

Technology Offer

Device and method for ready-prepared surgical knots

Ref. No.: CH711/2014

Background

Under restricted spatial conditions e.g. in minimal invasive surgery, tying and closing of surgical knots is difficult and time-consuming in particular when high demands concerning closeness and durability is required. Extracorporal knots solve this problem, however the state of the art methods are time-consuming and loosening of knots after initial knotting remains a problem.

Technology

A new device and method for ready-prepared surgical knots have been developed suitable for suturing tissue such as intestinals, peritoneum, ligaments, tendons, skin, etc. and performing ligations of vessels, intestinal anastomosis and blood stanching in minimal invasive or open surgery. The device represents a surgical yarn carrier with a prepared but still open knot. Several new types of laying the yarn are possible, which allow a very secure knotting and achieve durability of the knot on the tissue. If needed the yarn's end possibly provides a fixing element e.g. a needle, which the tissue structure is sutured with. By pulling both yarn's ends, the knot construction slides towards the tissue and the knot is pulled tight. The tighten knot withstands pressures of up to 4 Bar as measured with a dilation device.

Benefits

- ✓ Ready-prepared knot for surgical applications allows time- and cost-effectiveness
- ✓ Facilitation of surgical knotting in difficult to access areas
- ✓ Secured tightness and durability of knots
- ✓ Knot can withstand pressure of 4 bar (shown with a dilation device)

Application

- Surgical applications: Suture and ligation of tissue structures

Commercial Opportunity

Searching for a strategic / licensing partner or financial investor

Key Words

Ready-made knot, device, surgical, saturation, ligation

Developmental Status

Prototype

IP Status

DE patent application (07/2014)

Patent Owner

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