

Life-threatening bowel ischemia can often be treated by balloon angioplasty

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Acute mesenteric ischemia (AMI) can be successfully treated with endovascular therapy such as balloon angioplasty, according to research from the University of Eastern Finland. The study also found that AMI is a more common cause of abdominal pain among the elderly than generally thought; however, it is difficult to diagnose before bowel damage develops.

If left untreated, acute mesenteric ischemia usually leads to gangrenous bowel, which is a life-threatening condition. AMI usually results from an occlusion of the superior mesenteric artery, typically caused by [arteriosclerosis](#) or embolism, a blood clot originating from the heart. Previously, the most common course of treatment was resection of gangrenous bowel - that is if anything at all could be done, as the overall mortality rate was over 80%.

In 2009-2013, a total of 66 patients with acute mesenteric ischemia were treated at Kuopio University Hospital in Finland. Mesenteric revascularization by endovascular therapy, such as [balloon angioplasty](#) or mechanical suction of the blood clot, was attempted in 50 of the patients, proving successful in 44 of the cases. Three of the patients underwent a surgical bypass after failed endovascular therapy. The mortality rate among the 66 patients was only 42%, which is a clear improvement compared to earlier treatment outcomes. Resection of gangrenous bowel was resorted to only in approximately one third of the patients, and more than half of them avoided surgery altogether.

Acute mesenteric ischemia has so far been regarded as a very rare condition. The study analysed the prevalence of the disease within one hospital district in eastern Finland and found that in patients over 75 years of age, AMI is in fact a more common cause of acute [abdominal pain](#) than ruptured abdominal aortic aneurysm or acute appendicitis. The mean age of the treated patients was 79 years. Acute mesenteric ischemia is a disease affecting old people in particular, and underlying risk factors of cardiovascular diseases are typical.

AMI is usually diagnosed using contrast enhanced computed tomography (CT), which is generally regarded as a very reliable diagnostic method. However, the study demonstrated that it is very challenging to make a definite diagnosis at the early stage of the disease. CT findings are often inconclusive, and they tend to get more conclusive only after permanent bowel damage has developed. For the patient's prognosis, however, it is crucial to make a diagnosis before bowel damage develops.

"We hope that this study will raise awareness among surgeons and radiologists of the prevalence of AMI in older [patients](#), as well as of the diagnostics-related challenges," says Vascular Surgery and Gastrointestinal Surgery Specialist Jussi Kärkkäinen, Lic. Med., who presented the results in his doctoral dissertation.

Provided by University of Eastern Finland

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