CONCLUSIONS
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Following conclusions were drawn, based on the present study, conducted at the experimental research laboratory of M.L.E. Medical College, Jhansi.

1. Application of angulatory force manually, is a satisfactory and simple method of producing a closed transverse or short oblique fracture (the types most commonly met in clinical practice), in the mid shaft of long bone, in an experimental animals, for the purpose of similar types of studies.

2. External fixator, helps to bring about a better reduction (by virtue of it’s adjustability) as compared to the pins and plaster method of treatment.

3. A very rigid fixation of fracture fragments can be achieved by applying an external fixator; while pins and plaster, though provides a good fixation but not as rigid as provided by external fixator.

4. With both the external fixator method and pins and plaster method of treatments, full weight bearing can be started within first postoperative week in experimental animals.
5. Time taken for fracture union is less with application of external fixator, than with application of pins and plaster.

6. Primary union of fracture can usually be achieved with application of external fixator, while this can be achieved occasionally with pins and plaster treatment.

7. Amount of callus is directly proportional to the movements at the fracture site, as well as the displacement of fracture fragments. Fractures treated by pins and plaster method, usually unite by a moderate amount of callus, while those treated by external fixator usually develop a very little callus.

8. Compression at fracture site not only increases the rigidity of fixation, also accelerates the process of fracture healing. Compression at fracture site can be very effectively provided by the external fixator device.

9. Compression strength of a healing fracture is more than its tensile strength.

10. The callus obtained by applying an external fixator, though much smaller in volume is mechanically much stronger than the callus of same age after pins and plaster treatment. Union achieved by an external fixator is also much stronger than that achieved by pins and plaster application.
11. Joint stiffness is not a complication with either external fixator method of treatment or pins and plaster method of treatment.

12. Incidence and amount of shortening of leg after pins and plaster treatment is more as compared to that after treatment by external fixator.

13. Pin tract infection is not much of a problem with either an external fixator or pins and plaster method of treatment and can easily be avoided by routine antibiotic administration.

On the whole, on the basis of this study, it can be validly concluded that as compared to pins and plaster method of treatment for fracture both bones leg, external fixator not only helps to achieve an accurate reduction, also maintains a rigid fixation of fracture fragments leading to an early and better quality of union, which is much stronger mechanically. It is accompanied by a minimum of complications and simultaneously provides a good compression effect at the fracture site. Hence its use in clinical practice for complicated and uncomplicated fracture both bones leg is strongly recommended.