Biopotential Leads: What to Do with Them when Not Being Used

Users of multiple channel devices may occasionally choose not to use the biopotential leads. There is a recommended procedure for how to handle the unused leads to prevent surgical or electrical complications.

An example of a DSI multi-channel device is a C50-PXT transmitter. This transmitter can measure blood pressure, ECG, and temperature in rats. In some instances, users will find no value in collecting the ECG information and would often prefer not to increase surgical time by placing leads that will not be used. The question then arises on what to do with the unused biopotential leads. The following are suggestions on what to do with the leads if they will not be used.

- If the transmitter will be re-used, the leads can be left the full length. The silastic protecting the metal coil should cover all edges of the coil so that no metal is exposed to the abdominal organs. With some leads, the metal coil will extend past the silastic. In this case, grasp the silastic and pull it back towards the transmitter so that the metal coil is exposed. The metal coil can then be cut shorter and, when the silastic is released, the metal coil will retract into the silastic. Once the silastic is completely surrounds the metal coil, tie a knot with suture around the silastic to prevent moisture entry. The leads can then be coiled together and sutured to the abdominal wall using non-absorbable suture.

- If the transmitter will not be re-used, the biopotential leads can be cut 2-3 cm from the body of the transmitter. It is not advisable to try to cut the leads flush with the transmitter body. This will produce sharp exposed wire that could potentially be very damaging to the abdominal organs. The silastic protecting the metal coil should cover all edges of the coil so that no metal is exposed to the abdominal organs. Grasp the silastic and pull it back towards the transmitter so that the metal coil is exposed. The metal coil can then be cut shorter and, when the silastic is released, the metal coil will retract into the silastic. Once the silastic is completely surrounds the metal coil, tie a knot with suture around the silastic to prevent moisture entry. The leads can be left free floating in the abdominal cavity.