

Advent Access raises \$2M in largest pre-series A financing for SEA med-tech firm

By David Ho, Staff Writer

Advent Access Pte Ltd. has raised SGD2.6 million (US\$2 million) in probably the largest pre-series A financing round by a med-tech startup in Southeast Asia.

The Singapore-based company plans to use the funds to develop and commercialize its Av-Guardian technology, an innovation they believe will change dialysis treatment for many.

The device acts as a 'guardian guide-door' that is noninvasive to the dialysis vessel. Under the guidance of the device, hemodialysis needles are inserted into the exact same spot at the exact same angle and depth during each treatment.

"We invented Av-Guardian to help dialysis patients draw blood safely," Ruey Feng Peh, the founder and CEO of Advent Access, told *BioWorld MedTech*. "This helps preserve the health of the arteriovenous fistula [AV fistula], resulting in a reduction in hospitalization and surgery."

According to Peh, placing needles to access the AV fistula is often the most stressful and technically challenging part of the entire treatment. Vascular access is widely recognized as the Achilles heel of hemodialysis. If the needles are not well placed, they can cause significant wear and tear on the AV fistula. This can cause complications to arise and dialysis to be inadequately performed.

The resulting complications are the most common cause of hospitalization in patients suffering from end stage renal disease, directly impacting the cost efficiency of the treatment and the quality of life of patients. Peh said up to 35 percent of the cost of maintaining a patient on dialysis goes to hospitalization and repeated surgeries.

Big bucks being spent on dialysis

Globally, health care systems are spending \$85 billion annually to sustain these patients on dialysis. That number makes for promising news for Advent if the Av-Guardian gets adopted on a large scale basis.

Peh plans to use the funds to obtain a CE mark approval in the next 18 months. The company is also in the midst of conducting an international study that will help them gain global regulatory approval.

Dialysis is often a painful and long drawn out procedure that requires a patient's life to revolve around being plugged into a machine at least three times a week, four hours per session, in order to keep their bodies functioning normally.

Advent Access said that hemodialysis is the preferred therapy to remove waste from the body for 85 to 90 percent of dialysis patients. This requires large amounts of blood to be drawn out of the body, into a hemodialyser for toxins to be filtered, before being returned to the body in a specific way.

The AV fistula is a surgically modified vein placed in the patient's arm to enable high-flow, high-pressured blood to be accessed for hemodialysis. However, there are limited sites in a body a surgeon can create an AV fistula, hence making them a precious lifeline of every dialysis patient.

The device-guided needling platform engineers a high-quality tissue track to enable reliable and less painful vascular access. "The tissue track that the device creates and maintains is similar to an ear piercing. When successful and well created, patients will be able to be cannulated with a blunt needle under the guidance of the device. This lowers the skill barrier of obtaining vascular access, and reduces the pain of sharp needle cannulation for every treatment. We have further seen from our study, cases of difficult or uncannulate-able segments obtaining access success, largely with one needle attempt, after the Av-Guardian is placed," said Peh.

The pre-A round of financing is led by Accuron Medtech, the med-tech arm of precision engineering company Accuron Technologies Ltd. Advent Access will work closely with Accuron to commercialize the Av-Guardian.

This investment was made through the Med Tech Alliance, an accelerator appointed by Singapore's Spring Seeds Capital to facilitate the growth of startups in the local med-tech industry. "Our investment in Advent Access is Accuron MedTech's tenth transaction in building a strong portfolio of the most promising innovations which can make a significant difference to health care outcomes in Asia and around the world," said Abel Ang, group chief executive of Accuron.

Peh said the company is also developing other medical devices that can be combined with the Av-Guardian.

"We are looking at a pipeline to empower patients to perform hemodialysis independently, safely and more affordably. Combining the Av-Guardian with a dialysis machine agnostic self-care platform, I believe we will be able to disrupt how traditional in-center dialysis is delivered and increase the uptake of home hemodialysis," he said. ♦