CLAIMS

1. An apparatus for treating tissue, comprising:

a first treatment applicator head including a first plurality of needles; and

an applicator body having a first end connected to the first treatment applicator head;

wherein the applicator body includes a second end in communication with a radio frequency (RF) power source and a control system;

wherein the first treatment applicator head, when connected to the applicator body, is electrically connected with the RF power source in communication with the second end;

wherein the control system is operable to terminate tissue treatment after a treatment period occurs, the treatment period being initiated upon detection of a drop in impedance following an initial increase in impedance.

2. The apparatus of claim 1 wherein each needle of the first plurality of needles has a blunt tip.

3. The apparatus of claim 1 further comprising a second treatment applicator head including a second plurality of needles, the first end of the applicator body connected to the second treatment applicator head, wherein the second treatment applicator head, when connected to the applicator body, is electrically connected with the RF power source.

4. The apparatus of claim 1, wherein the first plurality of needles is arranged at vertices of a hexagon with a needle disposed at a center of the hexagon, defining an equal angular spacing of about 60 degrees relative to a centrally disposed needle.

5. The apparatus of claim 1, wherein the first treatment applicator head is removably attached to the applicator body, and wherein the applicator body includes a switch operable to release the first treatment applicator head from the applicator body.

6. The apparatus of claim 1, wherein the first plurality of needles defines an electrode array, wherein the electrode array comprises a conductive plate and the first plurality of needles extending from the conductive plate as a unitary conductive structure.

7. The apparatus of claim 1, wherein the control system includes measurement circuitry operable for measuring impedance values at a sampling rate that ranges from about 20 KHz to about 50 KHz.

8. The apparatus of claim 1, wherein the RF power source is operable to deliver an output voltage ranging from about 150 volts RMS to about 550 volts RMS to the first treatment applicator head.

9. The apparatus of claim 1, wherein a distance between adjacent needles of the first plurality of needles ranges from about 0.5 mm to about 3 mm.

10. The apparatus of claim 1, wherein the RF power source is operable to deliver RF energy at a frequency ranging from about 0.5 MHz to about 4 MHz.

11. The apparatus of claim 1, wherein the apparatus is operable in at least one of a monopolar mode and a bipolar mode.

12. The apparatus of claim 1, wherein the first treatment applicator head includes one or more suction ports in fluid communication with a conduit extending through the applicator body.

13. The apparatus of claim 3, wherein the second treatment applicator head has a different needle configuration than the first treatment applicator head.