



principle identifying feature:

1. It is larger than mand. First premolar .
2. The cusps are more equal in size with less pointed tips . usually this tooth has **three cusps**, one buccal and two lingual or may be only **two cusp** one buccal and one lingual.
3. The occlusal outline is almost in a **square** appearance with **no** mesio- lingual developmental groove.

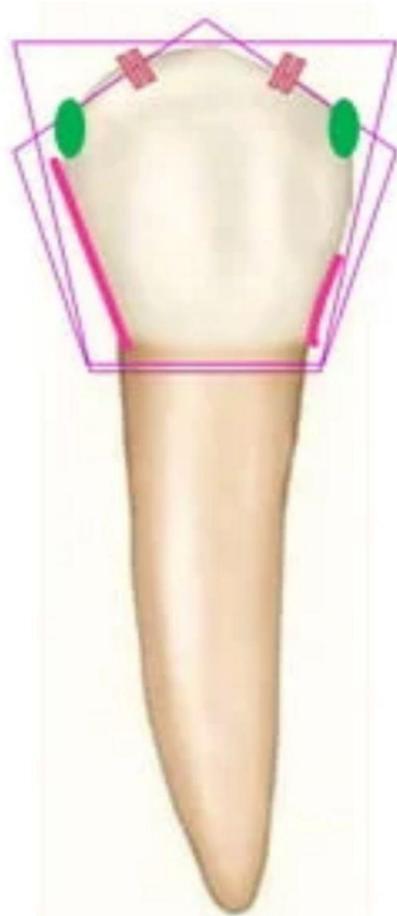


We have two types of mand. 2nd premolar

a/ three cusp type

b/ two cusp type

Buccal aspect



From this aspect it is similar to lower 4 except in the following :

1. It has shorter and less pointed buccal cusp than in case of mand. 1st premolar .
2. Both contact area are broad and high appear to be higher because of shorter buccal cusp (at the junction between middle and occlusal third)
3. Root is broader mesio-distally than that of mand. 1st premolar with a more blunt apex.

Lingual aspect for lower fifth tooth :

(From this aspect the tooth differ from lower 4 in the following)

1. The lingual cusps are more developed and longer than 4th tooth
2. Less occlusal surface when seen because the lingual cusps are slightly shorter than buccal cusp. We see part of lingual incline of buccal cusp from this aspect



3. A . In the *3cusps type* : there are two lingual cusps ,the mesio-lingual is larger than the disto-lingual cusp and are divided by the **lingual developmental groove** .

B. In the two cusps type : there is single large cusp of the same height as in the three cusps type . **There is no lingual groove** but the developmental depression also found

The height of contour of the lingual surface is found in the occlusal third



2 cusps type



3cusps type

Mesial aspect

The tooth differs from lower 4 in the following :



1. The crown and the root are wider bucco-lingually
2. Buccal cusp is shorter and not so much centered over the root trunk.
3. The mesial marginal ridge located at the junction between occlusal and middle third
4. There is no mesio-lingual developmental groove on the crown.
5. The root is longer with blunter apex.



Distal aspect



1. All the three cusps may be seen .
2. The distal marginal ridge is lower than that mesial marginal ridge so revealing more of the occlusal surface .

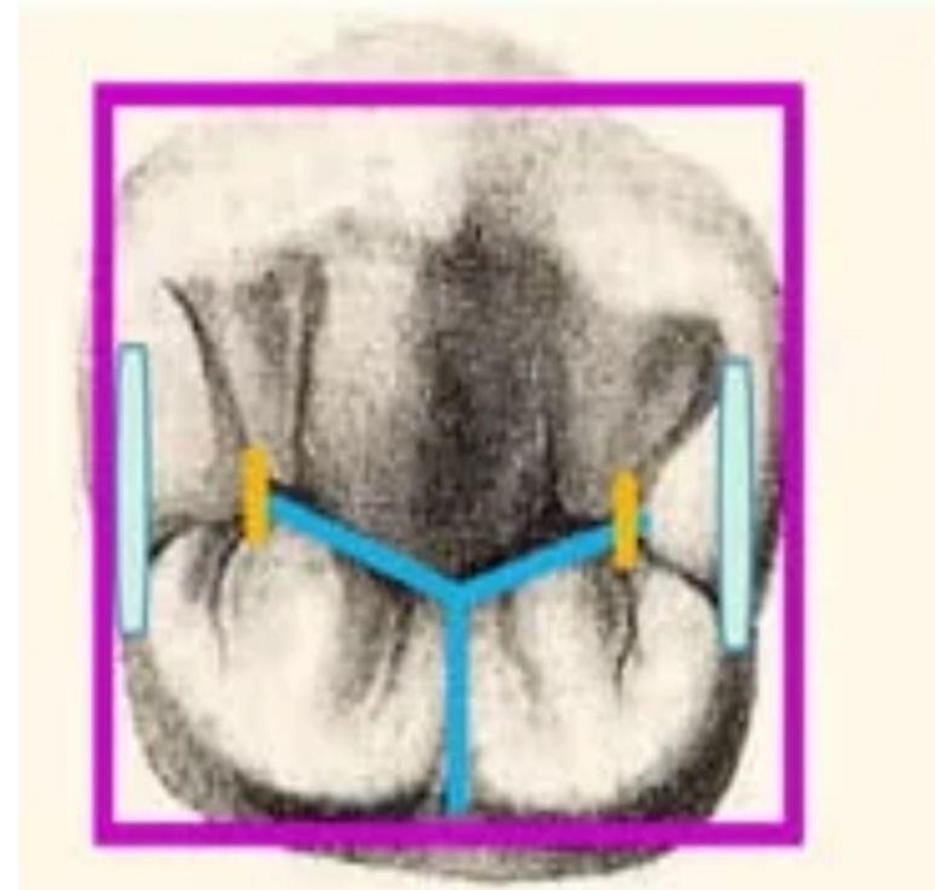


Occlusal aspect



A. Three cusps type :

1. The occlusal surface is square in shape .
2. Three cusps : The buccal cusp is the largest . followed by the mesio-lingual cusp and then the disto-lingual cusp.
3. Each cusp has a well formed triangular ridge separated by deep developmental grooves which form a **Y** shape on the occlusal surface .
4. There are Three developmental grooves :





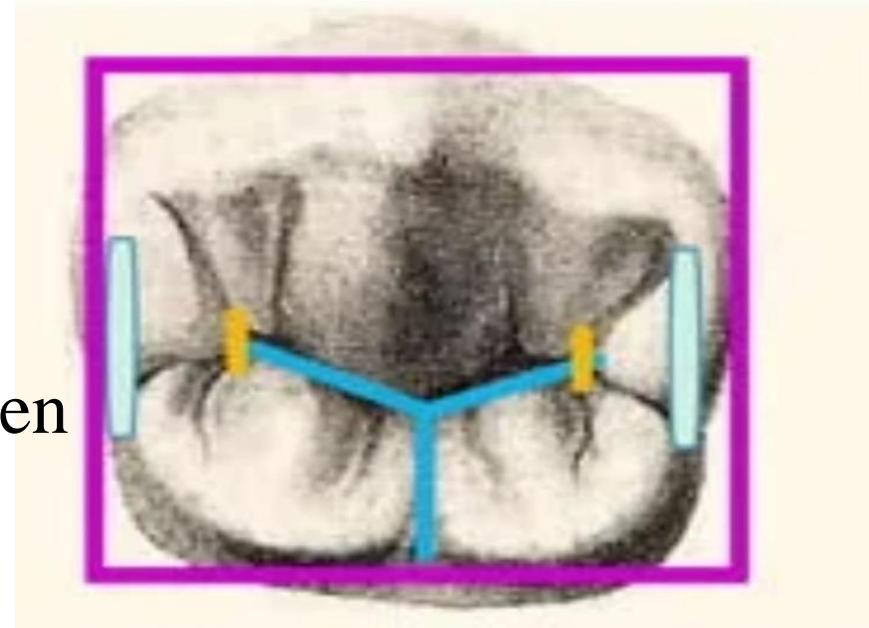
4. There are three developmental grooves :

A/ Mesial developmental grooves ending in the mesial triangular fossa.

B/ Distal developmental grooves ending in the distal triangular fossa

C/ Lingual developmental groove separating the two lingual cusps.

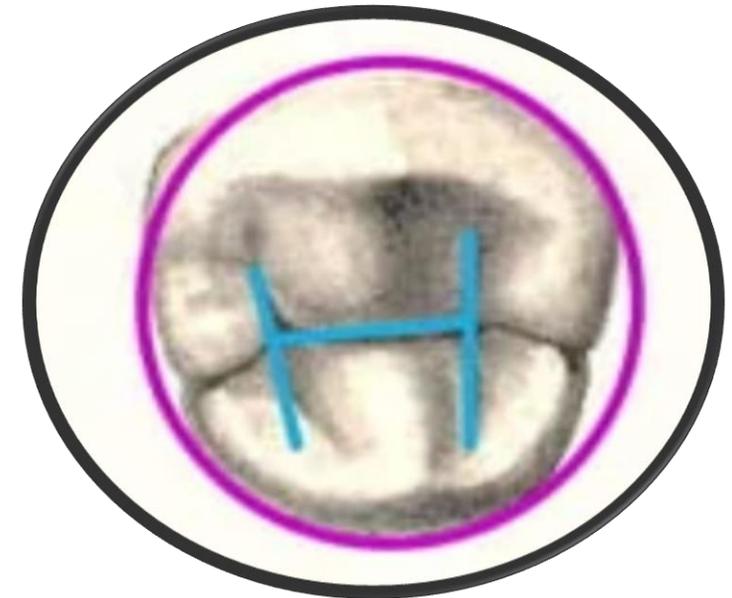
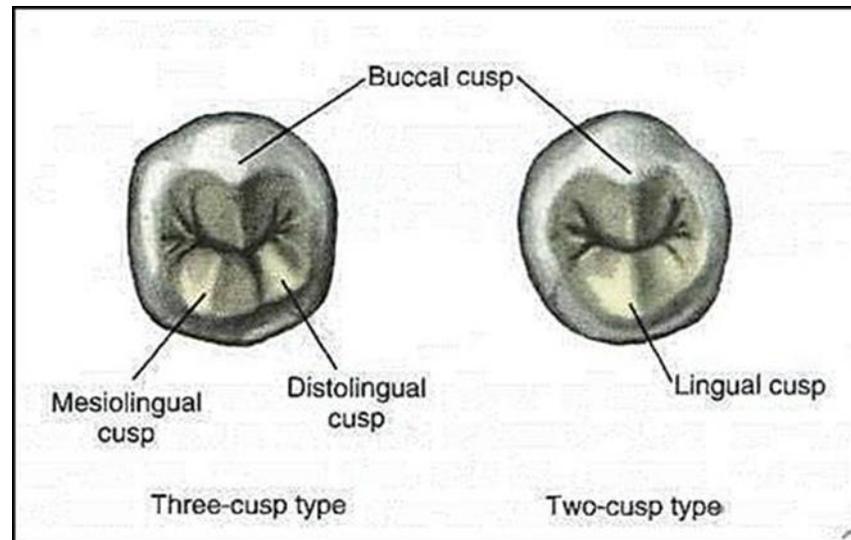
5. Supplemental groove are often seen



Two cusps type lower second premolar

1. Appear more rounded than the more angular three cusps type.
2. There is one well developed lingual cusp ,which is large and opposite the buccal cusp.

A central developmental groove travels in a mesio-distal direction with its terminals centered in the mesial and distal triangular fossae.





Thank you

