

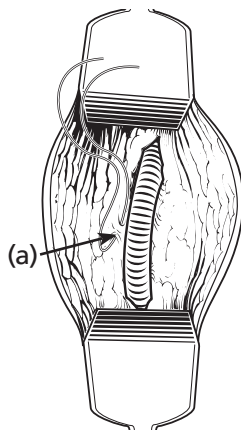
T400-Series Technical Note

Limited Exposure Sites: Probe Manipulation

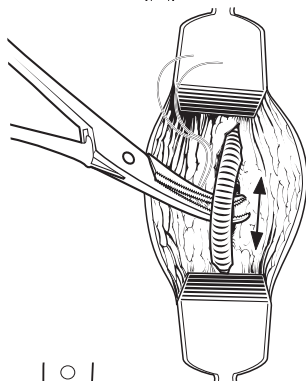
Deep vessels with limited exposures offer special problems for instrumentation. Dr. Xiu-Ying Ding, Department of Physiology, Laboratory of Pregnancy and Newborn Research, N.Y.S. College of Veterinary Medicine, Cornell University, Ithaca, N.Y. developed the following protocol to access such vessels for instrumentation. She uses a Flowprobe with back exit cable and L-bracket reflector and two small hemostats, one straight, one curved.

TECHNIQUE

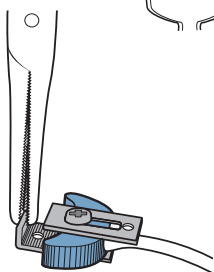
1. Dissect until the vessel is exposed. Position retractors at each end of the incision as shown. Although not optimal for serious retraction, this position is sufficient to separate the walls of the site and maintain visible contact with the vessel. Anchor suture thread as illustrated (a).



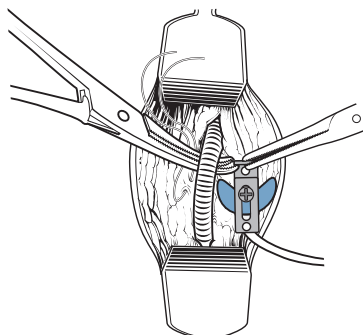
2. Carefully dissect free any adjacent fat which could interfere with acoustic coupling. Place curved hemostat under the vessel and create an opening large enough to pass through the Probe bracket. Open the hemostat slightly as shown.



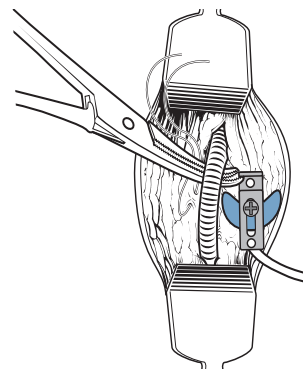
3. Loosen screw in the slide cover and open cover. Tighten screw with the slide open. Grasp and lock the L bracket with the straight hemostat, as shown. Grasp the clamp just on one-half of the reflecting surface so that a hemostat can also grasp this surface to secure the bracket in the incision.



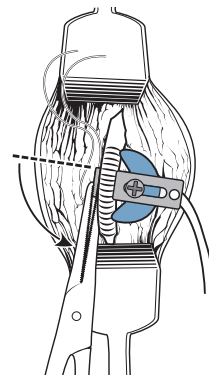
4. Lower the Probe to a position where it may be grasped by a curved hemostat passing under the vessel. Grasp the L bracket as shown and lock the curved hemostat; it is important to grasp the bracket along the lip of the "L" so that the vessel will slide smoothly over the bracket.



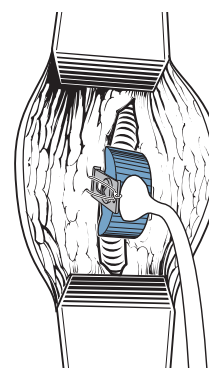
5. Unlock and release straight hemostat.



6. Rotate curved forceps clockwise as shown. If the vessel is a loose fit, it should fall easily into the bracket. If not, it may be necessary to release the hemostat, position the vessel and regrasp the bracket.



7. Loosen screw, close slide and secure screw. Pass the preplaced suture through the eyelet hole on the slide cover as shown. Remove curved hemostat and rotate the Probe around vessel as shown. Use a sliding half hitch knot to firmly secure Probe in place.



Limited Exposure Sites: Probe Manipulation cont.

NOTES

It is recommended to try this technique before the actual surgery. A rubber band in the bottom of a plastic pill bottle threaded through holes drilled at opposite sides is a quick and simple way to simulate a deep vessel in a site with limited exposure. To practice with a 2RB Probe, we use a pill bottle 3 cm in diameter and 6 cm in height. Opposing holes are bored through the bottle and the rubber band is threaded through them. The rubber band may be doubled to simulate a bundle of vessels.

ACKNOWLEDGEMENTS

Dr. Xiu-Ying Ding, Department of Physiology, Laboratory of Pregnancy and Newborn Research, NYS College of Veterinary Medicine, Cornell University, Ithaca, NY 14853.

EQUIPMENT

A curved hemostat with an 80° angle work best in procedures with very limited exposure. Since it may be undesirable and difficult to bend the desired angle in instruments made from the finest surgical steel, it is recommended that an inexpensive and malleable pair of hemostats be dedicated to Probe installation.

IDE INTERSTATE, 1500 New Horizons Blvd., Amityville, NY 11701 Phone: (800) 626-3784

- 3 1/2" Hartman mosquito straight forceps #328477
- 3 1/2" Hartman mosquito curved forceps #328480



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AMERICAS

Transonic Systems Inc.
34 Dutch Mill Rd
Ithaca, NY 14850
U.S.A.
Tel: +1 607-257-5300
Fax: +1 607-257-7256
support@transonic.com

EUROPE

Transonic Europe B.V.
Business Park Stein 205
6181 MB Elsloo
The Netherlands
Tel: +31 43-407-7200
Fax: +31 43-407-7201
europe@transonic.com

ASIA/PACIFIC

Transonic Asia Inc.
6F-3 No 5 Hangsiang Rd
Dayuan, Taoyuan County
33747 Taiwan, R.O.C.
Tel: +886 3399-5806
Fax: +886 3399-5805
support@transonicasia.com

JAPAN

Transonic Japan Inc.
KS Bldg 201, 735-4 Kita-Akitsu
Tokorozawa Saitama
359-0038 Japan
Tel: +81 04-2946-8541
Fax: +81 04-2946-8542
info@transonic.jp