

Dangers of SWD

1) Burns → Burns can be due to :-

(i) Concentration of electric field.

If there is material of hi-dielectric

constant or low impedance in the field such as metal or moisture this will concentrate the field and a burn can result.

ii) Excess Current

The patient's sensation is the only indication of the intensity of application and excess current may be applied if he does not understand the sensations that he should experience that can result burn.

iii) Hypersensitive skin and defective thermal sensation.

iv) Areas of impaired blood flow.
The blood circulating to the tissues normally dissipates the heat and prevents excessive rise of temperature.

v) Leads touching the skin.

If a lead approaches close to the patient's tissue heat is produced in the area and may be sufficient to cause a burn.

2.) Damage to equipments

The action of cardiac pacemaker

hearing aids and other electronic devices may be affected by disturbances setup by the short wave diathermy current. Patient with such devices should not be treated with SWD or allow to come in close proximity to the apparatus.

3) Synthetic Materials

This may have the following disadvantages :-

- They do not absorb moisture as readily as natural materials.
- They ignite more easily than natural materials and can produce large volume of toxic fumes.

4) Pregnancy

Avoid excessive exposure to SWD during pregnancy and direct application to the area of uterus.

5) Eyes

Because of poor dissipation of heat from eye, it should have minimum exposure to SWD.

6) Electric Shock

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Shock can occur if contact is made with the apparatus circuit with the current switched 'ON'.

7.) Distance from SWD machine

i) To restrict the exposure, the operators should remain 1m from continuous wave therapeutic diathermy equipments.

ii) 0.5 m from pulsed treatment with capacitive electrode.

iii) 0.2 m from pulsed inductive application.