Sheet no. : 16

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Veneer : a layer of a tooth colored material that is apply to a tooth to restore a localized or generalized defect or discoloration .

dentine is responsible of the color of the tooth because it’s the underlying substrate , while enamel is colorless it's made of prisms and it just reflect the underlying color of the tooth

What are these problems that you can solve using a veneer ?

1.deformation in tooth **structure ex : hypoplasia**

2.deformation in tooth **color**

3.deformation in tooth **morphology ex : microdontia , spaces , diastema**

4.deformation in tooth **alignment**

**composite veneers :**

if you build a veneer to close the space you should never put the incisal part same as cervical part , the cervical part will be normally more colored and less translucent and the incisal part especially the 1-2 mm must be translucent same as the translucency of the enamel or the incisal edge .

**blocking out** , sometimes you need before you put your final veneer shade you need to block out the underlying color of the tooth , this occurs when the tooth severely discolored like tetracycline , you need to put a first layer which we called it block out layer which is opaque and less translucent which prevent showing the underlying color of the.

**NOTE** : opaquer are use to block out light and the underlying color

Sometimes we put tent on our restoration to match an adjacent tooth that has a same craze line to look more natural , but first take the consent of the pt

**NOTE** : from A1 to A4 the opacity increase

**Factors affecting your shade matching :-**

1.you have to do your shade matching as quick as possible within 30 sec

2.at natural day light not under the yellow light of the clinic

3.the teeth must be clean

4.the operator might have color blindness

5.the operator is tired

6.ask your colleague to choose

7.choose at different appointment under different light condition to avoid metamerisim

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Sometimes you blend colors to mimic the color of natural tooth, the principle of the color shade selection by overlying different shade of composite not mixing them. Ex: A1+A3=A2 this is wrong.

Remember to use the correct thickness, the final polishing will affect the final shade of your restoration, a polish composite will not look like an unpolished composite, the best polished surface of composite is when using a matrix either cervical matrix or mylar strip, so the oxygen layer is not exist, its finally polymerized, which will give you the best clusters and the best finish.

Direct composite restoration it is cheaper than porcelain restoration but it take a lot of time and skill.

**\*composite restoration:**

-Comparison between the two materials;**Porcelain laminate veneers vs Composite**:

1-It’s cheap,

2-Takes a lot of time and a lot of skill

3-shades of the composite differ than the shades of the porcelain laminate veneers

4-Composite is going to stain with time.

5-in Composite we don’t remove a lot of tooth structure , more consrevative

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6- Porcelain is brittle so the preparations for it is difficult then composite

7- Porcelain has more longevity

8-Porclain has a glossy surface and good texture which is not decrease with time

9-Porcelain makes more attrition with opposing nutural teeth more than composite

**\*Tooth preparation:**

Simple with very small chamfer bur you’ll prepare the surface and always stay in enamel especially for porcelain laminate veneer ( in composite its fine to reach dentin but Porcelain NOT) 🡪 If the enamel which underneath porcelain laminate veneers was less , the survival of Porcelain laminate veneer will be less too.

-If a tooth has a large class III from one side and a lager class IV from the other side, I can’t do porcelain laminate veneers in such a case 🡪 it’s indicated for a crown.

**-Intra-enamel preparation**: it’s a minimal preparation (you just prepare within the enamel).

\*composite placement: you do acid etching-bonding-spread your restoration then start adapting your composite (adaptation : you start from one side and spread your composite and this method will prevent bubbles and stains between composite layers 🡪 for good adhesion + bubbles free restoration

\*if your composite was viscous and it’s exposed to the light for long time, you’ll not have a good adaptation.

\*what’s the purpose of doing preparations on the teeth even if it was just a 0.1 mm?

the external surface of the enamel has a problem with etching and bonding, because it’s hyper-mineralized+ hyper-fluoratic+ sclerose sometimes, and this lead to difficult bonding , and once you remove this hyper-mineralized layer of the enamel you’ll achieve higher bonding strength and better restoration🡪 that’s the purpose of preparations

-How much the survival rate of the composite?

It’s a multifactorial, depends on the oral hygiene of the patient + type of composite+ and how much you did finishing and polishing for it , it range from 7 to 9 years

-When we do a crown rather than veneer? 🡪 When there’s a lot loss of tooth structure

Esthetics problems of the teeth are: Again

1-color

2-structure

3-morpholpgy

4- Alignment

-So these 4 categories you could solve with veneers

-but if the discoloration was too black , I can’t cover it with veneers , so these 4 categories I can solve them as long as if they were minor (minor discoloration , minor alignment… etc)

-**Indications for veneers:**

**1-Developmental discrepancies:**

**2-Acquired discrepancies:**

**\*Treatment modality:**

1-Treatment could be according to esthetics or functional

When you have distruption in the structure of the teeth🡪the patient want the treatment to be depends on both; esthetics and functional.

2-Internal and external bleaching

3-Crown restoration

4-Indirect resin veneer or indirect composite veneer

5-porcalin laminate veneer

**Indirect composite veneers:**“

 laboratory Composite” by taking an impression and make a model then send it to the lab, 🡪perfect and complete polymerization, finally you will receive it completely ready and then you just cemented on the patient tooth by resin cement.

**Adv:**

1- Because its highly polymerized its more durable, more aesthetic

2-Simple procedure in the lab

3-Less costy than porcalin laminate veneer

4-butter than direct in stain resistance and wear resistance ( but not too much )

**Disadvantages:**

1-Direct composite has better bonding than indirect , indirect is highy polymerize and has little free monomer resins left to do bonding with cement . It's highly polymerized because it's under heat and pressure that used in lab make it less bonding to resin cement.

2-highly polished surface can be obtained initially then it become prone to wear and abrasion and become rough , plaque retentive , not aesthetic

3-Insisal chip fracture is very common

**Direct composite veneers:**

when you work in patient’s mouth and do preparations inside the oral cavity.

Chair side , time consuming need a clinicin who knows morphology well

the initial results be very good , but after 4-6 years surface staining will occur , because it's composite which has a low abrasion resistance .

 can be used only for minor surface defects and staining , but in severe cases we must use indirect method

**full coverage crowns**

 need extensive preparation and not a conservative choice of treatment , contraindicated for young patients because they have al large pulp chamber

**acrylic veneer**

in the past they used acryl ( PMMA ) as a veneer material but not anymore , why ?

1. limited shades
2. Bond with teeth is very weak and questionable
3. Little wear resistance
4. Porosities
5. Discoloration

So its bad from all aspects

**Porcelain laminate veneer**

Tooth colored restoration , thickness from 0.3 to 0.7 mm cemented on labial surface of anterior teeth by resin cement , designed to cover any existing surface defect , discoloration , alteration in size or morphology and alignment of restored teeth.

**Advantages** of PLV comes from high quality of material and conservative nature :

1. Conservative ( minimal tooth reduction from 0.3 to 0.7 ) , amount of reduction depend on area on tooth cervically less than incisally
2. Optimal aesthetic
3. Biocompatible
4. High Abrasion resistane
5. Can mimic translucency , color , contour of teeth and its stable over time
6. Brittle material but once its cemented it has optimal strength

**Disadvantages:**

1. Brittle material , so be careful in the try-in , that’s why it's preferable to do the occlusal adjustment after cementation
2. Technique sensitive
3. Cost
4. Detection of early caries underneath is very difficult

\*\* **Indications** :

1- anterior discoloration , porcelain veneer not only be in labial surface but we do overlap preparation ( preparation in labial and palatal surfaces ) , but be careful to not include incisal edge in preparation because it’s the end of anterior guidance and interface a high stresses so if covered by porcelain will chipped easily .

2- closure of median diastema and spaces between anterior teeth

3- correction of minor cases of mal alignment

4- modify size and contour of restored teeth ( peg shape lateral is one of most common indication to use porcelain laminated veneer .

5- treatment of malformed teeth

**Less common uses : has some case reports but week evidence so don’t use it**

1- repairing crown and bridge work

2- creating undercut for clasps of RPD

3- retaining anterior bridge

4- veneer as wings or resin modified bridges

5- management of patient with anorexia & bulimia nervosa , who have badly destructed palatal surface , in this case we can put a porcelain veneer .

6- someone who don't have guidance , we put veneer in palatal surfaces , to establish guidance ( as canine guidance )

**Contraindication** :

1- badly destructed tooth ( no enamel and no tooth structure )

2- teeth with extreme stresses due to bruxisim and other parafunctional habits ( not totally contraindicated )

3- severe degree of

5- patient is high susceptible to caries

**Best lf luck ;)**