

FLAP SURGERY - 1

Department of periodontics



LEARNING OBJECTIVES

- To learn about Definition, Classification, Incisions, types of Flap Surgeries, Suturing techniques and healing after flap surgery.



CONTENTS

- Definition
- Classification
- Incisions
- Types of Flap Surgeries
- Suturing Techniques
- Healing after flap surgery
- Conclusion



DEFINITION

- A periodontal flap is a section of gingiva and/or mucosa, which is surgically elevated from the underlying tissue to gain visibility of and access to the underlying bone and root structures.



CLASSIFICATION

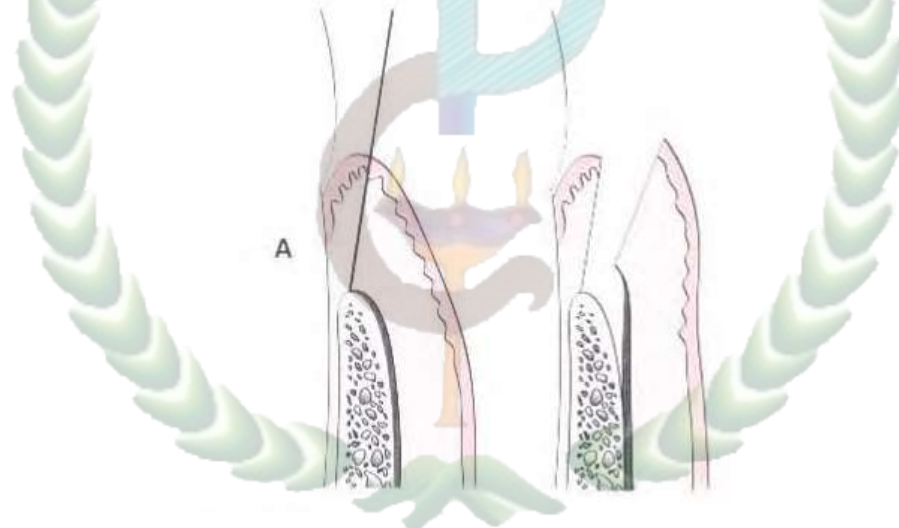
Based on

- Bone exposure after flap reflection
- Placement of flap after surgery
- Management of papilla



BASED ON EXPOSURE OF BONE

- **Full thickness flap or mucoperiosteal flap:**
 - All the soft tissue including the periosteum is reflected to expose underlying bone.
 - Indicated in cases of resective osseous surgery, regenerative osseous surgery and for pocket elimination or reduction therapy



- **Partial thickness flap or mucosal flap or split thickness flap:**

- This includes only the epithelium and the underlying connective tissue and the bone is covered by periosteum and a layer of connective tissue
- Indicated in apically displaced flaps and when exposure of bone is not required



BASED ON PLACEMENT AFTER SURGERY

- **Non displaced flaps:**
 - The flap is sutured back into its original position
 - E.g. Modified Widman flap
- **Displaced flap:**
 - The flap is displaced either coronally, laterally or apically.
 - E.g. Coronally advanced flap, laterally displaced flap and apically displaced flap



Based on management of papilla

- **Conventional flap:**
 - The interdental papilla is split beneath the contact point of approximating teeth to reflect the buccal and lingual flap
 - Indicated when the interdental space is too narrow and when you want to displace the flap.
 - E.g: Modified Widman Flap, apically displaced flap, undisplaced flap and flap for reconstructive procedures



- **Papilla preservation flap:**

- In this flap, the entire papilla is included in either the buccal or lingual flap by giving a crevicular incision and a horizontal incision at the base of the papilla
- Indicated in regenerative procedure where there are wide interdental spaces



Fig. 61-11 Flap design for a papilla preservation flap. **A**, Incisions for this type of flap are depicted by interrupted lines. The preserved papilla can be incorporated into the facial or the lingual-palatal flap. **B**, The reflected flap exposes the underlying bone. Several osseous defects are seen. **C**, The flap returned to its original position covering the entire interdental spaces.

INCISIONS

- Horizontal incision:
 1. internal bevel incision
 2. Crevicular incision
 3. Interdental incision
- Vertical incision

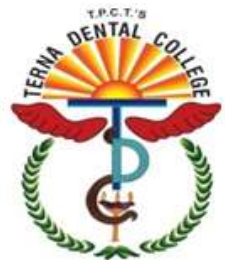


HORIZONTAL INCISION

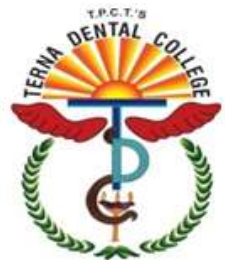
- Internal bevel incision or first incision or reverse bevel incision
- Extends from 0.5 – 1mm from the gingival margin to the crest of the bone



- It is termed as reverse bevel incision because the bevel is in reverse direction from that of gingivectomy incision
- It is termed as first incision because it is the first incision in reflection of periodontal flap
- Carried out by #11 or #15 surgical scapel



- It accomplishes the following:
 1. Removes the inner pocket lining
 2. Preserves the relatively uninvolved outer surface of gingiva
 3. Provides a sharp thin flap margin



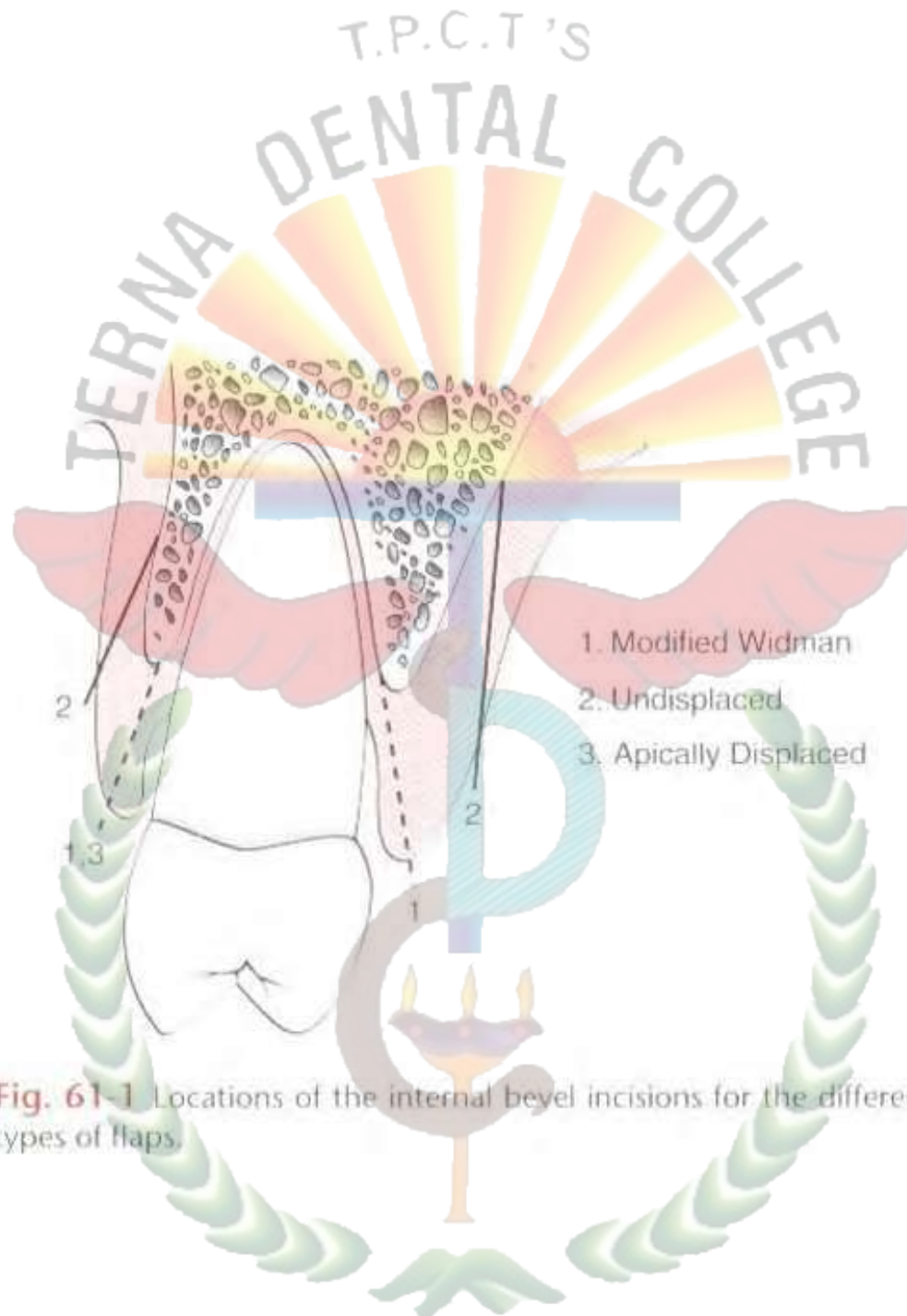


Fig. 61-1 Locations of the internal bevel incisions for the different types of flaps.



Crevicular incision

- This is also called as second incision
- It is made from the base of the pocket to the crest of the alveolar bone forming a V shaped wedge ending at the crest of bone
- Carried out with #12D surgical scapel



Interdental incision

- Also termed as third incision
- Used to remove the wedge shaped tissue created by the first two incisions
- Carried out by Orban's knife

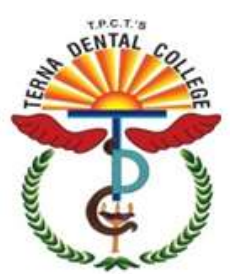
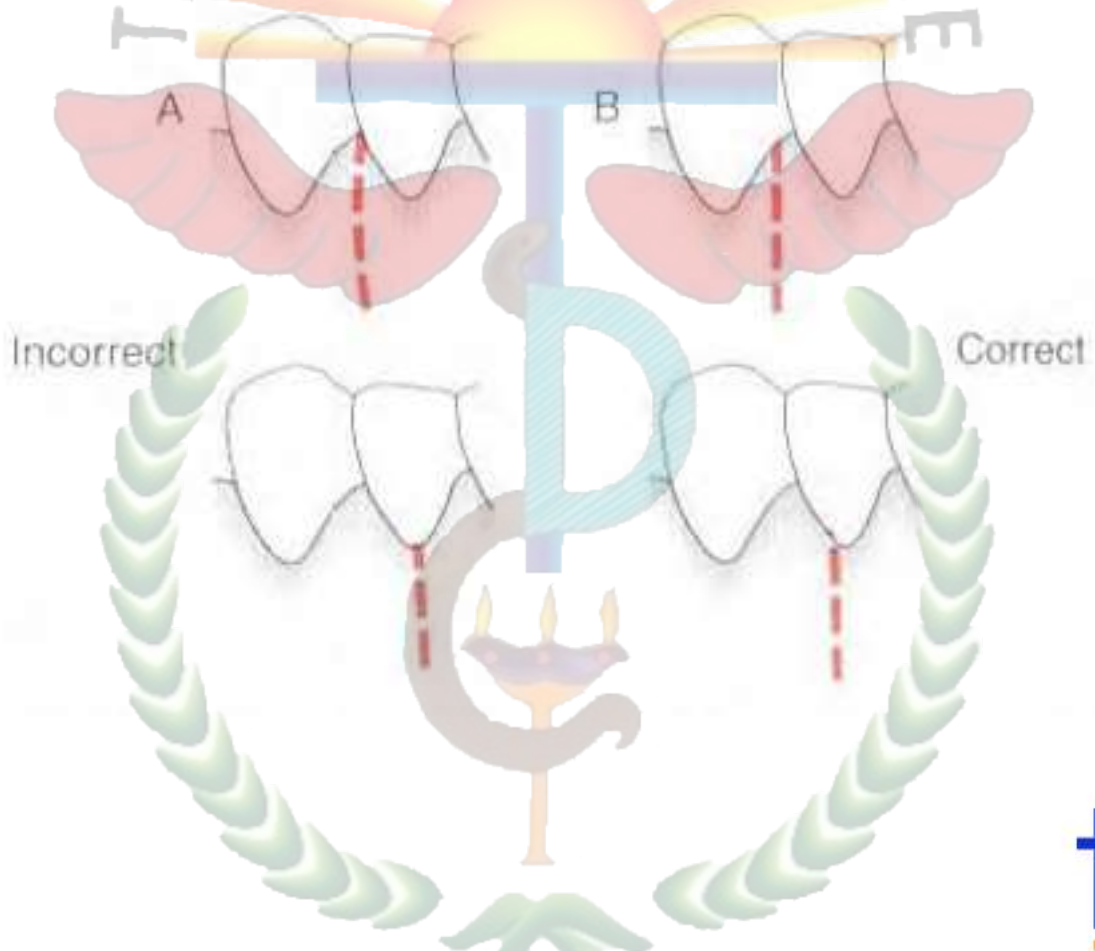


Vertical incision

- Vertical or oblique incision can be placed on one or both sides of the flap
- Must extend beyond mucogingival junction
- Always taken in displaced flaps. In undisplaced flaps, they are taken to gain more access.
- Should be made at line angles of tooth to either include or exclude the papilla
- Periodontal flap without vertical incision is called envelope flap



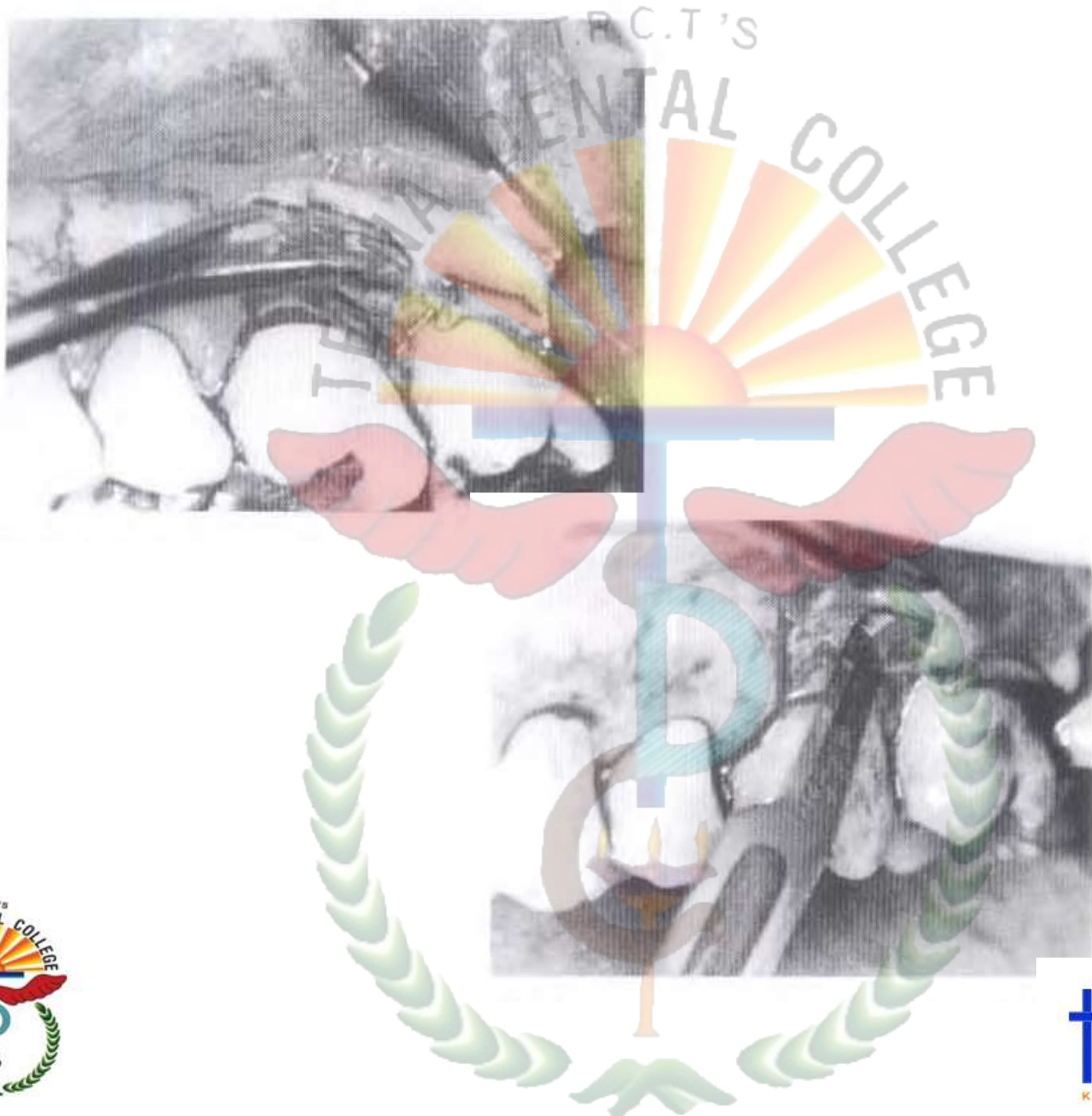
T.P.C.T.'S
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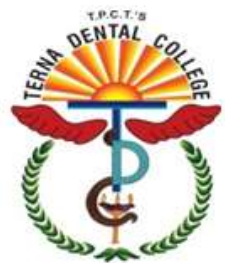
Elevation of flaps

- Full thickness flap:
 - Mucoperioetal elevator is used and is accomplished by blunt dissection
- Partial thickness flap:
 - Surgical scapel #11 or #15 is used and is accomplished by sharp dissection





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- Flaps used for pocket therapy accomplish the following:
 - Increase accessibility to root deposits
 - Eliminate or reduce pocket depth by resection of pocket wall
 - Expose area to accomplish regenerative therapy

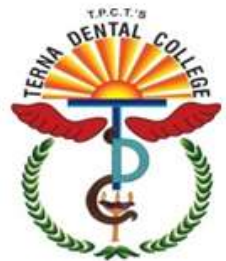
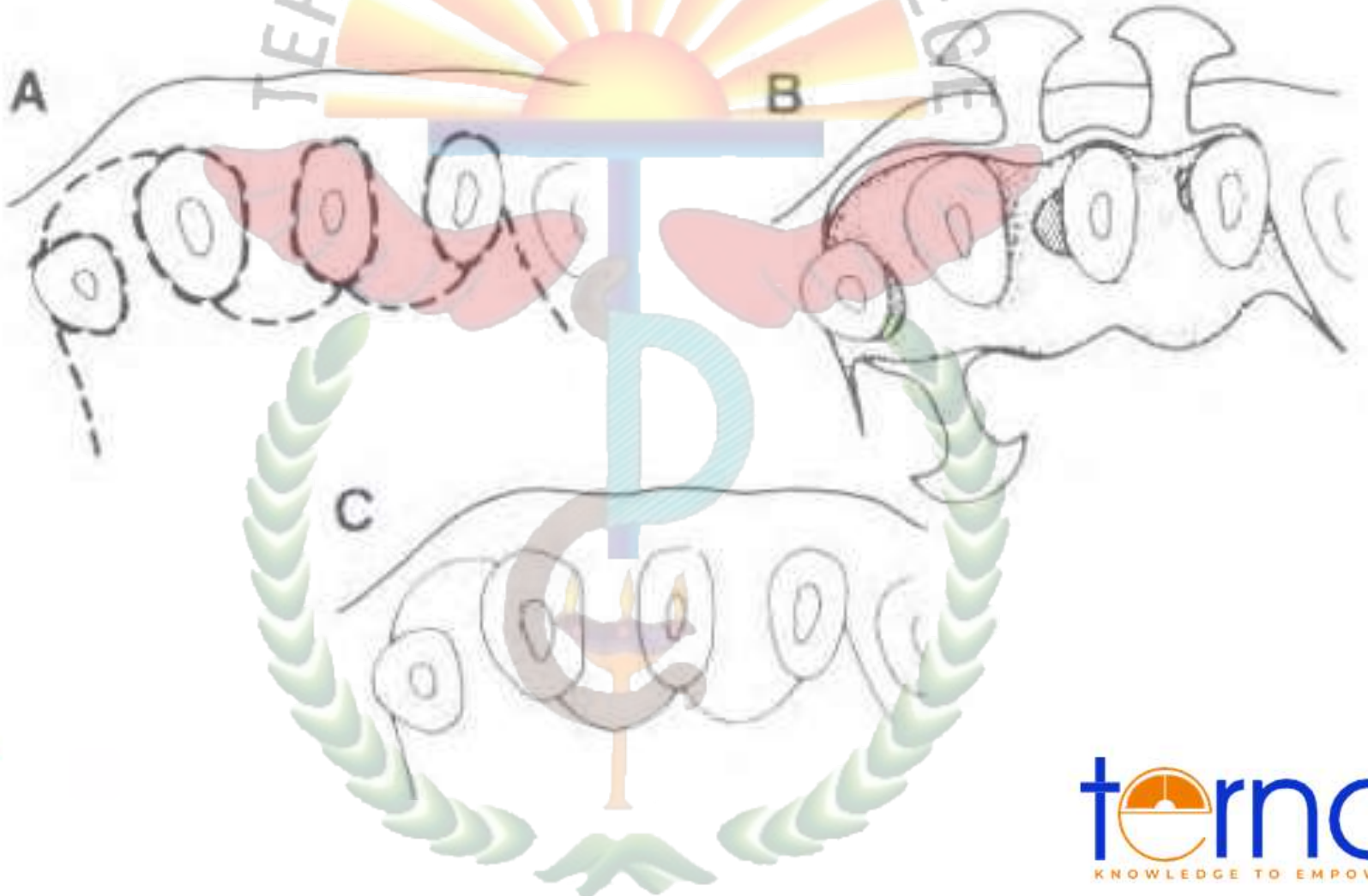


Reconstructive techniques

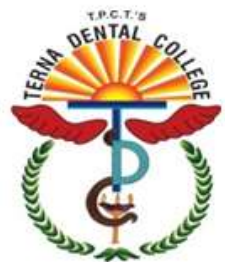
- Papilla preservation flap
- Conventional flap



Papilla preservation flap

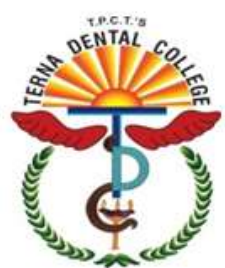


Conventional flap



Techniques for access and pocket reduction / elimination

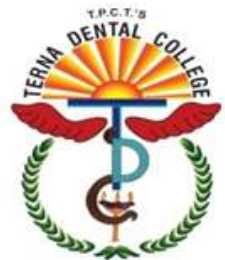
- Modified Widman flap:
 - Mainly to gain access to root deposits and eliminate pocket lining
 - Not intended to reduce or eliminate pocket, except for reduction that occurs due to shrinkage of tissue



- Undisplaced flap:
 - Gain access to root deposits
 - Eliminates the pocket



- Apically displaced flap:
 - Gain access to root deposits
 - Eliminates pocket by converting the pocket epithelium into attached gingiva
 - Increases the width of attached gingiva



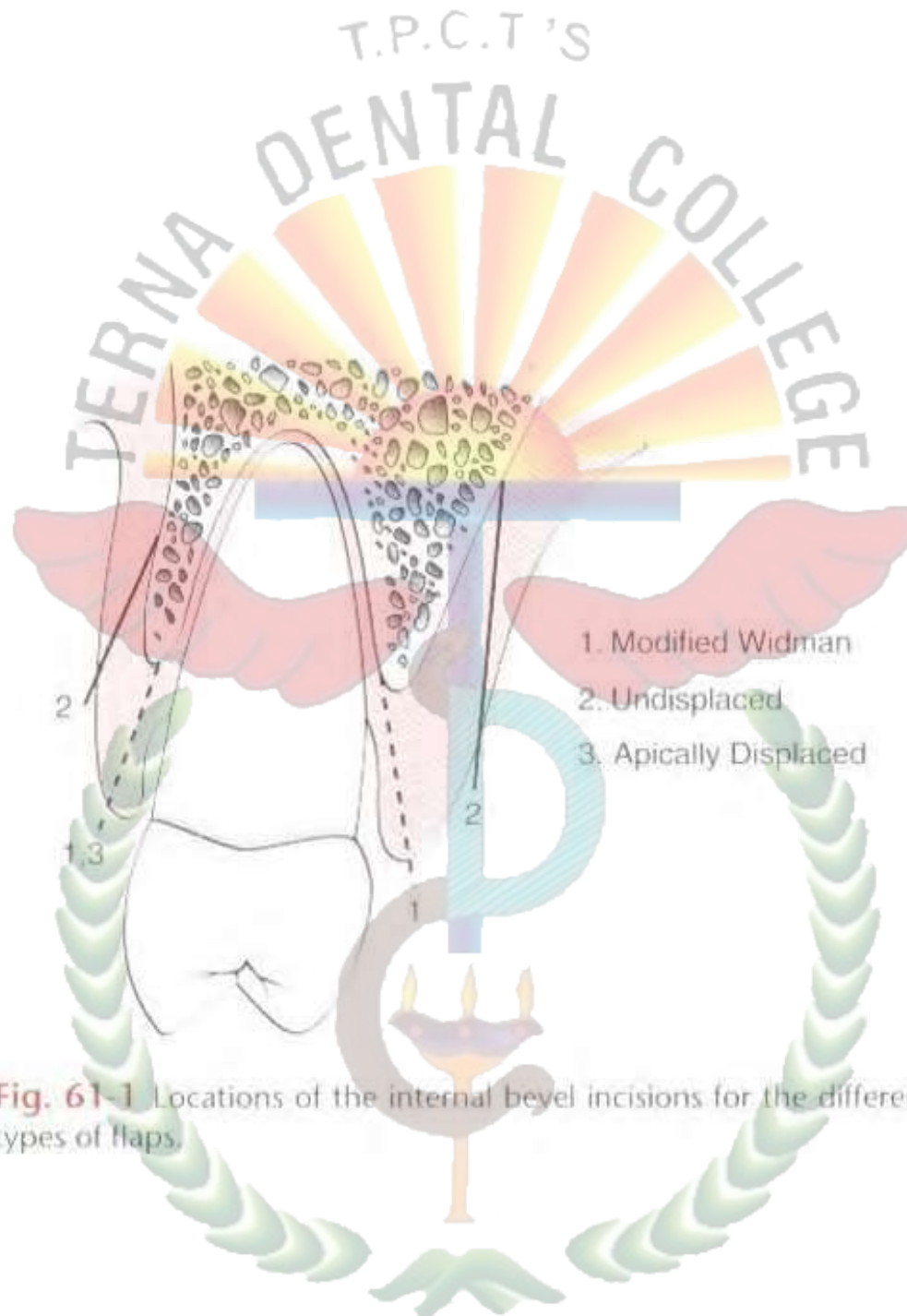


Fig. 61-1 Locations of the internal bevel incisions for the different types of flaps.



CONCLUSION

- Flap surgery is a definitive treatment modality in periodontal surgery and the mainstay for treatment of periodontal pockets and bony defects.



TAKE HOME MESSAGE

- There are specific indications, objectives, contraindications, advantages and disadvantages of periodontal flap surgery.
- Flap surgery when performed in indicated conditions gives good results and is still the mainstay of periodontal surgical treatment modalities.



PROBABLY ASK SAQ's

1. Define Flap surgery
2. Classify Flap Surgery
3. Write about indications and contraindications of flap surgery
4. Write about advantages and disadvantages of flap surgery
5. What are the objectives of flap surgery



PRABABLY ASK LAQ's

1. Define and classify periodontal flap surgery.
Write about Modified Widman flap in detail.
2. Write about Apically Displaced Flap
3. Write about Undisplaced Flap

