Dangers

① Burn

The most obvious danger is of a heat burn which occur if the patient is unaware of heat by the reason of the defective sensation or reduced consciousness.

- Sometimes patient could be burned if he fell asleep during the treatment.

- Burn can occur if the infrared lamp sets fire to some combustible material, highly inflammable

material should not be in the region.
This danger could be avoided by →
① careful application.
② Adequate warning to the patient.
③ Checking the effects on the skin several times during the application.

② Electric Shock

It can occur as a result of touching some exposed part of the circuit but the chief danger arises if the live wire comes in contact with the apparatus casing.

③ Lowered B.P.

As infra-red treatment causes marked cutaneous vasodilation, it may lead to temporary lowering of BP, particularly people who have less vasomotor control.
This may lead to faintness specially on standing up immediately after treatment.

④ Areas of defective Arterial Blood flow.

Areas in which the arteries and arterioles cannot respond by adequate vasodilation to the

demands of additional heating should not be treated. Areas that are affected by arterial disease such as arteriosclerosis, arterial injury or after skin grafting should not be treated with IRR because heating of such areas result in tissue necrosis (Gangrene).

⑤ Eye Damage

Long term irradiation can cause corneal burn from far infra-red and retinal and lenticular damage from near infra-red.

⑥ Dehydration

Prolong and intensive treatment to large body areas will cause sweating sufficient to provoke dehydration, if the water is not replaced.

Application of IRR / Techiques

(i) Choice of Apparatus.

→ In many cases luminous and non-luminous generators are equally suitable but in some

cases, one proves more satisfactory than the other.

→ When there is acute inflammation or recent injury, the sedative effect of IRR can be obtained from non-luminous generators.

→ For chronic condition, the counter irritant effect of short IRR from luminous generators is very effective.

Preparation of Apparatus

→ If a non-luminous lamp is selected, it should be switched 'ON' upto 15 minutes before application to allow the time for it to reach its maximum emission.

Preparation of Patient

→ The pt. is placed in suitable well supported position with the area to be treated exposed, skin to be treated is examined and thermal sensation tested.

→ The nature & effect of the tstnt are explained to the patient

Setting Up

→ Any object or garment that might obstruct the infrared or impede the blood flow is removed.

→ The lamp is positioned so that the radiation strike the surface at or near 90° angle to achieve maximum penetration.

→ The lamp is placed at an appropriate distance of about 60 - 75 cm for large (750 - 1000 watts) lamp and about 45 - 50 cm for smaller ones.

Instructions & warning

The heat sensation is described to the patient.
The patient is warned to report immediately if heating becomes more than comfortable warmth.

Application

→ The intensity of heating is controlled by altering the position of lamp or on some by altering the resistance and hence, the current to the element.

→ Once the correct temp. is achieved the treatment is usually continued for about 20 minutes.

Termination of Treatment

→ At the end of the treatment, skin should feel mildly or moderately warmth and moderate erythema should be evident.

→ Skin temp. of 36°-38°C could be considered mild treatment and 38°-41°C for moderate warmth.