Real and objective assessment to develop first class surgeons

Laparoscopic Suture Simulator evaluates skills in laparoscopic intestinal suture, as well as simple skin suture and forceps training. Simulate true-to-life scenarios by using real clinical devices, life-like softness and anatomy of the intestinal wall and dermis.

Prof. Hashizume, Center for Advanced Medical Innovation Kyushu University

Product Supervision

Box trainer only

- Disadvantage: Limited to simple tasks
- Advantage: Easy to use

Wet-lab

- Disadvantage: Hard to set & clean up, concerns in ethical issues
- Advantage: Realistic

Virtual reality simulators

- Disadvantage: Lack of realistic feel
- Advantage: Objective skills assessment

Integrating Advantages of Different Training Methods

1. Easy to use
2. Realistic tissue response
3. Objective feedback
Clinical Skills - Suture -

**Laparoscopic Intestinal Tract Suture**

1. **Quantitative Feedback combined with Realistic Hands-on Experience**

The system utilizes five criteria to evaluate laparoscopic suturing skills. Each criteria has an “acceptable” range based on expert surgeons to help improve performance.

**Judging success or failure**

1. Is the wound sutured without a leak?
2. Is suture completed through muscular layer to mucosal layer?
3. Is ligature appropriate for suture?
4. How much open area is there in mucosal layer?
5. How long does it take for suturing procedure?

Air leak from the sutured area can be checked by applying air pressure on the intestinal tract sheet.

*Uemura M et al. Surg Endosc. 2014. PMID: 25005015 / DOI: 10.1007/s00464-014-3681-9*

2. **Life-like Intestinal Tract**

Intestinal tract has four layers with respective characteristics. When holding with forceps and suturing, these four layers react like real tissue.

Evaluate simple interrupted skin suturing via quantitative assessment criteria. The Objective evaluation encourages honing of skills.

3. **Laparoscopic Forceps Training**

Forceps Training mode enables dry box training to handle laparoscopic instruments.

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**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Size: W50 x D110 x H160 cm</th>
<th>Weight: 93 kg/205lbs</th>
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<tbody>
<tr>
<td>Power: AC100-240V, 50/60 Hz</td>
<td>Power Consumption: 180 VA</td>
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**SET INCLUDES**

1. monitor
2. touch-monitor
3. video camera for assessment
4. intestinal tract suture
5. video camera for assessment (skin suture)
6. video camera for procedure recording
7. torso body
8. unit base
9. printer
10. key board
11. set of trocar
12. container
13. pieces of suturing sheet (intestinal tract)
14. pieces suturing sheet (skin)
15. instruction manual

**MATERIALS**

- Soft resin
- Latex free

**RECOMMENDED DEVICES**

- Forceps are not included.

**REPLACEMENT PARTS**

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