wire mesh is put into the narrowed artery and opens it up. Many operations to insert a vertebral stent have been carried out worldwide with good technical results; however, it is not known whether it is better to treat vertebral stenosis with stenting or only tablets. The Vertebral artery Ischaemia Stenting Trial was a randomised controlled trial comparing vertebral stenting and best medical treatment (BMT) with BMT alone in patients who had suffered a minor stroke due to vertebral stenosis. Ninety-one patients had stenting and 88 had BMT alone. Patients were followed for an average of 3.5 years. It was planned to enrol 540 patients to the trial, but recruitment was slower than expected and funding for the study was halted; therefore, recruitment was stopped at 181 patients. There was no difference in the rate of recurrent stroke between patients who had stenting and those who had BMT alone. There was some evidence that stenting might be associated with a reduced risk of recurrent stroke, but the difference was not significant. The trial was limited by the failure to recruit the anticipated sample size. The results tell us that stenting is a possible treatment for vertebral stenosis; however, further trials are required to determine whether or not it is more effective at preventing recurrent stroke than BMT alone.
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