Crowns and bridges
sheet#6
Dr. Amin Khraisat

inlay: a restoration which has been constructed out of the mouth from gold, porcelain or other metal and then cemented into the prepared cavity of the tooth.

the preparation looks like class 2 cavity preparation but it's flared occlusally

if one or more cusps are restored we call it an ***onlay***

***inlay*: in the crown (small)**

***onlay*: on the crown (larg)**

indications:

- small carious lesion with **good dentinal support** (an onlay is needed if it was large)
- low caries rate (for the avoidance of recurrent caries)
- contraindicated in: low plaque control(high caries rate), small crowns, children (because the restoration would be close to the pulp)

Good dentinal support? when all caries are removed, it's known that sometimes there would be an undermined enamel, but if the tooth

was highly carious sometimes we end up having enamel only, with little or no dentine at all because all of it had been invaded by caries. that tooth has no dentinal support so it's an absolute contra-indication for an inlay.

advantages of inlays:

- material properties : gold>composite>amalgam
- longevity
- no discoloration
- corrosion resistance

disadvantages:

- less conservative than amalgam (divergent preparation)
- more display of metal compared to composite and amalgam
- gingival encroachment, which is undesirable for periodontal health.
- wedging effect especially in nonvital teeth (the shape of the restoration is a wedge shape, so during chewing it acts like a wedge cracking and then fracturing the tooth structure). so the proper choice for nonvital teeth is **full crown**.

cavity preparation: Doctor Amin didn't Focus on this. but here is a figure from the book to help you

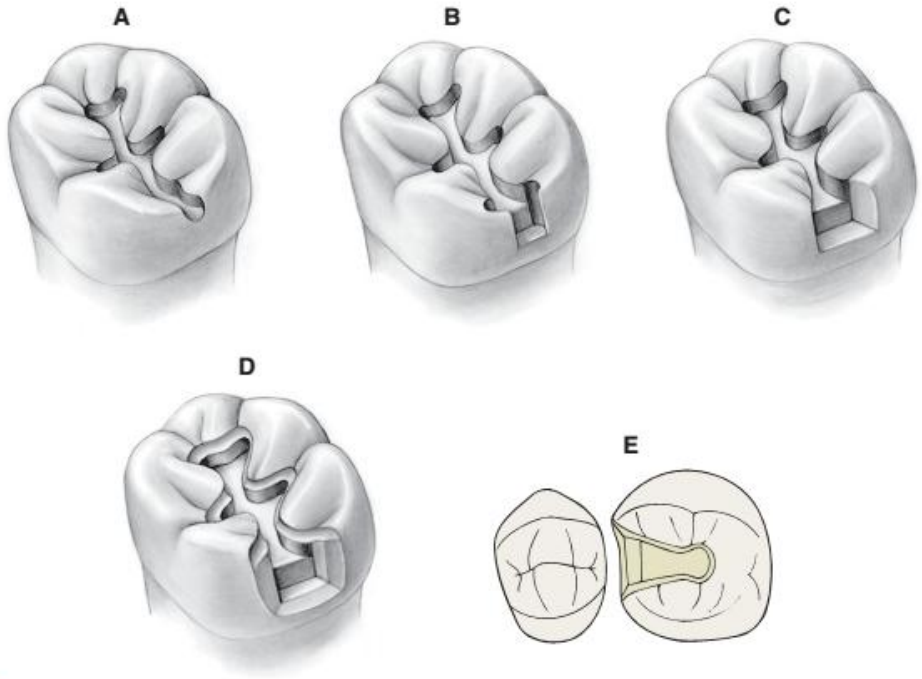

Fig. 10-48
The MO inlay preparation. **A,** An occlusal outline is prepared following the central groove and extended proximally. **B,** Gingival extension undermines the marginal ridge while removing caries. **C,** Unsupported enamel is removed, and the walls of the proximal box are defined. This is easily accomplished with hand instruments. **D,** An occlusal bevel or chamfer completes the preparation. **E,** Occlusal view of the completed preparation.

very important:

SUMMARY CHART
CLASS II INLAY PREPARATION

Indications	Contraindications	Advantages	Disadvantages
Small carious lesion in otherwise sound tooth	High caries index	Superior material properties	Less conservative than amalgam
Adequate dentinal support	Poor plaque control	Longevity	May display metal
Low caries rate	Small teeth	No discoloration from corrosion	Gingival extension beyond ideal
Patient's request for gold instead of amalgam or composite resin	Adolescents	Least complex cast restoration	"Wedge" retention summary chart
	MOD restorations	–	–
	Poor dentinal support necessitating a wide preparation	–	–

MOD, mesio-occlusal-distal.

SUMMARY CHART

MOD ONLAY PREPARATION

Indications	Contraindications	Advantages	Disadvantages
Worn or carious teeth with intact buccal and lingual cusps	High caries index	Support of cusps	Lacks retention
MOD amalgam requiring replacement	Poor plaque control	High strength	Less conservation than amalgam
	Short clinical crown or extruded teeth	Longevity	May display metal
Low caries rate	Lesions extending beyond transitional line angles	–	Gingival extension beyond ideal
Patient's request for gold instead of amalgam	–	–	–

cavity preparation for an onlay:

Occlusal outline
Proximal boxes
Caries removal
Occlusal reduction
Centric cusp ledge
Gingival and proximal bevels
finishing

the rest part of the lecture was a case presentation of a full mouth rehabilitation case that's done under Doctor Amin's supervision. he showed a lot of photographs of the case and he was just talking about the perfection of all the details when they contribute altogether in the final results.