

Long life implant

Long life implant is an expression to enhance the life of AQB implant.

One month implant is an easy expression to enhance the clinical time of AQB implant.

Question 1

I know that they are many kinds of implants but is there any difference among them?

Answer 1

There are many implant manufactures in the world and they manufacture and sell original implants.

Therefore there are many implants as implant manufactures.

However, we can distinguish implants largely by long life implants which has bio affinity power and others.

Other implants include HA implant (HA coating implant) which was explained earlier and titanium implants.

They are the bioactive but do not have bio affinity power, therefore they cannot be long life implants which are taken into the body to integrate.

Question 2

If so, why is this great revolutionary implant that patients want to have the most is not spreading around the world?

I believe that this long life implant should become popular like iPad in this world and people should accept it positively.

Answer 2

That is a great question.

In fact, long life implant is a medical device, therefore we cannot freely advertise and provide information to customers by disclosing information like iPad can.

Basically, dentists choose their implants first.

Next, patients use the implant that their dentist recommends.

For this reason, implants are selected and spread by the decision of dentists but not by the patients.

Question 3

So, if we can meet this long life implant, it means that we are lucky.

But don't you think that this great implant should be widely used?

I think that would be an act of kindness and contribution to society.

Don't you think that you should help patients from unnecessary time and risks?

Answer 3

That is a normal and right idea.

First, you are lucky because you have met this long life implant.

Second, long life implant would help people on earth if you and people who have good experience of this implant conduct word of mouth communication of your and their experiences.

Question 4

So, what kind of people actually has long life implant?

Could you please tell me the experience and desire of patients?

Answer 4

(1) That would be people who want to have food texture and tooth that works as same as one's own lost tooth. Long life implant can realize such dreams.

Ms. Reiko Yoshibayashi who has long life implants wanted to eat food freely, enjoy meals, and sing with her mouth wide open as she could with her own teeth.

People who wants to improve concentration by gritting one's teeth.

Long life implant realized these wishes.

Experience of AQB Part 4

"I am enjoying my life, eating and singing"

Ms. Reiko Yoshibayashi, 62 year-old, woman

Since I was 9 years old or 10 years old, I had started to go to dental clinic to treat teeth. When I had lost my baby teeth and got permanent ones, I remember that everything seemed fine. However, dental caries started to appear later on.

I think that this happened due to the poor teeth brushing. For that reason, when small dental carries appeared, I think that my dentist cut an affected tooth a little and filled it with amalgam.

Several years later the dental carries started to hurt again, so this time my dentist cut the tooth more and injected a medicine that kills nerve. A couple of days later, the nerves were extracted.

I remember that I received couple treatments to clean inside of affected tooth. When inside of the tooth became clean, my dentist had taken the tooth model and filled it with substance like a metal.

Even when the root was fine, white part went bad so I had to have new post crowns when former ones went bad.

I had to replace a post crown several times for the same tooth.

Yet, even the new ones` root is cracked and broken, therefore my tooth needed to be extracted.

“Oh dear, my natural teeth have almost gone!!”, I was really sad.

In the mean time, my life had passed so quickly that I was in 50s.

The condition of my mouth was, I had total three partial dentures at upper and lower side of mouth.

Especially, upper side`s left and right molars and front teeth were denture, consequently dentures covered my upper jaw. For that reason when I tried to swallow food or drink, sometimes the denture suddenly went into the deep part of throat, consequently I choked many times.

I had come to think that this would be the most dangerous thing when I grow older.

I had worked as a nurse before and I saw many people who were hospitalized due to the poor health and illness. When they lay down on a bed, the danger increased more that sometimes they swallowed food to the lung accidentally and had aspiration pneumonitis which led to the terrible results. Because of that and I had worn my denture, such anxiety crossed my mind.

After meals, I had to take my denture out, wash it, and before I go to bed I had to put it in a special container with disinfected solution.

But when denture was out, I assume that I still pressured teeth without consciousness while I was sleeping, so teeth gradually moved and my row of teeth became bad.

So, yes I had to replace my dentures many times.

In the mean while, I had started to see the sign of ‘Implant’, but I was not interested. I just happened to know the dental clinic that had the one month implant through my friend.

Feeling of uneasiness crossed my mind.

“Is it really ok to install a foreign matter into the bone?”

“Would I get hurt?”

“Would I be able to bite as my natural tooth?”

“Implant must be expensive”

I was worried about a lot of things.

I made an appointment and I let my dentist to check the gum at tooth extraction site and he decided the place to install initial implants.

First two implants were planned to install at right lower side. After the anesthesia, the operation had started. I was nervous but the surgery proceeded quickly.

The surgery was able to finish in about 30 minutes. I gargled couple of times but I did not find any bleeding after that. My dentist told me that I need to take pain killer because anesthesia would wear off in 30 minutes. But I only took one pain killer because I did not feel any pain, consequently I did not take any more of them.

Three months later from the first surgery, I had an implant surgery for two opposing teeth sites of preinstalled two implants. I was able to relax during the second surgery.

I only took a pain killer once, 30 minutes after the surgery.

Both former implants and latter implants took one month for me to be able to stat to bite food.

I first thought “Is this really ok?” but surprisingly, I was able to bite meat and vegetables without hesitation as I wanted.

I was able to bite even thick Japanese radish, I actually wanted to eat this all the time hence I was impressed.

Of course, I was able to eat thick Japanese rice cracker.

When I think of the unpleasantness of post crowns and dentures, I was in hell and my new implant made me to be in heaven.

Biting force is significantly different.

My implants are really strong that I can even think I am able to bite food stronger with them than my natural teeth.

All of my implant surgery has finished after installing an implant at upper left side. I am able to bite well now so, I feel like “Good bye, denture!”

Also during conversation, I was not able to pronounce nicely because I had a denture

and air leaked from the clearance. Therefore sometimes, my friends said “Sorry?” to ask me to repeat what I said.

I love to sing and now I am able to sing with my mouth wide open, thus I feel that my life gets better every day.

I have started to bite well so I have not had a stomachache recently.

I really think that I made a right decision to have implants.

Also, for the cost of an implant. I heard that it would cost 350,000 yen for one implant at other dental clinic, but it was only 139,000 yen and did not need to pay for any other costs.

I can eat food and enjoy everyday life.

(2) People who wish to escape from the troublesome and unpleasantness of denture, loss of concentration, and be unable to bite and people who wish to have great meals with one's own tooth and bite freely even solid food.

Long life implant AQB can realize such dreams.

① People who have trouble with their dentures have real troubles.

a Daily maintenance is troublesome.

b Biting with gingiva but not with jawbone, therefore food is not delicious. Eating is not fun.

c Food get caught between denture during a meal, unpleasantness, and pain.

d Needs to pay attention to others because of bad breath

e Be unable to eat hard or sticky food.

② Risk would arise because of denture placement.

a For example, if denture is full denture, jawbone would be absorbed rapidly and get thinner because the denture is placed on gingiva and the jaw bone does not receive pressure directly.

b As a result, denture needs to be replaced many times. All of such occasions cost.

c For example, in case of partial denture, it is attached with healthy tooth by spring called clasp, but even the healthy tooth would start to wobble and eventually the tooth may be lost.

d While putting the denture in and taking it out, denture may become unfit. Consequently the denture has to be replaced many times.

e When bridge is put on a healthy tooth, the healthy tooth would become bad.

Experience of AQB Part 5

“Released from my denture”

Ms. Yasuko Yoshikawa, 63 years old, woman

I turned 63 this year.

I only had one false tooth but 36 years later, now I have nine dentures.

I had complex about denture, therefore I was not able to talk or laugh with my mouth wide open.

Even when I went out, I knew that I could not bite stake so I refrained from eating it and I did not have courage to bite solid food such as an apple.

Also, when I went on a trip, I did not want anyone to see my face without my denture, so I wore mask to sleep.

When visitor came to my house suddenly, I fell into a panic. I need to look for my denture and a mask.

At that time, I noticed that my neighbor friend's tooth become very pretty, thus I asked her what she did. Then I found out that it was an implant.

It was the first time that I heard about an implant.

Having know that such a wonderful product exist in this world, I was in the seventh heaven.

Therefore, I went to the dental clinic to see if I could have implant. The result was fine. However, I was worried that I would feel pain because I heard that implant would be installed in my bone, but when the surgery started, the anxiety went away.

I started to feel confident by having implants.

I am free from denture life.

I have nine implants now.

Thanks to the implants, now I can derive pleasure from the second life, trip, and food.

I really appreciate my implants

(3) To prevent dementia, as he is aging.

With the increase in the number of teeth lost, the chewing ability deteriorates. This can lead to reduction in the number of stimuli transmitted to the brain, which can consequently decrease the amount of neurotransmitters such as acetylcholines to be secreted, therefore promoting the progress of Alzheimer's disease. The risk of dementia in those with several missing teeth is double that of the persons with 20 or more teeth remaining. The number of stimuli transmitted from the jaw bone to the brain in the individuals with full artificial dentures is small, indicating that the reduction in the amount of neurotransmitters such as acetylcholine secreted, consequently leading to increased risk of dementia.

The role of the long-life implant is effective in preventing such issues arising. With its ability to apply enough stimuli to the brain from the mastication, it can activate the secretion of acetylcholine etc. This is possible it allows one to chew with more strength than with their teeth.

Experience of AQB part 6

Escaping from dementia

Mr. Hideo Moriyama, 64 year-old, man

My wife and I went on our first vacation abroad to Guam. It was a show of my appreciation to my wife for sticking till my time of retirement.

My wife was in high spirits buying her chocolate ice cream without minding her age, saying,

"It was my dream to be able to eat ice cream while walking around!" and started walking on the Guam's main street while eating her ice-cream.

When I turned around to say " we are nearly at the Hotel!" I find my wife with her T-shirt covered in chocolate, crying.

I just thought she was upset because of getting her T-shirt dirty, and so said you can clean it in the room, so got back to the hotel.

I was finding that my wife's state had deteriorated gradually after that incident. She tried to go to dinner without putting her dentures in, or started buying the same things as a present for the grandchildren. So I travelled back home getting chills with the thought that my wife had developed dementia.

Having returned home, I forced my wife who was unwilling, to go to the doctors. She was indeed diagnosed with early stages of dementia.

I was looking forward to starting my second life as a taxi driver, and had already obtained the licenses for it. However, after this incident, I couldn't bring myself to go to work leaving my wife alone in the house, let alone go out of the house for few hours.

My daughter worried of her condition, came to visit her if she had free time, but during her visits, my wife appeared normal, in the end, my daughter thought I was the one who was acting up.

My final decision as to get her to undergo implant treatment was made when she had started to forget where she had left her dentures, and when she started eating her favorite nure-rice cake without her dentures, and ending up bleeding from the gum. These sightings of my wife worried me, as I did not know what else she might put in her mouth. This worry and for her safety, I made my wife go through with the implant treatment.

I explained this to my wife, but did not gather whether she actually understood or not, but she tolerated it well, and went through with the implant surgery following the dentist's instructions, inserting five in total to the upper and the lower jaws.

Three months later, my wife went to buy the rice cakes from the shrine on the festive day that takes place 28th of every month, saying she was craving for the rice cakes.

My wife started to be able to eat solid food without any problem, and as I had heard that the chewing of solid food would stimulate the brain, she started to be able to have normal conversations with me.

Recently, she became able to prepare for meals which she had not been able to do since getting back from our holiday to Guam.

Literally, our life has been able to return to normal. Implant treatment was such a good idea. I am sincerely thankful from the depth of my heart.

(4) People who have the desire to laugh out loud in front of people and also those who want AQB long life implant.

Those who have tooth loss in the locations where it is clearly visible from the front can

become afraid of being in front of people, or cover their mouth, and cannot openly laugh out loud. As a result, they eventually become timid, affecting them psychologically. So here, the AQB long-life implant presents these people with the positive spirit.

Experience of AQB part 7

My bad breath pointed out by my grandson has improved

Ms. Haruko Aida, 61 year old, woman

My mind went blank with the comment made by my grandson a year ago. That day was my son's first child, Hitoshi's third birthday, and I had cooked his favorite calamari, baked a special cake and went to visit him with my husband.

Hitoshi was incredibly pleased with the present, Pokemon game, given by my husband. Getting excited with the game with my husband, calling him "Granpa Granpa!"

I couldn't possibly lose as a Granma.

"Hitoshi, I baked a cake, shall we all eat?, it's chocolate, I know you like it". He usually eats the cake straightaway, but he was ignoring me for some reason.

"Is something wrong? Its Gramma's cake."

Hitoshi replied "later!" and went back to his Pokemon game.

I just ended up snapping at my husband saying "you should have given him the present after the cake!"

The birthday dinner table was laden with feast including my calamari, and Hitoshi seemed to be in excellent spirit munching away. Then, came the turn with the birthday cake. I held up Hitoshi in my arms and said,

"Go on and blow out the candle, Hitoshi!"

It was then that he shouted out,

"Granma your breath stinks!" with a scrawl. The whole room went silent.

Hitoshi's mother telling Hitoshi to "apologize to your granma!" had no effect on my mood falling to the rock bottom.

I snapped back at my husband when he said, "it's your denture that smells", saying, "You should have told me that when you noticed!"

For the rest of the day, the thought circling my mind were, "I'm always cleaning the denture everyday!" or "the dentist reassured me that denture was enough", trying to justify the fact that I was taking enough care not to let it smell.

My husband came to inform me, in a state of low degree of depression, that he had found a dentist who does AQB implants.

The first question I asked the dentist was whether the bad breath would disappear.

The decision to place AQB implant was made with the insurance by the dentist who said, "the sense of AQB implant becomes one that is similar to your own teeth, so there should be no problem as long as you continue to brush your teeth".

A year later, on the day of Hitoshi's birthday...

Hitoshi let me hug him without any reluctance. And said with his mouth filled with birthday cake,

"I love Granma's cake!"

The comment made me cry with pleasure.

Thank you very much implant!

(5) The long life implant AQB can fulfill a wish of those who want to be beautiful.

A beautiful dentition highlights a beautiful face.

It is a chance for people who use a denture or have lost anterior teeth to be beautiful.

Question 5

What is the difference between a long life implant (AQB implant) and a bridge?

Answer 5

(1) A bridge is not recommended because grinding of healthy teeth will be necessary. The best treatment for tooth loss is using long life implant which becomes one's own tooth because its implant placement does not require grinding of healthy teeth.

(2) I will explain it concretely the following.

A bridge (an artificial crown) requires grinding of healthy teeth which adjacent to the extracted cavity.

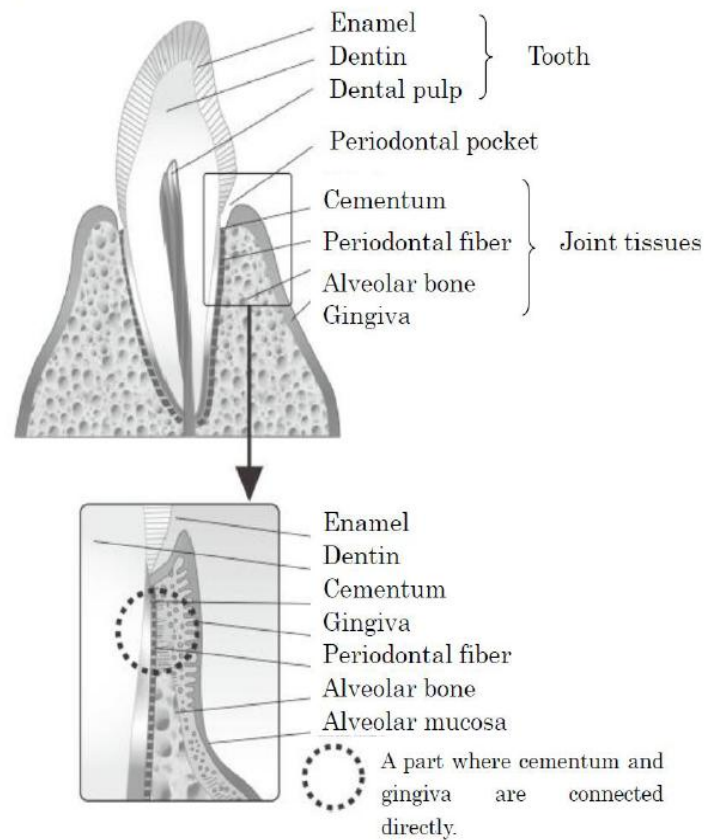
Target of grinding is enamel and a part of dentin, so these teeth become unhealthy.

Next, a bridge is attached on adjacent grinded teeth, so occlusal pressure applies to the grinded teeth including the extracted cavity.

It will be burden on the grinded teeth which support the bridge and will give damage to them, consequently they will be fragile, as a result, extraction of them will be necessary.

Fig.5

Structure of a tooth



(3) Moreover, the enamel is grinded and the dentin is exposed, therefore it will become easy for intraoral pathogenic bacteria to invade from the grinded site. Subsequently dental caries or periodontal disease tends to occur.

Also, plaque is easy to accumulate on the root of the bridge or between the bridge and teeth.

It is a big step to the periodontal disease.

For these reasons, extraction will be necessary.

(4) In addition, if the tooth which supports the bridge is decayed, it is impossible to treat the decayed tooth unless the bridge is broken to be removed.

(5) Tooth extraction means that treatment such as denture attachment or implant placement is necessary.

Hence, I recommend the long life implant for the treatment. I can say this because as I explained before, denture has some problems.

(6) The problem related to a bridge that you need to understand is that the alveolar bone of the extracted cavity become thinner gradually.

Fig.6

Structure of a bridge

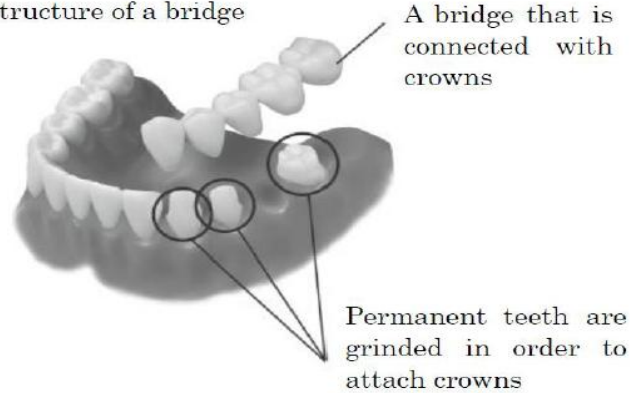
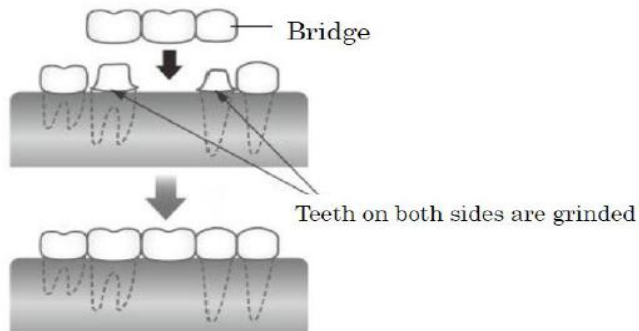


Fig.7



Point 5: Comparison table of merits and demerits between 'one month implant' and bridge

| One month implant | Bridge |
|--|---|
| <ul style="list-style-type: none"> ⊙ Becomes your own tooth in a month. ⊙ It is possible to bite off and crush solid food. ⊙ Unlike a bridge, unnecessary to grind of healthy teeth on both sides. ⊙ You can show your ability to concentrate by gritting your teeth. ⊙ The dentition looks natural and the mouth becomes beautiful. ⊙ You can laugh and sing with your mouth wide open. ⊙ You can be healthy because you can eat anything. | <ul style="list-style-type: none"> ⊙ Healthy teeth on both sides of affected tooth need to be grinded, therefore they can be decayed or get periodontal disease. Then it will be necessary to destroy a bridge and extract teeth. ⊙ Burden of teeth which support bridge increases. ⊙ Bone of the extracted cavity becomes thin. ⊙ Appearance is not good. ⊙ A long bridge is at risk of fracture. |

Question 6

My jaw is edentulous and I have a denture, but I am always annoyed by uncomfortable feeling. Today, I am here because I have heard a good reputation of 'long life implant'. Please tell me difference between a denture and the long life implant in my case.

Answer 6

I see.

You already have a denture, therefore I will compare it with the long life implant and explain the characteristic of the implant.

(1) Regarding a denture, you eat food with the denture which is just placed upon the gingiva, subsequently it is impossible to enjoy eating because the chewing strength is weak and feeling is bad. Of course, it is impossible to crunch or bite off solid food.

You will also have a trouble in biting something sticky.

By contrast, the long life implant is fixed into the jawbone therefore you will have chewing strength with the jawbone. For that reason, it becomes possible to eat and bite off solid food freely.

As a matter of course, you can taste food.

In addition, you can grit your teeth and it will improve your concentration.

This is impossible with a denture.

(2) A denture gives you foreign body sensation, uncomfortable feeling, or pain.

On the other hand, a long life implant 'becomes your own tooth', does not give you uncomfortable feeling or pain.

You will forget about having an implant because the implant make you feel as completely same as your own teeth.

(3) The maintenance of a denture is a hard task because it can habitually be smelly and unclean.

By contrast, a long life implant requires no maintenance because it will not be smelly and unclean.

If you brush your implant as your tooth, other maintenance will not be required.

(4) Appearance of a denture is bad, as a result, you cannot laugh or sing with your mouth wide open.

On the other hand, the long life implant makes your mouth beautiful by realizing natural dentition. Therefore, you can laugh and sing with your mouth wide open as you please.

(5) Having a denture will make you to not eat and taste every food, therefore it is not perfect in terms of health.

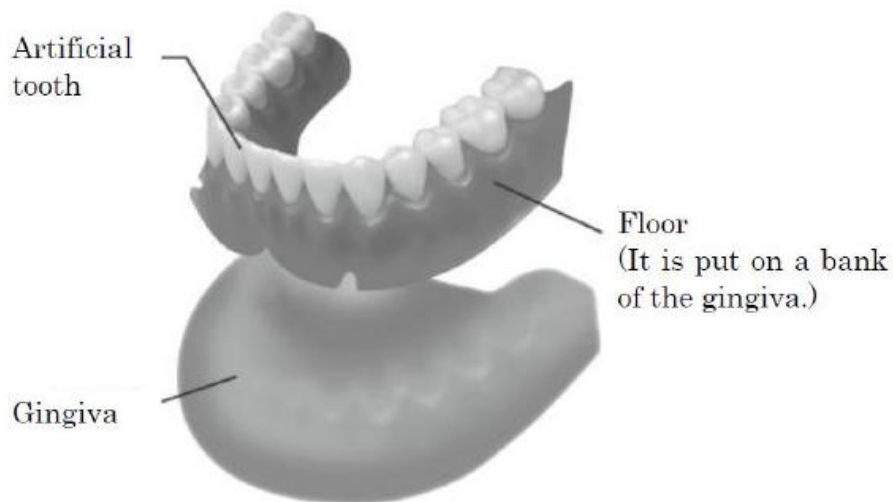
In contrast, you can eat anything with the long life implant, therefore it can help maintaining your health.

(6) If you have a denture, you feel inconvenience to exercise because you are unable to grit your teeth, consequently, you will be away from exercise.

On the other hand, in regard to the long life implant, you can run or throw something while gritting your teeth. Therefore, you can put your strength when you exercise.

Fig.8

Structure of a full denture (Example of the mandible)



- ✳ Chewing strength is very weak.
- ✳ You feel foreign body sensation strongly.
Sometimes it may accompany pain.
- ✳ A denture makes it difficult to pronounce.
- ✳ A denture is unstable and easy to come off.
- ✳ A denture needs to be remade repeatedly because it becomes unsuitable.
- ✳ The alveolar bone is absorbed rapidly and get thinner.

Question 7

Is it true that a long life implant can improve dementia?

Answer 7

That's true.

There are two types of dementia; the cerebrovascular dementia and the dementia of Alzheimer type. In regard to these two types of dementia, in case when its cause seems to be periodontal disease and the disease is unlikely to be cured, I believe that using an implant would be very helpful to deal with the dementia.

The following is an explanations and reasons for my opinion.

(1) Firstly, I will explain the cerebrovascular dementia. Its cause is a cerebral apoplexy. The cerebral apoplexy is caused by arteriosclerosis which occurs in cerebral blood vessels, hence it is important to prevent the arteriosclerosis. Recently, new findings has started to attract the attention that pathogenic bacteria in mouth and periodontal pathogenic is the cause of arteriosclerosis. It implies the importance to cure the periodontal disease in order to cure the arteriosclerosis.

(2) According to the study from the Ministry of Health, Labour and Welfare, compared people who have more than 20 of their teeth, with others, people who have few teeth and using a denture has 1.2 times more risk, and those who have few teeth but do not use a denture has 1.9 times more risk to have dementia.

Also, the person who cannot chew solid food has 1.5 times more risk to have dementia than people who can chew it.

It is thought that elderly with few teeth is at higher risk of having dementia when the periodontal disease is related to cerebral infraction which can be the one of causes of the dementia or decline of chewing strength that loses the stimuli to the brain.

● Risk of dementia of elderly people who have no tooth

| | |
|---|-------|
| Compared with people with more than 20 of their own teeth | |
| People who have few teeth and use a denture | × 1.2 |
| People who has few teeth but do not use a denture | × 1.9 |
| Compared with people who cannot chew solid food | |
| People who cannot chew solid food | × 1.5 |

(3) Therefore, it is possible to recover stimulus for the brain by obtaining chewing strength with an implant, consequently there will be an opportunity to improve the dementia.

(4) Early extraction of affected tooth and implant placement is thought to be an efficient approach for a patient who has advanced periodontal disease which is unlikely to be cured.

This is a great method to eliminate the cause of lifestyle related diseases which occurs by the periodontal disease and to recover chewing strongly largely.

(5) Chewing with teeth is also deeply related to dementia of Alzheimer type.

The dementia of Alzheimer type is a disease which has a characteristic to show brain atrophy. A decrease of acetylcholine secretion is thought to be the cause of the dementia of Alzheimer type.

It is known that a stimulus is transmitted from the periodontal membrane to the brain and acetylcholine secretion increases by chewing. From analysis of CT scan, it has reported that the fewer the remaining teeth, the further the progress of brain atrophy. Prevention of periodontal disease and teeth preservation will affect the prevention of the dementia of Alzheimer type.

(6) It is known that the patient with Alzheimer's brain show characteristic pathologic and biochemical lesion.

In addition to the remarkable brain atrophy caused by the loss of nerve cells, the Alzheimer's shows following characteristics: ①disorder of neurotransmitter such as acetylcholine, ②forming of senile plaque caused by the accumulation of amyloid B protein in the brain, ③accumulation of paired helical filament (PHF) that is composed of phosphoric tau protein or ubiquinone that is called neurofibrillary tangle. Among these, acetylcholine is secreted when the periodontal membrane is pushed by mastication stimulus and the stimulus is transmitted from the nerve in the dental pulp to the brain.

It is reported that concentration of acetylcholine in the hippocampus decreased for the rat whose back tooth was extracted.

From the examination of Alzheimer's brain condition with MRI at the time of mastication, it has reported that activation was observed in frontal association area where activity becomes low.

(7) I suppose you can understand how important it is for the dementia of Alzheimer type to obtain sufficient chewing strength by placing an implant and having your own tooth. In addition to the effect of making food delicious, implants have a big role in making the brain fine and healthy.

Question 8

I understand that the periodontal disease is a cause of arteriosclerosis, cerebral apoplexy, and dementia. Then, can the arteriosclerosis be a cause of heart disease or hypertension which are caused by bad blood circulation? If so, in terms of protecting me from heart disease, dementia, and hypertension, is it more desirable to extract an affected tooth early and place an implant than to cure the tooth?

Answer 8

The dental paradigm has shifted largely.

Up to now, treatment of teeth was thought to be enough in dentistry. However, we have entered a new era where systemic diseases are cured and prevented in dentistry.

Dentists and patients have to deepen understanding of this fact.

Well, your question seems to be on the assumption that the periodontal disease is difficult to be cured.

It is true that there is no definitive way to cure the periodontal disease completely at present.

I suppose you fear that, if the periodontal disease is difficult to be cured, the arteriosclerosis progresses and it might be a systemic problem during the progress of periodontal disease.

It is true, so I will give you following explanation regarding this idea.

Firstly, I will explain a mechanism of the periodontal disease and the arteriosclerosis, which are not generally known, as an important knowledge to guard our lives.

The arteriosclerosis is a disease that arterial walls become nonelastic and lumen of blood vessels become narrow due to the thickness of the walls and deposition effect to its interior.

Lumen becomes narrow due to the deposition of Atheroma which is mainly cholesterol, in the blood vessels, and it leads to deteriorate the blood circulation and sometimes it stops.

Periodontal pathogens that invaded into tissues promote the production of activated macrophages from a monocyte, and low density lipoprotein (LDL) englobes in vascular wall and become foam cells that contain substantial lipid.

In a part where the foam cells proliferate, the cells degenerate gradually and form extracellular lipid in the wall, therefore vascular walls expand towards inner side to limit the blood circulation, and cause arteriosclerosis

If above mentioned mechanism progress to cause heart disease, cerebral apoplexy, and dementia from arteriosclerosis, it is not wrong idea to prevent the progress of periodontal disease and if it cannot be done, extract the tooth to remove the cause. However, I have to mention that decision should be made by patients because only they can recognize subjective symptoms.

Question 9

In order to prevent dementia, cerebral apoplexy, and heart disease, I understand that it is useful to extract an affected tooth at early stage and place an implant in cases when the periodontal disease is unlikely to be cured. Is the periodontal disease related to any other systemic diseases?

Answer 9

In fact, a new scientific knowledge has been generalized that the intraoral bacteria are one of the causes of lifestyle related diseases.

(1) Oral health is deeply related to lifestyle related diseases such as obesity, diabetes, heart disease, cancer, arteriosclerosis and cerebral apoplexy.

Generally, dental caries, periodontal disease, and various inflammations are examples of oral diseases.

If you leave them as they are, for example, bad breath become worse, toothache and terrible swelling or inflammation will be caused, moreover it might lead to the tooth loss.

(2) Recently, it has become clear that more than 500 kinds of pathogenic bacteria such as bacteria of dental caries, periodontal pathogens, opportunistic pathogens, spirochete, pseudomonas aeruginosa, and staphylococcus aureus inhabit in the oral and there are more than 100 million pathogenic bacteria in 1 mg of plaque which are deeply related to

lifestyle related diseases.

These intraoral bacteria and their substances are carried through the body and reaches the various internal organs by blood flow and cause all sorts of diseases.

(3) However, this new knowledge is difficult to understand generally.

For instance, it is normal that people cannot easily image the relation between these intraoral pathogenic bacteria and obesity because it is a common knowledge that excess of calories is a cause of obesity.

Nevertheless, Gram-negative bacteria produce endotoxin and mainly lipopolysaccharide (LPS) that causes deposition of fat in the liver and fatty tissues to increase weight and to produces obesity.

A person who is easy to be fat although he/she does not eat too much should suspect if he/she has a lot of gram-negative bacteria which consist endotoxin.

Obesity leads to insulin resistance caused by tumor necrosis factor- α (TNF- α) and promotes progress of diabetes.

Conversely, if it is possible to make the oral clean and, for example, if periodontal pathogens are removed, production of the TNF- α will decline and insulin resistance will be improved, as a result, glycemic control will become stable and diabetes will become better.

(4) It became clear that there are close correlation between periodontal pathogens and influenza infection.

The patient with the periodontal disease gets influenza with a high probability.

Question 10

I have a daughter and I was concerned the problem of preterm low birth weight caused by the periodontal disease.

I have heard that if periodontal disease is progressed, it will be not cured since there is no special medicine for it. Therefore the cause had better to be removed by extracting a tooth.

Some municipalities provide subsidy to let people to go to the dentist.

Is it that serious problem?

Answer 10

Preterm low birth weight is very serious problem.

(1) I will explain what preterm low birth weight is first. The premature baby imply to the babies were born with a weight of less than 2,500 grams.

The premature baby has two big problems.

One is the problem that caused by brain damage.

For example, problems such as developmental disorder or neurological disorders (such as cerebral palsy, mental retardation, visual impairment and hypacusis) occur with a high probability.

If these problems do not appear before a child is under school age, learning impairment or behavior disorder will appear with a high probability after a child enters a school.

The other is that the premature baby is at high risk of getting lifestyle related diseases such as obesity, diabetes, hyperlipidaemia and ischemic heart disease in the future.

I will explain why such things happen.

There are two mechanisms.

One of them is a mechanism of brain development that if necessary brain cells are not formed while a baby is in the womb, it is impossible to recover it after the birth.

Women were told to give birth with lower birth weight and make a baby grow. However, it has caused serious social problems (such as class disruption, attention-deficit hyperactivity disorder (ADHD), increase of student in class for children with disability). It became clear that when women give birth at early stage, it makes a baby's brain to not grow when it should in the womb, and the brain would not recover after its birth.

The other is that if a baby is in condition of undernutrition, a baby adapts to live under this condition. As a result, the metabolic system developed during embryonic stages under this condition will continue even after its birth.

The babies will be in the condition of good nutrition in the satiation of today's society, consequently fat cells will become bigger and the babies will be easy to contract lifestyle related diseases.

(2) In addition, it has become common sense that periodontal pathogens increase a risk of preterm low birth weight.

I will briefly explain it the following.

Causes of preterm low birth weight by periodontal disease are classified into two types.

One of them is direct participation of periodontal pathogens in obstetrical organs such as womb. The other is inflammatory mediators (such as cytokine and prostaglandin) which are produced by the body against periodontal pathogens.

If periodontal pathogens proliferate in the oral, some substances such as cytokine (transmitter) will be produced into blood by immunocompetent cells.

If cytokine and other substances are secreted excessively, inflammation will occur in the oral, gingiva and alveolar bone will be destroyed and periodontal disease will progress.

There are various cytokine and some of them are related to parturition.

Usually, substances (such as cytokine and prostaglandin) are produced after the mother's body becomes ready for birth. However, periodontal disease also produces these substances, therefore the mother's body misunderstand it and triggers cervical ripening and uterine contraction to promote early parturition.

It is the preterm low birth weight.

Dysgenesis of premature babies will be a heavy burden on their lives.

Subsequently, I hope that young women recognize that to cure periodontal disease at dental clinic before becoming pregnant is responsible for their unborn babies.

Moreover, in regard to pregnant women, it should be understood that risk of periodontal disease become higher due to the increase of female hormone.

Also, risk of periodontal disease gets dramatically higher because pregnant women tend to fail in oral care due to morning sickness, etc.

For the reasons stated above, if you have daughters or granddaughters who are young, be sure to let them go the dentist.

If you are a young woman, examine whether you have periodontal pathogens or not in the dental clinic for the sake of your unborn baby's future. If you have the pathogens, cure the disease and make the oral clean in order to make preparations to have a healthy baby.

Let's protect future of unborn babies.

Question 11

What kind of risks are there in placing the long life implant?

Answer 11

I will explain general risks of placing implant at first.

Risks should be considered from three viewpoints, clinical skills of dentist, characteristics of implant body, and patient's condition of health around a tooth.

(1) Risk factor No.1. Clinical skills of dentist

It is the most important point to avoid failure of implant surgery.

Clinical skill is extremely varied by dentists.

Some of them are first-rate dentists, others are sued by patients because of failure of implant placement although they appear as if they are great doctors who have many experiences.

For example, when an implant is installed obliquely when it should be installed perpendicularly to the occlusal surface of tooth (where upper and lower teeth occlude), the implant would fall out because of the occlusal pressure (chewing strength).

Also, if the length of installed implant is long, it will fall out owing to the pressure from opposing teeth (teeth that are opposite of upper or lower teeth)

In short, it means failure.

For instance, there is a technique to place an implant by increasing bone with an osteotome which uses a space of the paranasal sinus in order to thicken thin bone and to install an implant into the maxilla (bone of the upper jaw).

It is an implant clinical technique called the socket lift procedure.

In this procedure, it is necessary to pull the Schneiderian membrane (thin membrane located between the paranasal sinus and the alveolar bone) up.

Some dentists make mistake of breaking through the membrane in implant surgery.

Moreover, slightly bigger crown will come off because of occlusal pressure (strength of occlusion).

In addition, if implants cannot integrate with bone by osteoinduction that long life implant can, there is a possibility that clearance would be made between the gingiva and implant.

Then a risk of infection diseases gets higher.

If infection disease occurs, an implant will fall out and the treatment will result in failure.

These problems would not happen if the dentist has high clinical skills.

Thus, it is necessary to choose the dentist who has high clinical skills of implant placement to avoid failure of the first implant surgery.

Then how can we find the dentist with high clinical skills?

Being good at advertisement and have an excellent clinical skills is totally different thing

I suggest you to get a recommendation of the dentist from someone such as friends or acquaintances who has had an implant surgery.

They should introduce you a reliable dentist.

It will be fine because people who introduce you to the dentist have received implant treatment by themselves and are sure that there was no failure.

The important thing is not to take whole information in books or advertisement on trust.

So, what should you do if you cannot find anyone who has received implant surgery?

I believe that it is a great idea to get information from a society of people who received the implant treatment.

If you wish to get some information I can tell you e-mail address of people who have experiences, so why don't you ask them directly?

I have been instructing dentists who perform implant surgeries and I have to add that their clinical skills are depending on their talent.

Dentists who are highly talented in clinical skills can be a great doctor, but some untalented dentists cannot hope for progress even if they receive many instructions.

(2) Risk factor No.2. Characteristics of implant body

In general, bio affinity power does not work for the first-generation implant body (bioinert) and it always at risk for fall out.

Next, in regard to the second generation implant body (bioactive) (such as an implant body that coated by a hydroxyapatite with plasma spraying), it cannot be 'one's own tooth' as long life can because high temperature (10,000 to 20,000 °C) that plasma spray makes destroys the condition of hydroxyapatite as explained above.

In short, some failures would generally occur in the long term.

(3) Risk factor No.3. Patients' own problems

In principle, there will be no risk if the patient is healthy.

In case where the patient has periodontal disease, an implant will be placed after the disease is perfectly cured and making teeth clean, for that reason, this case will not a problem.

In case of diabetes, a risk will get higher when first or second-generation implants are used. In general, implant treatment might be avoided depending on how diabetes and its complications progressed.

(4) Regarding the third-generation long life implant (AQB implant), it has been used for many diabetics because the implant has characteristics to integrate with bone by osteoinduction.

Question 12

I understand that long life implant (AQB implant) becomes 'my own tooth' and I think it means that the implant 'integrates with the jawbone and becomes a part of the body'.

I thought that was the one of a kind characteristic, but I found a section 'implant which integrates with bone' in the book on implants.

The implant's name was 'osseointegrated implant' and the book said that metal called titanium integrates with the human bone directly' and explained that 'osseo' means bone in Latin.

I have believed that 'only long life implant can integrate with the bone and becomes one's own tooth' and 'one of a kind'. But is there any other implants which 'can integrate with bone'?

Please tell me the truth.

Answer 12

The explanation in the book is incorrect.

I will state that titanium cannot directly integrate with bone.

This is a general knowledge as shown in the passage from the Journal of the Tokyo Dental College Society Vol.103.No.5 (2003)(Yoshinari M., Department of Dental Materials Science of Tokyo Dental College) "in regard to osseointegration of titanium implant, titanium does not directly integrate with bone, (p. 6 - 7)," "In this way, titanium implant integrates with the bone by forming amorphous structure in the interface, so it is not direct integration with bone (p. 7)." This fact has been confirmed by other papers.

To begin with, titanium is metal and it does not basically have mechanism to integrate directly with the body.

For that reason, technique such as apatite coating on titanium has developed and the apatite coated implants have been widely used.

If titanium can integrate directly with the bone, this kind of development and manufacturing approach does not need to exist.

From this reason, it becomes clear that direct integration of titanium with bone does not exist.