WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.074
Volume 8, Issue 5, 1249-1253. Review Article ISSN 2277– 7105

# PANKEY-MANN-SCHUYLER PHILOSOPHY- CRITICAL ANALYSIS

**Kondumahanti V. N. Avinash*[1], Ritika Sampathkumar[2], Anju Lekshmi Swathi[3], Venkat Raghu[4], Chiranjeevi Reddy G.[5], Jayakar Shetty[6] and Subash Munireddy[7]**

[1,3,4]Post-Graduate Student, Department of Prosthodontics, AECS Maaruti College of Dental Sciences and Research Center, Bangalore, Karnataka, India.

[2]Senior Lecturer, Department of Prosthodontics, AECS Maaruti College of Dental Sciences and Research Center, Bangalore.

[5,7]Professor, Department of Prosthodontics, AECS Maaruti College of Dental Sciences and Research Center, Bangalore, Karnataka, India.

[6]Professor and head of the Department, Department of Prosthodontics, AECS Maaruti College of Dental Sciences and Research Center, Bangalore, Karnataka, India.

Article Received on
14 Feb. 2019,

Revised on 07 March 2019,
Accepted on 28 March 2019

DOI: 10.20959/wjpr20195-14607

***Corresponding Author**
**Dr. Kondumahanti V. N. Avinash**
Post-Graduate Student, Department of Prosthodontics, AECS Maaruti College of Dental Sciences and Research Center, Bangalore, Karnataka, India.

## ABSTRACT

Occlusal Rehabilitation of dentition requires thorough knowledge of various factors that play a key role in the maintenance of occlusal harmony. A prosthodontist should carefully plan and execute the treatment plan accordingly. All the factors responsible for the patients current scenario should be kept in notice while fabricating the treatment plan. Various philosophies were advocated for successful rehabilitation. Among them PANKEY-MANN-SCHUYLER PHILOSOPHY is most commonly applied. This is the critical analysis on such a philosophy.

**KEYWORDS:** Full Mouth Rehabilitation; pankey-mann-schuyler philosophy; Hobo philosophy.

## INTODUCTION

Full mouth occlusal rehabilitation, which is one of the major challenges to a prosthodontist, is the correlation of all indicated and required dental treatment for a particular patient in order to restore his occlusion to normal function, to improve aesthetics, and to preserve tooth and their supporting structures.[1]

**Review**

Functional and parafunctional activities causes attrition that results in occlusal wear that forms occlusal interferences which alters the existing occlusal plane.[2]

Glossary of Prosthodontic terms defines Bruxism as ‘‘Parafunctional grinding of teeth or an oral habit consisting of involuntary rhythmic or spasmodic non-functional gnashing, grinding or clenching of teeth in other than chewing movements of the mandible which may lead to occlusal trauma’’.[3,4] Bruxism can be of two types.

1. Bruxism that occurs during wakefulness (Diurnal Bruxism).
2. Bruxism that occurs during sleep (Sleep Bruxism).

During the treatment procedure, various factors such as the vertical dimension of occlusion, centric relation, occlusal pattern, esthetics and phonetics need to be considered. This consideration should be done simultaneously for both anterior and posterior teeth. The prosthodontist should also manage the existing restorations, pulpal exposure, missing teeth, tooth sensitivity, supra erupted teeth and Tempero-Mandibular Joint pain.[5]

A comprehensive examination, diagnostic mounting, careful planning stands out to be the crucial feature for the success of the treatment plan. Sequencing of various steps, discussion with the patient of the different treatment alternatives and careful execution of the treatment is also important in these types of cases.

The PMS philosophy aims at achieving the following principles of occlusion advocated by Schuyler.[6]

a. Coordinated and static contacts of the maximum number of posterior teeth in centric relation position of the mandible.
b. Functionally harmonious anterior guidance during the lateral excursive movements.
c. Disclusion of the posterior teeth during protrusion determined by the anterior guidance.
d. Absence of interferences during lateral excursions on the non-working side.
e. Group function on the working side during the lateral excursions.

Proper sequence advocated by PANKEY-MANN-SCHUYLER philosophy:

Part1: Examination, diagnosis, treatment planning and prognosis.

Part-2: Harmonization of the anterior guidance for best possible esthetics, function and comfort.

Part-3: Selection of an acceptable occlusal plane and restoration of the lower posterior occlusion in harmony with the anterior guidance in a manner that will not interfere with condylar guidance.

Part-4: Restoration of the upper posterior occlusion in harmony with the anterior guidance and condylar guidance.[7, 8]

The management of teeth with severe attrition tooth wear is a subject of increasing interest in the prosthodontic literature.[9,10] There are many philosophies to follow for an occlusal rehabilitation; most important among them is Hobo's philosophy and Pankey Mann Schuyler philosophy. Pankey Mann Schylur philosophy is one of the most practical philosophies for occlusal rehabilitation.

**Advantages of Pankey Mann Schuyler philosophy**

1. It is possible to diagnose and plan treatment for the entire rehabilitation before a single tooth is prepared.
2. It is a well organised and logical procedure.
3. This philosophy never advocates for preparing or rebuilding more than eight teeth at a time.
4. It divides the rehabilitation into separate series of appointments.
5. There no danger of losing the patient's present vertical dimension.
6. Functionally generated path and centric relation are taken on the occlusal surface of the teeth to be rebuilt at the exact vertical dimension provide a better prognosis of the treatment.
7. All posterior occlusal contours are programmed by and are in harmony with anterior and condylar guidance.
8. Laboratory procedures are simple.[7,8]

Loss of occlusal vertical dimensions is a confounding issue in dentitions showing extensive wear. A number of factors will be influencing the rest position recording. So a single method will not provide the accurate vertical dimension. Two or more methods are always employed to decide the vertical dimension. The changes should always be tried with provisional restorations.[6,8] For example, physiologic method, esthetics and phonetics can be used to assess the VDO. The result should be satisfactory with the short-term use of provisional restorations.

The incisal guidance formed by the anterior teeth has the most profound influence upon the mandibular movement.[2] In oral rehabilitation, soon after deciding VDO it is important to check for the presence of favorable incisal guidance which controls the necessary steepness of all posterior teeth inclines.[11] The anterior guidance also separates the posterior teeth during excursions providing mutual protection for each other.[2] This harmony between the anterior and posterior teeth relies on the correct occlusal plane. The curve of Spee, which exists in the ideal natural dentition, allows harmony to exist between the anterior tooth and condylar guidance.[12] Pankey and Mann introduced an instrument for occlusal plane analysis; broad rick flag analyzer is more popular for occlusal plane analysis.[13,14] This assists in the reproduction of tooth morphology that is commensurate with the curve of Spee when posterior restorations are designed.[7]

Occlusal protection of the final restorations with soft splint served to protect dental/periodontal structures against adverse effects of hyper-loading and parafunctional wear.[15]

**REFERENCES**

1. Dylina TJ Phase II therapy for a chronic pain patient: a clinical report. Cranio, 1999; 17: 126–131.
2. Dawson PE Functional occlusion: from TMJ to smile design. Mosby, Canada, 2007.
3. The Academy of Prosthodontics The glossary of prosthodontic terms. J Prosthet Dent, 2005; 94: 10–92.
4. Ferini-Strambi L, Pozzi P, Manconni M, Zuconni M, Oldani A Bruxism and nocturnal groaning. Arch Ital Biol, 2011; 149: 1–11.
5. Manoj Shetty, Niranjan Joshi et al. Complete Rehabilitation of a patient with occlusal wear. A case report. Journal of Indian Prosthodontic Society, 2012; 12: 191-197.
6. Turner KA, Missirlian DM. The P.M. philosophy of occlusal rehabilitation. Dent Clin North Am, 1963; 7: 621-38.
7. Mann AW., Pankey LD. Part I. Use Of P-M Instrument In Treatment PlanningAnd In Restoring The Lower Posterior Teeth. J Prosthet Dent, 1960; 10: 135-150.
8. Mann AW., Pankey LD. Oral Rehabilitation Part II: Reconstruction Of Upper Teeth Using A Functionally Generated Pathway Technique. J Prosthet Dent, 1960; 10: 151-62.
9. Song M-Y, Park J-M, Park E-J Full mouth rehabilitation of the patient with severely worn dentition: a case report. J Adv Prosthodont, 2010; 2: 106–110.

10. Pokorny PH, Wiens JP, Litvak H. Occlusion for fixed prosthodontics: a historical perspective of the gnathological influence. J Prosthet Dent, 2008; 99: 299–313.
11. Mccullock AJ Making occlusion work: practical considerations. Dent Update, 2003; 30: 211–219.
12. Lynch CD, McConnell RJ Prosthodontic management of the curve of Spee: use of the Broadrick flag. J Prosthet Dent, 2002; 87: 593–597.
13. Craddock HL, Lynch CD, Franklin P, Youngson CC, Manogue M A study of the proximity of the Broadrick ideal occlusal curve to the existing occlusal curve in dentate patients. J Oral Rehabil, 2005; 32: 895–900.
14. Small BW Occlusal plane analysis using the Broadrick flag. Gen Dent, 2005; 53: 250–252.
15. Dao TTT, Lavingne GJ Oral splints: the crutches for temporomandibular disorders and bruxism. Crit Rev Oral Biol Med., 1998; 9: 345–361.