A new stent design may put patients at risk

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Some stents that keep blood vessels open to treat heart disease are poorly designed to resist shortening, according to publications in the *Journal of Interventional Cardiology*. A case report published in the journal by Dr. Cindy Grines, of the Detroit Medical Center Cardiovascular Institute, and her colleagues describes a patient who experienced a heart attack after the recently marketed Ion stent (Boston Scientific, Natick, MA) in his artery shortened and accordioned. The articles indicate that some stents are susceptible to becoming deformed, which could result in adverse clinical consequences.

Coronary stents, which are scaffolds placed within arteries that supply blood to the heart, are lifesavers for many patients with heart disease and other conditions. By using new materials and developing advanced designs, manufacturers have been working to continually improve the performance of stents to prevent blood vessels from becoming blocked.

Recently, though, researchers and clinicians have identified stent shortening as a newly observed deformity in cases using a particular family of stents. This shortening usually occurred when the clinician attempted to complete the procedure with the typical catheters and balloons used after a stent is implanted. Stent shortening and deformity can cause serious complications for patients; in this case the stent clotted off and the patient had a heart attack.

In an accompanying editorial, Dr. Grines notes that the results are "disturbing" and that because clinicians, researchers, and regulators are rapidly investigating the issue, hopefully there will soon be new

recommendations regarding the use of this particular design of stents.

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