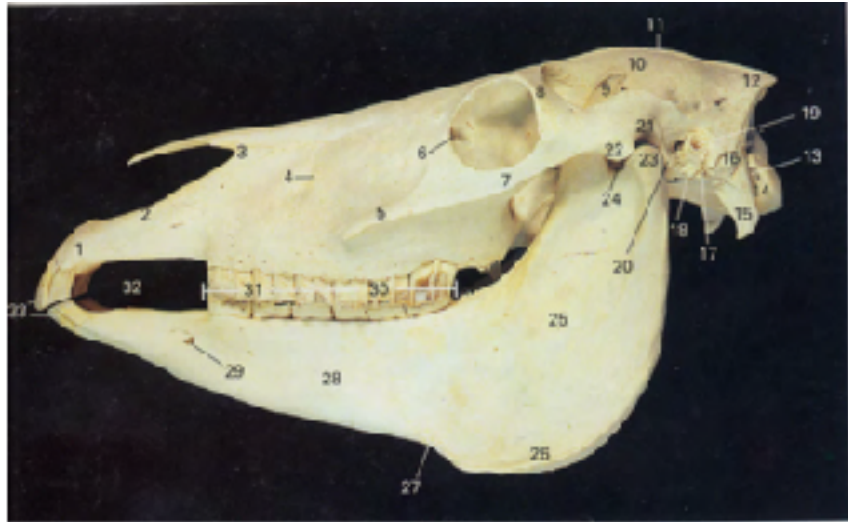


Review of the Normal Dental anatomy of the Equine Animal

Lateral View of the Skull of the Equine

- 4 - Infraorbital Foramen
- 29- Mental Foramen
- 30 - Molar Teeth
- 31 - Premolar Teeth
- 32- Diastema
- 33- Incisors



Ventral View of the Skull highlighting the Maxillary portion of the Oral Cavity

Dorsal view of the Mandible

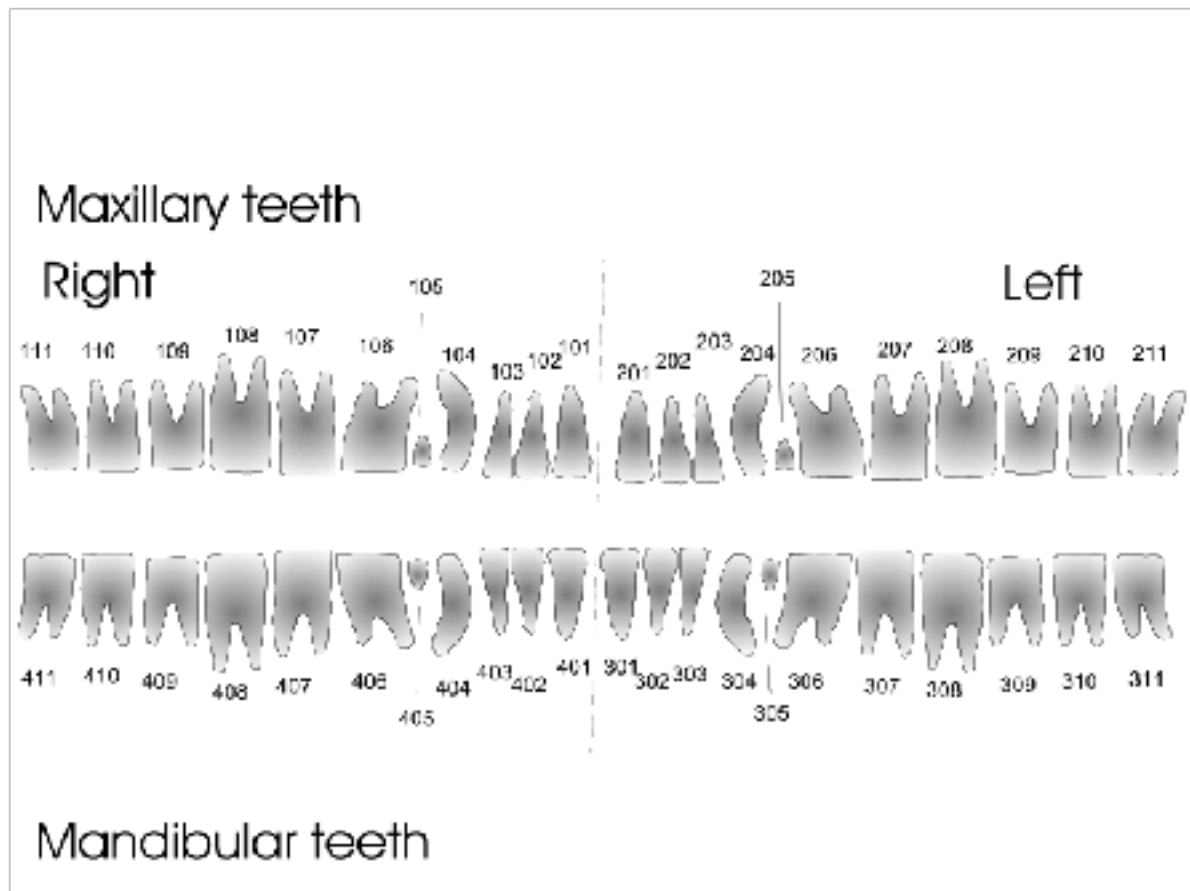


- 1 - Incisors
- I1 - Central Incisor
- I2 - Middle Incisor
- I3- Lateral Incisor
- P2-P4 = Premolars
- M1-M3 - Molar teeth

Eruption Ages of Equine Teeth

Tooth	Triadan Number	Eruption Age	In Wear
Deciduous Incisors			
Central	501	3 days	
Middle	502	3 weeks	
Corner	503	3 months	
Deciduous Premolars			
1st Cheek Tooth	506	birth	
2nd Cheek Tooth	507	birth	
3rd Cheek Tooth	508	birth	
Permanent Incisors			
Central	101 (2,3,401)	2.5 years	
Middle	102	3.5 years	
Corner	103	4.5 years	
Canine	104	5 years	
Permanent molars			
1st Premolar (wolf tooth)	105	2-2.5years	
2nd Premolar (1st Cheek tooth)	106	3 years	3.5 years
3rd Premolar (2nd cheek tooth)	107	4 years	4.5 years
4th Premolar (3rd Cheek tooth)	108	1 year	1.5 years
1st Molar (4th Cheek Tooth)	109	2 years	2.5 years
2nd Molar (5th Cheek Tooth)	110	3 - 3.5 years	3.5 years
3rd Molar (5th Cheek Tooth	111		

Modified Triadan System Demonstrating the Dental Nomenclature for the Equine Animal



Aging Based on Dental Attrition

Theory

As the occlusal surfaces of the teeth are worn during food prehension and mastication, their appearance changes. The cementum and enamel covering the surface are worn as the horse chews. This results in exposure of primary dentine on the occlusal surface and the enamel takes on the appearance of a continuous raised ridge surrounding the dentine and bounded by the peripheral cementum. In the incisors and maxillary cheek teeth the infundibula become raised concentric circles or crescents.

In the incisor the central enamel of the infundibulum (dental mark) is filled with nonregenerative infundibular cement and the invagination (dental cup) becomes filled with organic material, which undergoes oxidation to gain a dark appearance. As the tooth erupts the infundibulum becomes narrower and the amount of organic material becomes reduced, resulting in gradual obliteration of the dental cup. Eventually, in aging horses (9–11 years), the infundibular enamel is worn away in the central incisors first, followed by the middle and corner incisors, and the dental mark eventually disappears to leave an occlusal surface consisting entirely of dentine.

As the occlusal surface is worn, the pulp cavity eventually becomes exposed. Odontoblasts lining the pulp chamber produce secondary dentine in the pulp cavity, which maintains the separation of the pulp from the oral cavity. The secondary dentine becomes darkly stained and appears rostral to the 'dental mark' as a 'dental star', which appears at between 8 and 10 years of age, commencing at the central incisors. The angle between the upper and lower incisors becomes more acute with age, and this is reflected in changes in the shape of the occlusal surface from oval in young horses to triangular or trapezoid in geriatric horses and ponies.

Eruption of the cheek teeth with age results in some modeling of the maxilla and mandible as the tooth erupts.

The appearance of Galvayne's groove has been used to age horses between ages 10 years - 20 years based on the distance its appearance and how it has travelled down the length of the lateral incisor but it has been reported to be relatively unreliable

Group E Horse



The Age of the horse presented was estimated to be between 4 and 5 years old .This was determined from :

- the assessment of the complete eruption of all the permanent incisors
- Presence of the wolf teeth
- Absence of wear or erosion of the infundibular cups