

SNS COLLEGE OF PHYSIOTHERAPY

Affiliated To The TamilNadu Dr.MGR Medical University, Chennai
Coimbatore– 641035

COURSE NAME :Electrotherapy II

SUBJECT CODE : 6282

TOPIC: Microwave Diathermy (MWD)

Define

- Microwave Currents / Microwave Diathermy
- Microwave diathermy is a therapeutic modality that uses microwave- frequency electromagnetic waves.
- It produces localized heating in superficial and moderately deep tissues.
- Common wavelengths used: 12.25 cm and 33 cm.
- Heat is produced due to dipole rotation of water molecules.
- Used mainly for musculoskeletal conditions.



Ideate

- Concept:
 Deliver focused thermal energy to a specific area.

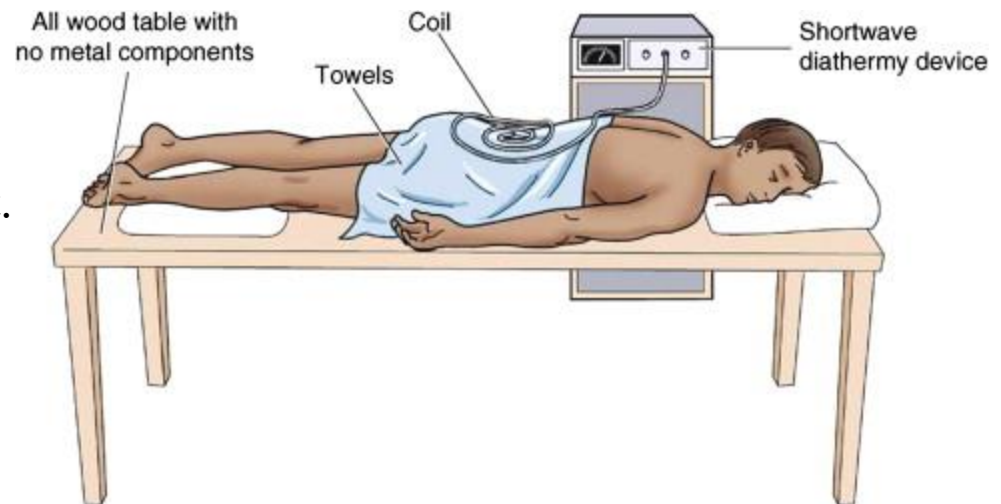
- Why microwave currents?
 More localized heating than short wave diathermy.

- Helps in:
 - Pain reduction
 - Muscle relaxation
 - Improved tissue flexibility
 - Suitable for small treatment areas.



Empathize

- Patients may suffer from:
 - Localized pain
 - Muscle spasm
- Restricted movement Need:
 - Comfortable and safe treatment.
- Microwave therapy provides:
 - Non-contact heating
 - Short treatment time
- Therapist empathy ensures:
 - Correct applicator positioning
 - Patient safety and confidence



Treatment Using Microwave Currents

- Patient positioned comfortably.
- Area to be treated exposed and free of moisture.
- Applicator placed at an appropriate distance from skin.
- Intensity adjusted according to patient's heat tolerance
- Continuous monitoring during treatment.



Treatment Parameters

- Frequency: 2450 MHz
- Wavelength: 12.25 cm or 33 cm
- Intensity: Mild to moderate warmth
- Duration: 15–20 minutes
- Sessions: Once daily or on alternate days

Advantages of Microwave Diathermy



- > **Relieves pain**
- > **Heals infections faster**
- > **Aids in relaxation**

© www.medindia.net

Dangers and Precautions

- Dangers
 - Burns due to improper distance
 - Overheating of tissues
 - Electrical hazards.
- Precautions
 - Avoid metal objects
 - Do not use over impaired sensation
 - Continuous patient feedback required

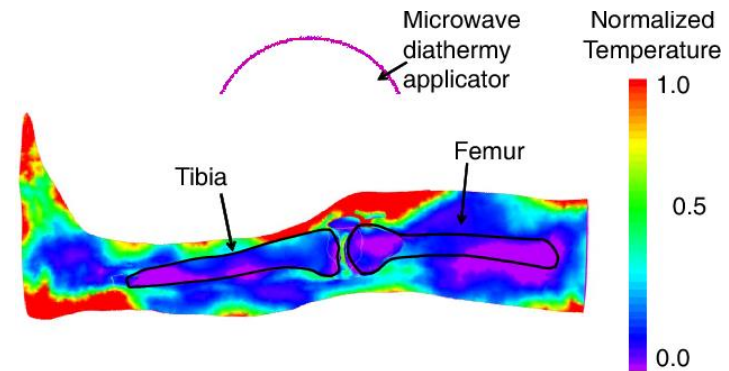


FIG. 7. Temperature distribution in a human leg during RFM.

Flow Chart



In class assessment

1. Define microwave diathermy.
2. Mention the frequency used in microwave therapy.
3. Explain the treatment procedure of microwave currents.
4. List any two treatment parameters of microwave diathermy.
5. State two advantages of microwave currents.

In class assessment

6. Mention any three dangers of microwave diathermy.
7. Why is empathy important during microwave treatment?
8. Draw and explain the flow chart of microwave currents.
9. State two precautions to be taken during microwave therapy.
10. Write a short note on microwave currents in physiotherapy.

Thank you

