

Left Radial Support Sling

Coronary angiography is carried out to assess the patency of the vessels which supply the heart muscle with blood. This is achieved by inserting a catheter into the cardiovascular system and locating it in the coronary arteries feeding the heart. When the catheter is in the correct position, contrast agent is injected into the blood vessels to enable coronary blood flow to be visualised under X-ray fluoroscopy. This procedure can be prolonged and as a result, the comfort of the patient is an important issue.

To carry out the procedure, the catheter can be inserted into either a femoral or a radial artery. Recent evidence suggests however, that radial access should be used in preference to femoral access as it is less painful for the patient, and requires a shorter recovery time, with the patient being less likely to require a bed overnight. Despite this, difficulties are experienced since the configuration of many angiography theatres is such that the surgeon stands on the side of the patient, which makes left radial access uncomfortable for the surgeon and the patient.



Outcomes

- ▶ Accessing the left radial artery is difficult for the surgeon and they must lean across the patient during the procedure.
- ▶ An uncomfortable position often results in the surgeon using a femoral approach rather than the preferred radial approach, even though a femoral approach can increase the time in hospital for the patient, increasing the cost of bed occupancy.

Key Project Impacts

Sue Best, a Senior Radiologist at South Tees Hospitals NHS Foundation Trust, came up with a novel solution to this problem.

She invented and developed a disposable sling which supports the patients left arm in a position across their body. This enables the surgeon to complete a left radial approach without leaning over the patient and prevents the patients arm from slipping. The angiography sling complies with hospital infection control regulations and is available through Amdel Medical. A video of the sling in use by clinicians is available online: www.youtube.com/watch?v=2Jgbwi8xUrQ

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Background Summary

- ▶ An unmet need was identified demonstrating that by finding a way of utilise the radial approach when undertaking this surgery, the surgeons task could be made much easier and the patient's hospital stay post-surgery could potentially be reduced.
- ▶ A disposable sling was designed to support the patients left arm across their body in order to make this approach to surgery possible for the surgeon.

Support Provided by NHS Innovations North

NHS Innovations North, in conjunction with the Academic Health Science Network for the North East and North Cumbria, provided support with the following:

- ▶ Concept and product development
- ▶ Market intelligence to assist with sale and marketing strategy, identification of a commercial partner, and licence negotiation
- ▶ Intellectual property protection

Benefits to Stakeholders

This innovation allows the surgeon to more easily undertake this surgery using the most appropriate method, undertaking the surgery in this way can potentially reduce the patients hospital stay, post-surgery.

Next Steps and Plans for the Future

The intellectual property is for the idea is currently licensed by the Trust to Amdel Medical. The sling is currently used by surgeons undertaking this procedure within the Trust, It is available for purchase by other organisations directly from Amdel Medical: <http://amdemedical.com/pdfs/left-radial-support-sling/Radial-Support-Sling-Application.pdf>

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