

Contraindications of ultrasound :-

1. Rapidly dividing tissues:

US can increase the neoplastic growth and provoke metastasis. Treatment over tumours or over the tissues in precancerous states should be avoided.

2. Spread of infections:

The bacterial and viral infection could be spread by US therapy by facilitating microorganism movements across membranes and through the tissues. So acute infection which marked inflammatory reaction should not be treated.

For example → TB of bone etc.

3. Vascular Problems

Condition in which haemorrhage can be provoked should not be treated.

For example → Where the bleeding is still occurring or recently controlled such as an enlarging haemangioma or haematoma.

Treatment over nervous thrombosis should be avoided because it can extend thrombus or dis-rupt its attachment forming an embolus.

4. Radiotherapy:

Areas that have received radiotherapy in the last few months should not be treated because of the risk of encouraging precancerous changes.

5. Nervous System:

Congenital abnormalities like spina bifida when the nerve tissue is exposed, should not be treated with ultrasound.

6. Specialised Tissues:

The fluid filled organs offers exceptionally good ultrasound transmission and damage could occur for example, over the eyes, abdominal organs and brain etc.

7. Implants:

US treatment should be avoided over the metal implants areas.

Treatment over implanted cardiac pacemaker should not be given because the ultrasonic wave vibration may interfere with pacemaker stimulates frequency.

8. Anaesthetic Areas:

High doses ultrasound should not be given over

the anaesthetic areas.

Precautions while giving ultrasound:

1. Transducer head should be continuously moved in a circular fashion to prevent accumulation of waves at one site which may cause burns if applied for longer period.
2. There should be no gap between transducer head and skin. Use good amount of coupling medium.
3. When applying coupling medium in the middle of the treatment, turn off the machine.
4. Transducer head should be kept \perp to the skin.
5. Don't apply ultrasound on the shoulder of the patient with pacemaker implanted.
6. Avoid using ultrasound over the carotid bodies.
7. Avoid using ultrasound where the internal fixator are present if for orthopedic purpose.