MATERIALS AND METHODOLOGY:

SOURCE OF DATA:

A total of 40 patients with the age range of 21- 50 years were included in the study from Out-Patient Section of Department of Periodontics, Government Dental College and Hospital, Kadapa, India.

STUDY DESIGN:

A total of 40 patients having periodontitis were included in the study and weredivided into control and test sites randomly. A split mouth design was employed. Each patient was given brief description about the intended surgical procedure and were required to sign an informed consent paper.

The sites were randomly allocated into following groups:

Control sites: Consist of 40 sites treated by conventional open flap debridement.

Test sites: Consist of 40 sites treated by microsurgical open flap debridement.

STUDY PROTOCOL:

1. Institutional ethical committee clearance.
2. Medical history and informed consent.
3. Complete periodontal examination using mouth mirror and UNC 15 probe.
4. Intra-oral examination and evaluation of all clinical parameters of the study.
5. Radiographic evaluation of the selective sites.
6. Phase-I therapy and reevaluation of all the clinical parameters.

7. Selection of study sites and random allocation into two study groups.
8. Surgical procedure (microsurgical approach or conventional approach of open flap debridement) according to group selection.
9. Post- operative care.
10. Clinical and radiographic reevaluation at 3, 6 and 9 months.

CRITERIA FOR SELECTION OF SUBJECTS:

INCLUSION CRITERIA:

1. Patients with generalized periodontitis.

2. Patients with Probing pocket depth > 5 mm.

3. Patients with horizontal bone loss in contra lateral quadrants.

EXCLUSION CRITERIA:

1. Patients with any systemic diseases.

2. Patients under antibiotic therapy in the past 6 months.

3. Smokers and Alcoholics.

4. Pregnancy and Lactating women.

5. Patients with poor oral hygiene.

CLINICAL PARAMETERS:

1. Probing Pocket Depth.

2. Clinical Attachment Level.

3. Gingival Recession.

4. Plaque Index - Loe and Silness.

5. Gingival Bleeding Index – Ainamo and Bay.

6. Visual Analogue Scale of Pain for 1 Week Post Operatively.

7. Early Wound Healing Index – Wachtel.

PROCEDURE:

PRESURGICAL PROCEDURE:

1. Clinical Examination: A pre-operative examination is carried out with careful evaluation of soft and hard tissues.

2. Radiographic Investigations: OPG, IOPA of patient is taken.

3. Blood Investigations: The pre-surgical blood investigations (HB%, RBS, CT, BT, HIV, HbsAg) of all the patients selected for the study will be carried out.

All selected patients were given strict oral hygiene instructions and were subjected to Phase-I periodontal therapy and after 3-4 weeks of phase-I therapy patients were reevaluated for clinical status and patients with acceptable oral hygiene were selected.

SURGICAL PROCEDURE:

The patient were prepared by intra-oral antisepsis and extra-oral antisepsis with 0.2% chlorhexidine digluconate rinse and 5% povidine iodine solution respectively, draped

and anesthetized under aseptic conditions with 2% lignocaine HCL with adrenaline (1:80,000).

In the control site, intracrevicular incisions were made and full thickness mucoperiosteal flaps were elevated both buccally and lingually. Surgical debridement was carried out to remove subgingival plaque, calculus, diseased granulation tissue, and pocket epithelium. Then surgical flaps were closed with 3-0 silk suture and non-eugenol periodontal dressing (Coe-pak) was placed.

In the test site, microsurgery was carried out with x3.5 optical magnification dental loupes. After anesthetizing, intracrevicular incisions were placed with microsurgical blade and flaps were reflected on both buccal and lingual sides using microsurgical periosteal elevator and debridement was done with curettes to provide full access and visibility to root surfaces. And 5-0 silk sutures were placed and non-eugenol periodontal dressing (Coe-pak) was placed.

POST OPERATIVE CARE AND EVALUATION:

The patients were put on antibiotic regimen consisting of amoxicillin 500mg TID for 5 days as well as analgesics like aceclofenac-100mg BID for 3 days. The patients were asked to abstain from brushing on the surgical site for at least 1 week.

All the patients were given post-operative instructions and were instructed to rinse with 0.2% chlorhexidine digluconate for 7 days following surgery, and they were recalled 7/10 days postoperatively during which sutures were removed and the operated area was evaluated for healing, infection and any signs of ulceration and necrosis. After that the recall appointments were made after 3 months, 6 months and 9 months. During the

recall appointments all the clinical parameters were assessed, oral hygiene maintenance was reinforced and supragingival scaling was performed, if required.

ARMAMENTARIUM:

For clinical examination:

1. Mouth mirror.
2. William's periodontal probe.
3. UNC 15 probe.
4. Explorer.
5. Tweezer.
6. Cotton rool.
7. Kidney tray.
8. Examination gloves.
9. Face mask.

For phase I therapy:

1. Mouth mirror and explorer.
2. Scalers and curettes.
3. Kidney tray.
4. Cotton rolls.
5. Disposable gloves, face mask and head cap.
6. Disposable syringe and needle.
7. Local anesthetic agent.

For surgical procedure:

1. Mouth mirror and UNC 15 probe.
2. Tweezers
3. Surgical gloves, mouth mask and head cap.
4. Local anesthetic solution.
5. Bard parker blade no:15, 15c and straight and contra-angled handles.
6. Periosteal elevator.
7. Goldman fox scissors curved.
8. Curved Catrovejo scissor.
9. Gracey curettes and Universal curettes.
10. Syringe of 2.5ml and 5 ml.
11. Periosteal elevator.
12. Needle holder.
13. Suture materials 3-0 silk, 5-0 silk.
14. Dressing material (Coe pak).
15. Dental loupes- x3.5 optical magnification.
16. Microsurgical instruments: microsurgical blade handle, microsurgical periosteal elevator, microsurgical needle holder, microsurgical tissue forceps, microsurgical scissors curved.