

Instrument for surgical stapling between a vascular prosthesis and the aorta

DESCRIPTION OF THE TECHNOLOGY

The object of the invention is an instrument for surgical stapling between a vascular prosthesis and the aorta, comprising a handle, a stem associated with the handle, a head associated with the stem, a ring associated with the head, anterolateral staples, and posterior staples.

The development of automatic or semi-automatic end-to-end and end-to-lateral suture systems for tubular structures (intestine, biliary tract...) has numerous antecedents and designs in surgery over the last few decades. However, its introduction in the field of vascular sutures has been limited by various factors, such as being subjected to pulsatile blood flow at high pressure or the presence of wall irregularities (atheroma plaques) of varying consistency (fibrosis, lipids, calcium). It is for this reason, at least in part, that designs based on drums with circular suture lines (common in digestive surgery) have had limited application and little diffusion.

MARKET APPLICATION SECTORS

The sectors of application are public or private health systems with cardiology, angiology and vascular surgery services.

TECHNICAL ADVANTAGES AND BUSINESS BENEFITS

- The device offers improved anastomosis construction between the prosthesis and the aorta.
- It provides a suture prototype that allows adaptation to laparoscopic aortic surgery.
- It improves the prevention, diagnosis, and treatment of diseases with a socio-health and economic impact on the NHS.

CURRENT STATE OF DEVELOPMENT

The invention is at TRL5 level. The technology has been developed in the laboratory with evidence of technical feasibility. The next step will be the development of a prototype to enable validation of components in a relevant environment.

INTELLECTUAL PROPERTY RIGHTS

National Utility Model U202132499, dated 20 December 2021.

Utility Model Title: Instrument for surgical stapling between a vascular prosthesis and the aorta.

COLABORATION SOUGHT

We are looking for a company in the field of *medical devices*, for patent licensing and commercialization.

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RELATED IMAGES

C400 C300 C200 C100

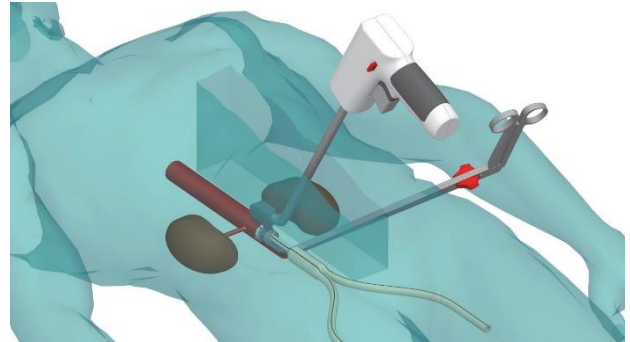
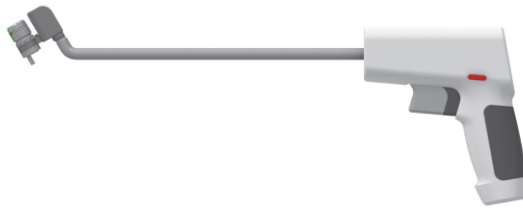


Image 1. Object of the invention: grip (C100), stem (C200), head (C300) and ring (C400). Simulation of the surgical procedure.

CONTACT DETAILS

Responsible scientist: Manuel Miralles Hernández

OTRI IIS La Fe

Instituto de Investigación Sanitaria La Fe
Av. Fernando Abril Martorell, nº 106 46026 Valencia (Spain)

Contacto: otri@iislafe.es; +34 961 246 609 / +34 618 73 00