

# An excellence towards a perfect ness, in the complete denture prosthesis - a clinical approach;

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## Introduction

As far as, a long life of a mega structure is concerned, a well-built, solid & durable base is essential.. Our best teacher it is always our best experience likewise, Posterior palatal seal in maxilla & anterior region seal in the mandible & balanced occlusion side by side are obligatory for the success, failure & perfect ness of complete denture and underlying tissue . Present review article deals only posterior palatal seal.

Definition; it is valve seal area of soft tissue , at or along the junction of hard & soft palates on which pressure within physiological limits can be applied by denture to aid in the retention & stability of prosthesis (Fig.-1).

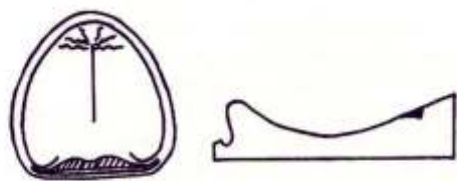


Fig-7; Butter fly shaped PPS with bead on distal margin

## Aims & objectives

it is a review type article on PPS & deals to its anatomical landmarks, different types of palate & different shapes of PPS seals. Current presentation also enumerates the importance, function & process of its clinical registration.

Anatomical land marks; it extends medially from one tuberosity to another known as post dam area. It also extends laterally across the hamular notch & it travels 3 to 4 mm anteriolaterally to end in muco-gingival junction of posterior part of maxillary ridge, k/A Pterygo-maxillary seal (Fig-2). At bony level, posterior palatal seal area encompass maxillary tuberosity & hamular process of medial pterygoid plate. Land marks also contain vibrating lines.

Vibrating lines à PPS area clinically determined by an imaginary vibrating line across posterior part of palate marking division between immovable & movable tissue of the hard & soft palate.

Two types of vibrating lines exist;

- Anterior vibrating line
- Posterior vibrating line

Anterior vibrating line : it is an imaginary line, lying between immovable tissue over hard palate & movable tissue of the soft palate . It is generally cupid bow-shaped (Fig.-3).

Posterior vibrating line : it is also an imaginary line, located at junction of soft tissue that show limited movement & the soft palate that show marked movement. It is usually straight & generally having slight curvature anteriorly (Fig.-4).

Relationship of vibrating line with fovea palatine

Fovea palatine are two indentations à oval to round in shape & unique to human race located approximately 1.3 mm anterior to anterior vibrating line Importance of PPS;

It enhances stability & retention of prosthesis that enables the denture, to resist against, the forces of gravity, the adhesiveness of food, & the opening & closing of jaw movements. Retention is the resistance of prosthesis movement against the vertical axis.

Whereas stability is the denture balance towards the horizontal axis. Retention is regulated & influenced by;

1. Peripheral border seal : It is obtained by performing border molding procedure or muscle trimming, in muco-labial and muco-buccal fold spaces so that soft tissue properly over drape to them.
2. Posterior palatal seal : Posterior border or valve seal area is completed in posterior palatal seal by border molding with the green stick compound.

Function of P.P.S; the role of PPS is related in fabrication of the special (custom) impression tray, slight displacement of palatal soft tissue, positive contact posteriorly & positioning of impression tray. The task are also enhances the quality of mastication, deglutition & phonetics. It also takes the job of food prevention under denture, eliminate gagging & sunken distal border, to counter act denture warpage & also creates a vacuum.



**Fig-5; U' shaped hard palate**

TYPES OF PALATES ; two type -

- Hard palate – Anterior part
- Soft palate - Posterior part

Classification of Hard Palates;

Class A - broad, shallow, and flat palate, & least beneficial.

Class B - v-shaped, medium vaulted palate. It gives intermediate quality of P.P.S.

Class C- high vaulted & U-shape, it gives best retention and stability so most helpful P.P.S (Fig.-5).

Classification of Soft Palates;

Class I - it is horizontal & makes 10° angle to the hard palate & most advantageous (Fig.-6).

Class II - soft palate makes a 45° angle to the hard palate.

Class III -soft palate makes a 70° angle to the hard palate.



**Fig-3; Anterior vibrating line**

Categorization Of Palatal Seal ;

- According to shape - generally five shape recommended.
- 1. Single bead shape of posterior palatal seal
- 2. Double bead shape of P.P.S.
- 3. Butter-fly shaped of P.P.S.à best retentive effect (Fig. -

7).

4.Butter-fly shaped P.P.S, with bead on distal angle of dentures.

5.Butter- fly shaped of P.P.S, with widened on distal angle of dentures.

·ACCORDING TO AREA COVERED; It is according to palatal throat form between the hard and soft palatal area as follows,

Class à large and normal in form, an immovable band of tissue 5 to 12 mm distal to across the line of maxillary tuberosity.

Class à immovable band of resilient tissue - 3 to 5 mm.

Class à with small maxilla, curtain of soft tissue abruptly down 3 to 5 mm.

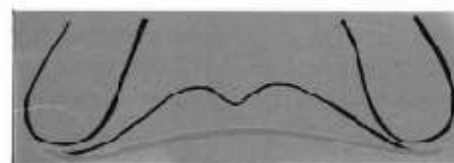
Choice Of P.P.S. Width; antero-posteriorly - Enough wide à3 to 4 mm wide & while at Hamular notch à2 to 4 mm wide. The dept of P.P.S. is 1 to 1.5 mm in height and 1.5 mm at its base in case of a bead type.

Recording of P.P.S. clinically; it is performed by conventional method, fluid wax method & arbitrary scribing of master cast.

Conventional method; it is accomplished by marking with the indelible pencil, at pterygo-maxillary seal by using “t burnisher. Recording of anterior vibrating line is performed by valsava manner & whereas posterior vibrating line by asking “ah’ in vigorous manner. This is technique-sensitive method.

FLUID WAX METHOD; It is done by using Correcta wax no: 4, or adaptor wax and physiologic paste. It is physiologic & chair time consuming technique.

ARBITRARY SCRIBING OF MASTER CAST; this technique is inaccurate & non physiological.



**Fig-4; Posterior vibrating line**

**Summary & Conclusion;**

Perfection is achieved, not when there is nothing more to add but when there is nothing left to take away. Incorporation of posterior palatal seal is a paramount & extremely important. It provides state of art technology & enhances stability & retention of a maxillary RDP. A

butter-fly shaped PPS. posses maximum retentive effect; moreover its width varies from 2 to 5 m.m.

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