AN INaugural dissertation
ON
Adontalgia

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Odontalgia

This word, as most of our medical terms has its origin from two Greek words: Odoos a tooth and Algos pain. We are convinced that the teeth are not inferior to all organs. It being their function to masticate our food into small particles as to be easily digested, and the injurious effects of imperfect mastication are of frequent occurrence. We will consider the teeth in their various forms.

Structure & Composition. 1st Formation: ossification commences much sooner than many suppose. At birth we will find the pulps of all the deciduous teeth ossified. The above is the opinion of most anatomists. But in dissecting a subject only four months of age, I found none but the middle incisors of the
Superior and inferior maxilla are the molars of the superior maxilla. Development, this process differs from that of any other organ of the human body, commencing with terms or semimolars. The development of the teeth differs much in different individuals requiring from the fifth month until the sixth year to acquire a full set of milk deciduous or temporary teeth. And as a general rule, the inferior incisors make their appearance first, then the corresponding ones in the upper or superior maxilla. The deciduous teeth are twenty in number, five on either side of each jaw, consisting of two incisors, one cuspidate, and two molars. Though these teeth are only adapted for the infantile state, and drop
out at about the sixth or tenth year

and are succeeded by the permanent

teeth which consists of twenty-eight or

thirty-two. This we really perceive in a

wise provision in nature for adapting

teeth for childhood, and a second set

for adults, and in proportion as the

bodies of the permanent teeth are completed

and approach the gum. The fangs of the

deciduous teeth are absorbed until the

body finally is fixed only mechanically

in the gum, and are removed by a slight

effort. The infantile or deciduous teeth

seem to have no fang and is supposed to

be so by those who have not investigated

the subject sufficiently, but this is an

erroneous notion; they have fangs but are

mostly absorbed, before the regular period of

shedding, these teeth. We see the necessity
If a second set of teeth are twenty it is not sufficient to fill the adult jaw. If at
the age of six or eight none of the milk teeth have been shed or otherwise re-
moved we will have from forty eight to fifty two teeth contained in the jaws.
These teeth are all more or less completely formed. As before stated the permanent
teeth are thirty two in number, sixteen in each jaw, and are at little inside of
where the deciduous teeth did exist.
Those of the inferior maxilla corresponding exactly with those of the superior. The
teeth are divided into four classes. Incisors from the Latin word incisus to cut cuspidate
from cuspid are three. Bicusps, resembling two spears molars, from molare a mill
because they are adapted for grinding the food. And also the denta lapsi"c". Id. com
of the molares it does not begin to ossify
until about the ninth or tenth year and
is the last of all to make its appearance
through the gum and hence its name
dental sapientiae. This tooth is of little
value on account of its proneness to decay and
should be extracted. Its fangs differ from
the others, by its being three or more
compressed together, and running
obliquely backwards. The teeth are divided
into three distinct portions: 1st, that por-
tion which projects beyond the gums is
called the body or crown. 2d, that portion
which is embraced by the gum is termed
the neck. 3d, the portion which penetrates
the alveoli socket is called the root or fang.
Eccoch tooth when in a natural condition
has an opening at the apex of the fang.
This cavity exactly corresponds with the
Shoes of the jaw and is occupied by an artery vein and nerve. And it is by the exposure of this nerve we have the familiar dolorosa. The teeth of the superior jaw are furnished by the infra-orbital nerve a branch of the superior maxillary nerve, those of the inferior jaw from the inferior maxillary nerve, which as well as the first are from the fifth pair of nerves. Nerves and blood-vessels have never been traced into the structure of the teeth. H. Bell maintains that they do exist because dismembered, the tooth is endowed with a certain degree of sensibility, and injections have been observed in the teeth. Hunter says that he has been the teeth coloured in young subjects by eating madder. This last only shows that a portion of the madder had taken to form the teeth, and he does
not believe the body or bony structure to be
endowed with nerves or blood vessels. This
one will find as an unsettled point among
anatomists, though my opinion may
not accredit to much. I believe that the
bony structure is endowed with nerves and
for blood vessels I can not lay but that nerves
as exist we must admit, or admit that
they do exist in some teeth, whoever
has had the dentist file in his mouth
knows how excessively sensitive it is
when the enamel has been removed. I
speak from experience I can not bear the
dentist to even file upon the enamel
as it produces the most intense pain in
imaginable... Dr. Bell says, he has seen
it in a patient who, died of pain—they tinged
with a bright yellow, I have seen myself
a young man who after having an attack
of, jaws diverge one of his middle sup
essor incisors was tinged with a deep
yellow, and this certainly could not
happen if the tooth was devoid of a
vascular system. Composition of the
teeth, suffice it to say that according
to most anatomists they are composed of
phosphate fluoride & carbonate of lime, soda,
and chloride of soda, phosphate of magnesia
and free alkalis with a portion of
of animal matter. The teeth have a pecu-
lar kind of matter called dentine which
is firmer and more durable than any of
the other bones. The crown of the tooth is
covered with a vitreous substance differ-
ing materially from bone, and is called
enamel. This substance is composed of
phosphate of lime and some animal matter.
This enamel covers the whole of the crown of
the crown about a line in thickness or perhaps more, being thicker in those positions most exposed to friction, gradually decreasing in thickness down to the neck. The enamel has no vitality or blood vessels or nerves, coloured with little or no sensibility consequently not subject to decay. When a portion of it is removed it is never replaced. There is a substance commencing where the enamel stops and going in an opposite direction to the enamel towards the apex of the tooth, gradually increasing in thickness towards the apex. This substance is called crista petrosa or cortical substance. Miller regards this as being essentially the same as the testae, existing in herbivorous animals. After the teeth have all been extracted or lost by decay the alveoli socket is entirely closed leaving no trace by
which we could recognize the previous existence of teeth. There is sometimes an attempt in nature to restore the teeth by a third dentition, which it frequently does, often only partially, but sometimes a whole set. These teeth although not differing in composition are characterized by the absence of the fangs. They are injurious instead of as we might be induced to suppose beneficial, causing a considerable amount of pain in cutting them. The gum which had become callous by the act of mastication reflects the forces of dentition with more force than ordinarily. Also of a singular peculiarity of a child being born with teeth and the reverse of some never having any teeth. Such as these latter cases of mites may be ascribed to the freaks of nature.
often exists especially in this the case with
the canine teeth which consist in these
teeth growing within the socket of other
teeth (that is internal to it) or external to
them. In the former case the tooth interferes
with the office of the tongue. The latter con-
sists in protruding the lip so as to expose
the other teeth. These deformities should always
be remedied by the forceps or key if great
inconvenience be suffered by them. Also the
fangs are often irregular, as usual being dep-
erated widely at the base and embracing a
portion of the jaw bone and permitting a
fleshy mass to grow between. This is caused by
the apex of the fangs coming in close
approximation. Should these teeth be extracted
there is danger of fracturing the jaw and tear-
ing up the gum. The teeth frequently especially
the incisors grow transverse or encircle the
The ancients used caries as synonymous with sepsis, but by caries we mean an ulceration of the bone and by sepsis they of the part. Then we define caries to be a disease peculiar to bones, and similar to ulceration of the soft parts. This was the opinion of great Galen, Bones, like the soft parts are continually undergoing a slow but gradual decomposition of their bony structure, but are again repaired by nutrition. When these parts fail to receive their proper nourishment, there is then an ulceration or caries by a continued wasting away and is not renewed, and are laid to be deprived of vitality. It thus continues to waste and thus the nerve is exposed. Then when any acid substance either warmer or cooler than its natural temper coming in contact with it anywhere it will of necessity produce some
Adontia-odontodes, Causes of Caries, It is obvious to everyone that the most frequent cause is a hereditary predisposition. Most often, the most frequent cause is some condition the bone has acquired during its formation, in consequence of some peculiarity of the constitution or state of health existing at the period of eruption. As persons, affected with tonsillitis, are prone to this disease. Gouty and rheumatic patients are frequently attacked with this disease. Women and children more liable to it than men. Women in pregnancy often affected with it. Acids, especially salivary glands, have once taken or acids taken into the mouth, a

such a substance are said to assist in the decay of the teeth. We can not see that saccharine matter can by any means affect the teeth we acknowledge, that it may after
caries has commenced actively in the decomposition of the structure of the tooth. Percival Mat. Materia Med. Therapeutics, Vol. 1. p. 86. Says, sugar is principally employed by man on account of its agreeable taste rather than as a direct source of nourishment. During the sugar season of the West Indies Islands, every negro on the plantations of every animal even the dogs, grow fat. It has been alleged that the eating of sugar spoils the colour and corrupts the teeth. This however proves to be a mistake. For no people on earth have finer teeth than the negroes in Jamaica. Then the popular notion of sugar having a tendency to injure the teeth becomes most absurd. Though sugar is strongly to allure nerves, after they are exposed, health is one source of various teeth by allowing small
particles of food to remain and on the sides of the teeth undigested till it putrefies and forms an acid which is very injurious to the teeth. Pasteur or phosphate of lime collecting upon the teeth assists in producing caries. When the caries is slight that is when the nerve has not been exposed or has never ached. The diseased portion should be removed and filled with gold or the foil they may be filled with other metals but there are preferable. This might be called a properly lasted measure it acts by excluding the atmosphere and other irritating substances. But where the nerve has been exposed for some length of time and the tooth has ached, it should not by any means be filled it rarely if ever does any good absorbs into form under the plug and still if necessity have
To be removed; destroying the nerve with nitric acid. The actual cautery or some of the essential oils. These measures are objected to by many as it is thought that a tooth deprived of vitality would necessarily act as a foreign body. That abscesses would form at the apex of the root. This may be true, but I know that it is not always the case. As I have done three or four teeth which the nerve was killed some five years ago by the application of nitric acid and these teeth have never caused me since nor can I perceive how teeth could be of more hurt than those are. It has been recommended to pull the tooth until it loses from its socket and replace the tooth and it will again become firm but will never ache. Thusly breaking up the nervous pulp. This may probably answer a very good pur
I have seen one done this way and it answers very well. It has never ached since and is firmly fixed in the socket.

Causes of the pain in the teeth. Caries and some irritation in the most frequent cause. The caries is confined principally to the molars though extending to the incisors. The teeth may ache without being in the least carious from cold or inflammation or from excessive phygismos. The pain is either heavy, sharp, dull, throbbing, lancinating, grinding or purgant. The pain may be regular intermittent or intermittent in their occurrence. We will merely mention the different forms as neuralgia, inflammation. This affection may be located in a single nerve or in the whole nervous trunk. Not unfrequently the pain is in the jaw instead of the teeth. This is particularly the case in pregnancy.
women who may be attracted with what is
termed tooth-ache. Treatment. Bleeding
was formerly a universal remedy, but it like
a nostrum has had its day. Purgatives are
useful if the bowels are in a torpid
condition. There remains an efficient when
the patient objects to the destruction of the
nerve — extraction, the whole catalogue
of narcotics have been tried to be useful.
Opium, Hyoscyamus, Clanda belladonna and
mife and tobacco. Many essential oils have
been recommended. cloves, horsemint, linseed,
peppermint, laetifras, cinnamon, camphire
lavendar and lemon. Though noted I
believe to efficacious as. Knowsote. Extrak-
tion must be admitted by all to be the
most effectual mode of curing this disease.
In extracting teeth we should be very careful
not to fracture the jaw. In dealing our
instruments, we should procure forceps, elevator, and key. The forceps and elevator are now principally used to the exclusion of the key. In applying the forceps, our first object is to divide the gum with the gum lanceet, but to deeply divide the ligamentum densum well and the tooth is much easier extracted after applying the forceps, as soon as we see the neck of the root exposed. The sound the better. We can readily see the necessity of several sets of instruments. One alveolus, one for each side because of the third fang being situated on the inner side of the tooth. These should accurately fit the elevations and depressions of the tooth. One will be all that is required for the inferior molars having but two fangs, one is
necessary for the bicuspids, and canine of the upper jaw, and for those of the lower jaw; and for both will be necessary for the incisors of either jaw. In extracting the tooth after the forceps have been adjusted our first object is to loosen the tooth and then pull it straight out. The canines of the upper jaw is pulled first by a gentle twist combined with a rocking motion. Then pulled perpendicularly downwards with a slight inclination backwards. Those of the lower jaw. The motion communicated to them is backwards and forwards. Then straight up. The molars and bicuspids are to be moved from side to side then pull perpendicularly up or downward as the case may be. The elevator is useful only for bicuspids or struggling teeth by using the operator's finger on another tooth.
for the fulcrum; the elevator is held in a horizontal position, and the stem is forced directly upwards. The use of the key is comparatively little now. Some may still prefer it if so they should recollect that the fulcrum as a general rule should be placed upon the inner side for the bicuspids of the inferior maxilla and molars of the upper jaw and on the outer side for the molars of the lower jaw. The dentes, lapicelliae, should never be extracted by the key because of the strong texture of the bone which the fulcrum will of necessity rest on. If the key is too large and the fulcrum too long the claw may be broken on the alveolar process exsanguined fractured. But if the key is too small and the fulcrum too high there is danger of breaking the crown off the tooth, off. The
may arrange the key according to another rule. If we notice very closely nearly every tooth inclines either a little inwards or outwards and if it be ever so little, it amounts to something considerable in extraction. If the tooth is inclined inwards apply the pulvinum on the inner side and pull the way the tooth leans, and bid, and so forth. If the tooth leans outwards apply the pulvinum outwards. But as before stated the most essential point in extracting teeth is in dividing well the ligamentum dentis. Haemorrhage: This separation is sometimes followed by haemorrhage, either from the dental artery at the bottom of the socket or from the gums which had been previously diseased. There are various modes of arresting this haemorrhage.
Up from the gum some one of the astringents will often succeed in arresting the flow of blood. But if from the dental artery, a strong solution or stalk of Nitrate of Silver will cause the flow of blood to cease, or by removing the clots of blood and introducing small pledgets of lint until the lint mounts higher than the surrounding teeth then close the teeth down upon it and apply a roller bandage over the head and under the chin to maintain (8) the teeth in apposition, or, by introducing the same tooth into the socket as it will fit the bleeding surface, or if the tooth be occasion it might be plugged and replaced. This would certainly answer all purposes and not subject to pain or further decomposition. This much
I deem it proper to say, The subject might be further pursued, but I deem it may be taken for
sublime.

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