First robotically assisted coronary stenting procedure performed at Sulpizio Cardiovascular Center

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The interventional cardiology team led by Ehtisham Mahmud, MD, FACC, at UC San Diego Sulpizio Cardiovascular Center (SCVC) has successfully completed the first two robotically-assisted coronary angioplasty/stent procedures in California. Patients with coronary artery disease (CAD) now have access to this new technology that puts the precision of a robot in the hands of interventional cardiologists during procedures to open clogged heart arteries.

The CorPath System designed by Corindus Vascular Robotics (Natick, MA), offers interventional cardiologists unparalleled control in catheterization laboratories (cath labs) while performing coronary angioplasty and stenting.

"Sitting a few feet away from the patient's bedside at a computerized work station, I was able to navigate and advance the guidewire, balloon catheter and stent through the coronary artery. The ability to accurately measure lesion length with this technology enabled me to identify the exact length of the stents required and precisely place them," said Mahmud, chief of cardiovascular medicine and director of the SCVC-Medicine.

The first patient treated was a 66-year-old woman who had previously undergone coronary artery bypass graft surgery and required stenting of a 90 percent blockage in her native artery. The second patient was a

61-year-old man with a severe 95 percent blockage of his right coronary artery who presented with unstable angina.

CAD is characterized by plaque buildup that restricts blood flow in the arteries and is a widespread and life-threatening disease. In addition to medical therapy, angioplasty and coronary artery stenting are the most common treatment for CAD. During the minimally invasive procedure, a tiny balloon is used to physically open an artery blockage and help improve blood flow. Interventional cardiologists then use drug-eluting stents, wire metal mesh tubes, to prop open the arteries and keep them open following the procedure. There are nearly one million angioplasties performed annually in the nation.

The new robotic system acts as an "extra hand" that holds cardiac devices in place during the entirety of an interventional procedure. Furthermore, the entire procedure is performed with minimal radiation exposure to the operator, resulting in shorter procedure time and enables the delivery of cost-effective care.

"As the only comprehensive academic health system in the region, we are honored to be the first hospital in the state to deliver this technology to patients and the community," said Mahmud.

The interventional cardiovascular team at the SCVC, led by Mahmud, performs a high volume of complex interventional procedures and offers patients comprehensive, cutting edge treatment for the entire spectrum of cardiovascular disease.

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