

WHAT IS CLAIMED IS:

1. A catheter, which elongates in one direction and has a proximal end and a distal end, the catheter comprising:

 a first support member located near the distal end of the catheter and having a first hollow with both open ends;

 a second support member located near the proximal end of the catheter and having a second hollow with both open ends;

 an operating tube configured to elongate in one direction and having a third hollow, the operating tube being inserted into the first hollow and the second hollow and fixed to the first support member or the second support member to move the first support member or the second support member in a longitudinal direction;

 a plurality of connection members having one end connected to the first support member and the other end connected to the second support member;

 at least one electrode provided at the connection members to generate heat; and

 a shaft body located near the proximal end of the catheter in comparison to the second support member to elongate in one direction;

 wherein at least one of the first support member and the second support member has stepped surfaces to which the plurality of connection members are connected and fixed.

2. The catheter according to claim 1, wherein at least two of the plurality of connection members are connected and fixed to different stepped surfaces of the at least one of the first support member and the second support member.

3. The catheter according to claim 1, further comprising:

 a guide wire configured to elongate in one direction and inserted into the third hollow through both open ends of the operating tube to be movable in the longitudinal direction inside the third hollow.

4. The catheter according to claim 1,
wherein which the plurality of connection members are made of various materials as long as a bending portion may be formed in a portion of the connection member,
wherein the operating tube is fixed to the first support member and is movable in the longitudinal direction inside the second hollow.
5. The catheter according to claim 1, wherein the operating tube includes:
an inner tube configured to elongate in one direction and having the third hollow;
a mesh tube having a mesh form and configured to surround an outer surface of the inner tube; and
an outer tube configured to elongate in one direction and surround the outer surfaces of the inner tube and the mesh tube.
6. The catheter according to claim 1, wherein the operating tube includes a coil.
7. The catheter according to claim 6, wherein the coil is formed at an inner surface and/or outer surface of the operating tube.
8. The catheter according to claim 6, wherein the coil is embedded in the operating tube.
9. The catheter according to claim 1, wherein the shaft body includes:
an inner body configured to elongate in one direction and having the fourth hollow;
a mesh body having a mesh form and configured to surround an outer surface of the inner body; and
an outer body configured to elongate in one direction and surround the outer surfaces of the inner body and the mesh body.

10. The catheter according to claim 1, further comprising:
a power supply wire electrically connected to the electrode to give a power supply path to the electrode.
11. The catheter according to claim 10,
wherein the shaft body further has a fifth hollow formed therein in the longitudinal direction, separately from the fourth hollow, and
wherein the power supply wire is configured to be inserted into the fifth hollow and movable in the longitudinal direction, and is connected from the proximal end of the catheter to the electrode.
12. The catheter according to claim 11,
wherein the fifth hollow is provided at one outer side of the fourth hollow and is bent along an outer circumference of the fourth hollow.
13. The catheter according to claim 10,
wherein the shaft body is configured so that a central axis of the fourth hollow coincides with a central axis of the catheter, and
wherein the power supply wire is provided in plural so that the power supply wires are arranged to be spaced apart from each other by a predetermined angle on the basis of the central axis of the fourth hollow.
14. The catheter according to claim 13,
wherein the power supply wires are inserted between an inner surface and an outer surface of the shaft body and are fixedly coupled to the shaft body.
15. The catheter according to claim 13,
wherein the power supply wires are inserted between an inner surface and an outer surface of the operating tube and are fixedly coupled to the operating tube.

16. The catheter according to claim 10,
wherein the power supply wire is provided in contact with an outer surface of the operating tube, and
wherein the catheter further comprises a thermally shrinkable film having a thermally shrunken form to surround outer sides of the power supply wire and the operating tube.

17. The catheter according to claim 1, further comprising:
a deflection wire configured to elongate in one direction and having a distal end fixed to a distal end of the shaft body and a proximal end exposed outwards at a proximal end of the shaft body, the deflection wire being configured to be movable in the longitudinal direction inside the shaft body.

18. A denervation apparatus, comprising the catheter defined in claim 1.