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Surgical Training Device

TECH ID #: 1126.2BV

Background

The current techniques to train surgery residents to suture internal organs involve live or preserved patients or animals. Those models are expensive, only available in small quantities and pose legal and ethical concerns. In many cases, simple models used in surgical skills labs allow students to practice throwing standard sutures. However, the geometries involved in cardiac surgery requires sutures to be thrown at unusual angles with different strategies.

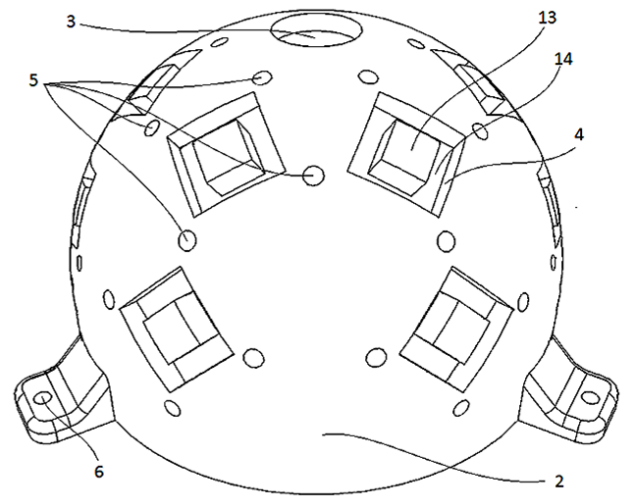
A cardiac surgery resident at the University of Calgary has developed a new device to more accurately simulate the complex angles involved in cardiac surgery or in the surgery of other internal organs. The device is able to simulate the “feel” of real tissues, while the optimized shapes of the suture pads force the user to complete the suture within acceptable parameters (see figure). The device also has an interface which administers a series of tests to gauge how well the user performs.

Areas of Application

Training surgery residents

Competitive Advantages

- No human or animal material involved
- Developed and evolved based on feedback from cardiac surgeons and residents
- Simulates the “feel” of real tissue
- Forces proper suture technique at technically challenging orientations
- Suture pads are replaceable as a consumable
- Guides the user and provides feedback on their technique
- Simple and inexpensive manufacturing process



TECHNOLOGY



Stage of Development

Prototypes tested by residents with positive results

Intellectual Property Status

Protected by a provisional application