CLAIMS

1. Medical system (10) intended for penetrating an anatomical structure (2, 3) of a patient, the anatomical structure (2, 3) having tissues presenting different capacities for conducting an electric current, said medical system (10) comprising:

- a body (11) suitable for penetrating the anatomical structure (2, 3), the body (11) having an outer surface (12),

- at least one first electrode (16) having a first contact surface (16a) arranged on the outer surface (12) of the body (11) so as to come into contact with the tissues of the anatomical structure (2, 3),

- at least one second electrode (17) having a second contact surface (17a) arranged on the outer surface (12) of the body (11) so as to come into contact with the tissues of the anatomical structure (2, 3) at a distance from the first contact surface (18a),

- an electric generator (22) suitable for applying an electric current (M) between the first (16a) and second (17a) contact surfaces,

- a processing device (23) suitable for determining an electrical characteristic representative of the capacity of the tissue of the anatomical structure (2, 3) between the first (16a) and second (17a) contact surfaces to conduct the electric current (M), and for emitting a warning signal corresponding to the determined electrical characteristic, the warning signal having at least one parameter that varies as a function of the determined electrical characteristic,

wherein the warning signal is intermittent and has a warning cadence in which user-perceptible warning sections (Sa) are successively emitted with a time interval (Si) between two successive warning sections (Sa),

the medical device (10) being characterized in that the processing device (23) is suitable for detecting a variation of the electrical characteristic and for varying the at least one variable parameter of the warning signal after a time delay (T) following the variation of the electrical characteristic has elapsed.

2. Medical system (10) according to claim 1, wherein the time delay (T) is equal to at least a portion of a warning period corresponding to the warning cadence, in particular equal to at least a portion of the time interval (Si.

3. Medical system (10) according to claim 1, wherein the processing device (23) determines the electrical characteristic at a measurement frequency, the electric

current (M) having a measurement period corresponding to the measurement frequency, and wherein the time delay (T) is equal to at least a portion of the measurement period.

4. Medical system (10) according to claim 3, wherein the time delay (T) is greater than two times the measurement period, and wherein the processing device (23) is adapted to calculate an average electrical characteristic from electrical characteristics determined at each of the measurement periods occurring during the time delay (T), and to vary the warning signal parameter as a function of the calculated average electrical characteristic.

5. Medical system (10) according to any one of claims 3 and 4, wherein the measurement period is between 50 ms and 250 ms.

6. Medical system (10) according to any one of claims 1 to 5, wherein said at least one variable parameter of the warning signal includes the warning cadence, the processing device (23) being adapted to modify the warning cadence after the time delay (T) has elapsed.

7. Medical system (10) according to any one of claims 1 to 6, wherein the warning cadence is between 1 Hz and 20 Hz.

8. Medical system (10) according to any one of claims 1 to 7, wherein said at least one variable parameter of the warning signal comprises a warning frequency at which each of the warning sections is emitted, the processing device (23) being adapted to modify the warning frequency after the time delay (T) has elapsed.

9. Medical system (10) according to claim 8, wherein the warning frequency is between 470 Hz and 2600 Hz.

10. Medical system according to any one of claims 1 to 9, wherein said at least one variable parameter of the warning signal includes a warning amplitude, the processing device (23) being adapted to modify the warning amplitude after the time delay (T) has elapsed.

11. Medical system (10) according to any one of claims 1 to 10, wherein the processing device (23) is adapted to determine an electrical conductivity as an electrical characteristic, and to:

- increase the warning signal parameter when the electrical conductivity increases,

- decrease the warning signal parameter when the electrical conductivity decreases.

12. Medical system (10) according to any one of claims 1 to 10, wherein the processing device (23) is adapted to determine an electrical resistivity as an electrical characteristic, and to:

- increase the warning signal parameter when the electrical resistivity decreases,

- decrease the parameter of the warning signal when the electrical resistivity increases.

13. Medical system (10) according to any one of claims 1 to 12, wherein the processing device (23) is adapted to keep constant said at least one variable parameter of the warning signal as long as the electrical characteristic is below a threshold, and to vary the parameter of the warning signal when the electrical characteristic reaches the threshold.

14. Medical system (10) according to claim 2, wherein the time delay is equal to at least a portion of the time interval (Si).

15. Medical system (10) according to claim 2, wherein the time delay is between 30% and 100% of the time interval (Si).

16. Medical system (10) according to claim 2, wherein the time delay is between 50% and 100% of the time interval (Si).

17. Medical system (10) according to claim 2, wherein the time delay is between 60% and 90%.

18. Medical system (10) according to claim 3, wherein the time delay is between 10% and 500% of the measurement period.

19. Medical system (10) according to any one of claims 3 and 4, wherein the measurement period is 200 ms.