A novel training model for nerve repair

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BACKGROUND

Techniques to repair nerve and vessel injuries are essential in microsurgical training.¹ Courses teach such skills but many are expensive and require animal tissues. Although alternatives exist, we are not aware of a specific model for nerve repair.² We present a model for teaching nerve repair using inexpensive and readily available materials.

TECHNIQUE

A length of twine is rolled in cling-film to make the nerve model in which twine fibres represent nerve fascicles, and cling-film the epineurium (Fig. 1). The model is fixed to the table using adhesive tape and divided transversely. With fine monofilament non-absorbable suture, the 'epineurial repair' is performed by suturing the cling-film under a microscope or loupes (Fig. 2). It should be possible to align the divided fibres of twine correctly in their pre-divided arrangement without tearing the cling-film. A number of these 'nerves' maybe bundled together in a separate layer of cling-film acting as epineurium and the individual cling-film layers of each nerve model now become the perineurium, thereby increasing the difficulty.

Figure 1 A piece of twine is rolled in a layer of cling film to form the nerve model.

Figure 2 Repaired nerve model using 8/0 non-absorbable monofilament suture under magnification.

DISCUSSION

This nerve repair model is a teaching aid for microsurgical trainees. It incorporates the use of microsurgical instruments under a microscope or surgical loupes and helps to develop hand-eye co-ordination, improve speed, and tissue handling techniques. This model is cheap, easy to assemble and anatomically similar to real nerve. It may be practised in any setting and no animal specimens are required. It is safe and the degree of difficulty may be increased with improving skills and technique.

References

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A technique to relocate the robotic prostatectomy retrieval bag to the mid-line camera port

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BACKGROUND

During robotic-assisted laparoscopic prostatectomy, the prostatectomy specimen is collected in an Endocatch™ bag (Covidien, Mansfield, MA, USA), the silk suture of which exits the abdomen from a laterally placed 12-mm laparoscopic port. At the end of the procedure, the exit site of the silk suture needs to be moved to retrieve the specimen through the mid-line incision. We

Figure 1 Diagrammatic representation of the procedure.

describe a simple method to relocate the silk suture to a different exit wound in a controlled manner rather than blindly 'win-king' a finger in the abdomen to catch the silk suture and pull it through the mid-line incision.

TECHNIQUE

At the end of the procedure following undocking of the surgical da Vinci robot (Intuitive Surgical, Sunnyvale, CA, USA), the camera port is removed and an index finger inserted via this wound into the abdominal cavity to identify the end of the laterally placed 12-mm port. The port is completely occluded with the tip of the finger. The laparoscopic sucker is inserted via the 12-mm port and pushed against the tip of the finger while the finger retreats and guides the tip of the sucker out of the mid-line incision. The tip of laparoscopic needle holders are then inserted into the hollow end of the sucker tip and used to push the sucker back out of the 12-mm port. The end of the specimen bag silk suture is then grasped in the laparoscopic needle holders which are then pulled back through the mid-line incision, together with the silk suture (Fig. 1 above). This incision may then be enlarged to allow delivery of the specimen bag. The technique may be adapted for other laparoscopic procedures.

DISCUSSION

This technique has proved effective and efficient to relocate the silk suture to a different exit wound in a controlled manner.

A simple technique to control bleeding after Plastibell circumcision

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BACKGROUND

The Plastibell technique is commonly used to circumcise infants in the community for cultural and religious reasons.¹ Bleeding occurs in 3–10% of cases in reported series,^{2,3} although this may be reduced by careful technique.¹ Bleeding usually arises from the frenulum; however, as the frenular vessels are hidden inside the Plastibell, the site of the bleeding is unclear and external compression is ineffective. We describe a simple technique to control frenular bleeding after Plastibell circumcision.

TECHNIQUE

Resuscitation is imperative. Babies often present after several hours of continued bleeding and blood transfusion may be necessary. To assess the wound, the penis is stabilised by gentle trac-