Prosthodontics

Lec.8 Metal Try In and Occlusal Records for RPD

Fitting the RPD framework:

After finishing of the laboratory steps for Chrome cobalt (Cr/Co) framework, it is tried in the patient's mouth. The fit of the framework is tried first on the master cast and then inside the patient's mouth. The framework should sit passively on the master cast without wedging or impingement on the abutment teeth.

A. Laboratory inspection

The Cr/ Co framework must be checked on the master cast for the following:

1. The framework must confirm the original design.
2. Rests must be completely seated in the corresponding rest seat.
3. Lingual plate should be closely adapted to the surface of the cast.
4. The tissue surface of the framework should exhibit a fine matt texture. This surface should not be highly polished.
5. The external surface of the framework should be extremely smooth and should be polished to a high shine.
6. All surfaces should be checked for nodules, which may produce discomfort and prevent complete seating of the framework.
7. Internal finish lines should be sharply defined.
8. External finished lines should be sharply defined and with slight undercut to permit improved retention of acrylic resin denture base.

9. Finger pressure should be applied to both side of the framework simultaneously.

The framework should be rigid enough to resist flexure. If not fully seated, the internal surface of the framework should be painted with a disclosing medium such as disclosing wax, fit checking spray or pressure indicating paste. The framework should then be seated on the master cast using firm pressure. After removing the framework from the cast, it should be inspected under magnification for indication of internal high spots or frictional discrepancies as detailed by the disclosing medium. Adjustments are accomplished as needed until the metal casting is completely seated.

B. Clinical procedures

Once the framework is fitted to the master cast, the casting or framework is ready for clinical try-in which involves the following steps:

1. Don't use excessive force to seat the framework immediately. Gradual seating of the framework to check interference. The framework must go into place in a smooth manner without binding or catching the abutment teeth.
    - ✓ A framework that fits the master cast but not the mouth indicates that the master cast is inaccurate and a new impression should be made to initiate the remake of the framework.

2. Interference could be indicated by using pressure indicating paste or disclosing wax.

3. Remove internal interferences use a multifluted finishing bur in a high speed handpiece until the framework is fully seated into the rest preparations.

4. Once seated, it should be inspected for complete stability. The casting or framework should fit passively without rocking. All components should be checked with magnification for close adaptation to the teeth and tissues.

5. Use articulating paper to check if there are premature contacts (high spots) on occlusion which should be adjusted when needed.

Occlusal evaluation

The framework should then be evaluated for clearance during patient articulation. Initially, remove the framework from the patient's mouth and ask him or her to occlude. Analyze the bite closely, and observe whether opposing cusps fit into wear facets or if opposing canines fully articulate together. If open spaces are observed, the framework is elevated in occlusion and must be adjusted. When both maxillary and mandibular frameworks are being tried, they should be done individually before they are done together. Common areas of occlusal interferences are on rest seats, clasp shoulders, and minor connectors. Thin articulating marking paper, or disclosing wax can be used to discern high spots on the metal frame. Often it is difficult to mark and visualize highly polished areas, so a matte finish with micro - abrasion may be desired in these occluding areas. Disclosing wax can also be easily visualized when used to check occlusion

- Metal calipers should be used routinely after adjustments to ensure at least 1.5 mm thickness of metal remains along rest seat, clasps, and minor connectors. Metal less than 1.5 mm in thickness will likely fracture or deform under function and the framework must be remade or repeated.
- When there are maxillary and mandibular frameworks are to be tried-in, each one should be tried-in alone and any interference or high spot should be removed then the two are checked together inside patient's mouth.
- After try-in, the framework is forwarded to the laboratory for the fabrication of the special tray for altered cast technique (in case of class I or II Kennedy) or for the fabrication of the record base and occlusion rim.
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- ## Clinical procedures after fitting the framework

1-Corrected or altered cast.
2-Maxillomandibular record.
3-Face transfer.
4-Interoclusal record.
5-Wax try-in.