From now on, say “NO” to the conventional method of restoring your teeth. There are better options. All dentists should try their best to improve prosthesis and stop unnecessary tooth extractions and dental implants.

**New Taiwan Konus® detachable hygienic tension retaining prostheses vs Destructive conventional fixed prosthesis**

**Conventional fixed prosthesis** - 40 years of clinical practice has proven that fixed prosthesis can actually further destroy root canal teeth in addition to damaging adjacent teeth. Those in the dentistry profession know that when a dentist restores a tooth with fixed prosthesis, there is a high chance that the tooth itself along with adjacent abutment teeth all get destroyed. In the aftermath, an adjacent abutment tooth may be damaged so that it needs to be root canaled. When a root canaled tooth is severely decayed resulting in non-restorable carious destruction, extractions become the only solution. This is a never-ending costly and unbearable cycle.

From my clinical practice and observations, permanent prosthesis usually last about 4 to 5 years. After about 8 to 10 years: swelling, inflammation, crowns falling off, stench filled pus, severe decay, and loose teeth are all too common. 10, 15, to 20 years of observation, conventional cement glued fixed prostheses act like a toxic installation which slowly poisons teeth causing the most common global disease. This inadvertently promotes unnecessary teeth extractions and helps the dental implant business prosper. Nonetheless, there is usually nothing wrong with the teeth adjacent to the fixed prosthesis. This proves that fixed prosthetic crown restoration treatment for endodontic therapy or periodontal disease is ineffective and deceiving. The result is a repeating cycles of severe decay spreading to adjacent teeth and the foul smell from decayed teeth and prostheses.

Today, with multi-country patents, the innovative New Taiwan Konus® detachable hygienic tension retaining prostheses have solved 5 major flaws caused by fixed prostheses. The main flaws are as follows:

A. Unable to remove fixed prosthesis, years of food debris accumulating in the thin groove between gum and teeth cannot be cleaned thoroughly causing further decay.

B. For carious or restored teeth, dentists nowadays can only improve the outward appearance of the tooth. Not only does the hygiene problem still exist, there is also no improved design to relieve the chewing pressure endured by the restored teeth. Without alleviating the pressure load, the tooth stump succumbs to breakage, crown loosen, and food debris traps in the gum, resulting in tooth extractions.

Addressing fixed prosthesis problems, the **New Taiwan Konus®** is designed to be removable for easy cleaning access. Its design also distributes chewing pressure amongst adjacent teeth to prevent the compromised tooth stump from breaking and new procelain surface from cracking. In addition to solving the 5 issues caused by conventional fixed prosthetic method, the New Taiwan Konus® also overcomes the following problems.

1. Prevents further decay of root-canaled teeth after their very first restoration which solve the prosthetic problem at the very beginning stage.
2. Eliminate deep pocket by sectioning of the root for teeth with mild to medium periodontal disease, and at the same time, create grooves spacious enough for an inter-dental brush to clean. Afterwards, complete the treatment with **NT Konus®** prosthesis. (This incurable bifurcation or trifurcation defect, also known as tooth cancer, which must be extracted with current practice, can now be treated, restored, and its mastication resumed normally.)
3. (With one or two toothless areas, if there are still healthy adjacent teeth, then small tooth, detachable tension retaining prosthesis can be fabricated and restored instead of having dental implants. (This method avoids drilling holes through your gum into your bone in germ infested oral environments which opens up a route for a variety of bacteria. Bacteria infect the deep area in the upper and lower jaw bone. Once in the jawbones, the bacteria can spread to the rest of the body)
4. (As a last resort, if an implant is the only option, then restoring the NT Konus® detachable hygienic prosthesis enables thorough cleaning around the area between gum and implant post; thus, avoiding food debris accumulation and an infection passing to the bone. (Minute amount)

The following section uses pictures to illustrate **5 problems of conventional fixed prostheses**, their main causes, types of NT Konus® detachable prostheses, how NT Konus® solve conventional problems, some essential details in fabrication, and lastly, when using implant as a last resort, benefits of multi-posts vs single post and implant’s hygiene and maintenance concerns.

All the following innovative NT Konus® designs along with **problems of conventional fixed prostheses** are available for schools of dentistry and graduate institutes upon request for further study. I urge all dental students to start learning this method.

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**5 Major Fixed Prosthesis Problems**

1. **Hard to clean cervical gum area and in between ……..**

2. **Unable to remove fixed prosthesis for………..**

3. **With detachable hygienic tension retaining prostheses ……..**

4. **The flange of detachable prosthesis can be…..**

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See Page 21 A

See Page 21 B

See Page 21 C

See Page 21 D

See Page 21 E

See Page 21 F
New Taiwan Konus® Detachable Hygienic Tension Retaining Prosthesis

Why is there a need to invent detachable hygienic tension retaining prosthesis to replace conventional fixed prosthetic? Because it is common knowledge that for every one fixed prosthesis made, there is a high chance that three more teeth are ruined as a result.

People are more aware nowadays that when a dentist restores a tooth, after several years, they will need to restore three more. (A high percentage of people) Sooner or later, the damaged teeth need to be removed and re-fabricated. If the teeth are severely decayed and become non-restorable, patients will need to extract the teeth and eventually have implants done. It's a vicious cycle. It is very frustrating for dentists who care about their patients.

Technically speaking, how safe are dental implants? Is there a better method? If all foreseeable problems (constant decay or irreversible teeth extraction) can be taken into consideration when the first prosthesis is made, wouldn’t it be a perfect solution? Addressing these issues, New Taiwan Konus® detachable hygienic tension retaining prosthesis is a successful innovation that has been clinically proven for the past 5 to 6 years. New Taiwan Konus® has overcome the five major problems caused by conventional fixed prosthesis. Due to its detachable nature, the gum line area surrounding the root can be cleaned thoroughly. Tooth decay is nonexistent due to New Taiwan Konus® cleanliness. There won't be any more repeat restoration processes or pus filled pockets difficult to cure due to periodontal disease. (The main reason for stench is the pus filled pockets)

With New Taiwan Konus® detachable hygienic tension retaining prosthesis, you can prevent the restored teeth from further deterioration. This decreases the likelihood for irreversible situations such as extractions and dental implants. After all, when making an incision and drilling a hole in an environment similar to pig swill, there is a high risk of inflaming the gums and surrounding tissues. (Case in point, a situation where a patient requiring IV injection for two or three weeks and the skin area surrounding the IV needle is inflamed.) (There is a high percentage of cases where gingival sulcus area is not clean. Food debris can easily accumulate in the grooves between tooth and gums. In a couple of days, food debris will turn into spoiled pig swill making the area as toxic and smelly as feces.) The spot where a titanium post is screwed into the jawbone provides a perfect route for the bacteria to bore into. For patients with more than one implant, with years of pig swill accumulating bacteria in the mouth and penetrating into the body, I am really concerned about patient’s immune systems.

We must be proactive in making changes to overcome the 5 damages conventional prosthesis has done to human kind for the past 40 years. We must not let prostheses repeat the damaging cycle continuously - decay, restore, further destruction, extraction, and implant. We must come up with a restoration that is humane, rational, functional, and safe for human use. We don't need restorations that cause patients misery and dentists frustration. New Taiwan Konus® is the scientific-know-how that dentistry school and graduate institutes should incorporate into their dental curriculums so students learn the correct method for tooth restoration. Learning the conventional fixed prosthetic method is a low level technique, which in the long run compounds the problem and wastes time.

See Page 22 A It is hard to clean the gaps between……

See Page 22 B Unable to clean gingival sulcus ….

See Page 22 C Conventional fixed dental crown…..

See Page 22 D 1. If detachable hygienic tension…

See Page 22 E As long as there are healthy….

See Page 22 F Restore detachable hygienic dental…

See Page 22 G For maxillary molar furcation defect…..

See Page 22 H Partial root stumps are saved …

What is the 5 disasters caused by conventional fixed prosthesis? How does detachable hygienic prosthesis improve the restoration structures and eliminate the 5 major problems?
If teeth were restored with this method to begin with, further destruction of them would be prevented.

Reasons:

a. Gum surrounding inner crown can be effectively cleaned.

b. Prevents tooth fracture caused by occlusal force overload.

Stress relief: upside-down U-shaped Rest Arm pieces can distribute and share chewing force among several teeth.

Innovative NT Konus® design:

1. With upside-down U-shape Rest Arm pieces at both ends of the crown (including occlusal surface) laying on adjacent healthy teeth, normal mastication is restored.

2. With tension retaining pins securely placed in the outer crown, chewing function is attained with stability.

3. Casting posts on the inner crown allow tension retaining pins to latch on in order to hold the outer crown.

Criteria to replace implant with Tension Retaining Prosthesis

a. One or two edentulous space

b. There must be healthy teeth next to edentulous space.

c. T-stud metal alloy piece design criteria

It is an outer crown (with porcelain occlusal surface) with add-on Rest Arm pieces. Top with T-stud metal alloy pieces and tension retaining pins. Goal is to prevent dental implant, restore normal mastication, and avoid large reduction on adjacent teeth. (Minor reduction only) (File down very thin layer of enamel surface of adjacent teeth for approximately 0.6 to 0.8mm thickness needed to fit T-stud metal alloy plate. T-stud metal alloy plate have 3 prongs to clasp on tightly)

Detachable Hygienic Tension Retaining Prosthesis

New Taiwan Konus

Type I: All-In-One Double Crowns + Casting Post

→ Tension Retaining Prosthesis

(Design as the very first restoration for incipient furcation involvement)

1. If teeth were restored with this method to begin with, further destruction of them would be prevented.

Reasons:

a. Gum surrounding inner crown can be effectively cleaned.

b. Prevents tooth fracture caused by occlusal force overload.

Stress relief: upside-down U-shaped Rest Arm pieces can distribute and share chewing force among several teeth.

What we have here is the prosthetic mainstream for people all around the world (Several Deans of Dental medicine schools have approved.)

* Dentists can examine the cervical area easily with their naked eyes and probing tools. Decay and fracturing won’t occur. Restorations can be serviced for a lifetime. Only minor repairs are needed. There won’t be any serious decay, extractions, and implants. The major issues with fixed prosthesis are essentially solved.

Type IV: Metal Alloy Piece w/ Tension Retaining Prosthesis

Prosthesis replacing Implant Method

2. Criteria to replace implant with Tension Retaining Prosthesis

a. One of two edentulous space

b. There must be healthy teeth next to edentulous space.

c. T-stud metal alloy piece design criteria

It is an outer crown (with porcelain occlusal surface) with add-on Rest Arm pieces. Top with T-stud metal alloy pieces and tension retaining pins. Goal is to prevent dental implant, restore normal mastication, and avoid large reduction on adjacent teeth. (Minor reduction only) (File down very thin layer of enamel surface of adjacent teeth for approximately 0.6 to 0.8mm thickness needed to fit T-stud metal alloy plate. T-stud metal alloy plate have 3 prongs to clasp on tightly)

The tension retaining pin is made from Australia orthodontic wire which is difficult to break or split off. It is glued to a trough at the top of the outer crown. If it malfunctions, technicians can repair it easily.

Dentists only need to make adjustments on the occlusal surface height and its surface color of the restoration.

Interdental brushes and dentists periodic check-ups along with the aid of machinery can effectively control gum length; thus, with hygienic oral environment, periodontal disease is fully under control. Outer crown tension retaining pins and T-stud pieces can be re-fabricated easily in case of breakage or lost. All dentists need to do is to make a NT Konus® precise impression. Then along with outer crown are sent to technician for repair.
What are the major problems caused by conventional fixed prosthesis?

How does detachable hygienic tension retaining prosthetic design improve the structure and overcome these problems?

Conventional fixed prosthesis

Problem 1 - Hygiene
Unable to keep cervical and neighboring gum clean

Similar to our natural teeth, fixed conventional prosthesis cannot be removed for brushing. This makes it difficult to keep the cervical and surrounding area hygienic. Years of residue accumulation destroy the remaining tooth, as well as affecting neighboring teeth and bone structure. That’s one reason why patients have the impression that “fixing one tooth, breaks three”.

Because of the secured snap-on fastener fabricated in the detachable hygienic tension retaining prosthesis, the outer crown can easily be removed for daily cleaning; thus, there is enough space between the inner crown and adjacent teeth for easy interdental brushing. When a dentist is performing a routine hygienic care checkup, there won’t be a situation where plaque cannot be removed. Oftentimes when dentist think they have done their best, their work is actually incomplete because of unseen residue stuck in a narrow gap. This is a major reason why teeth with fixed prosthesis continue to deteriorate resulting in excessive teeth extractions and implants worldwide.

Severe cases of furcation defect contain ulcerous periodontal pockets causing bone loss and affect the neighboring teeth as well.

Detachable hygienic snap-on prosthesis (Overcame the formation of ulcerous pockets and fracturing of tooth stump)(Can be removed for cleaning. Rest Arms distributes chewing force.)

Conventional fixed prosthetics

Problem 2 - Ulcerous deep pocket
Affecting base of root trunk

Due to the difficulty in cleaning cervical area and adjacent gums, years worth of bacteria and toxic residue sink deep into the gums slowly eroding away the base of tooth trunk developing bifurcation defect. Bacteria and toxins in this enclosed pocket cause a stench and erode away base bone structure rapidly. Soon, these bacteria penetrate blood vessels traveling throughout the entire body causing infections such as meningitis, endocarditis, etc in major organs. At this point, there is very little a periodontal specialists or dentists can do besides cleaning the teeth as best as they can. When facing a problem like this, tooth extraction is only a matter of time. Since too much bone loss compounds the difficulty in bone grafting when implants are considered, most doctors would recommend immediate extraction to avoid further loss of bone and infections of major organs. However, with current dental medical school knowledge and technology, conditions as previously described cannot be effectively treated. What a frustrating and disappointing situation. It is such a waste of time for elite students who spend 6 precious years of their study at dental school.

The New Taiwan Konus detachable hygienic snap-on prosthesis can effectively treat the aforementioned condition. It avoids extractions, drilling holes for implant (may induce infection throughout organs) (Details in later chapters), and can be used for a lifetime.

New Taiwan Konus® Detachable Hygienic Snap-On prosthesis saves teeth. Tooth problems are not a major issue anymore. (Stench and fracture)

Ulcerous deep pocket at base of root trunk (cancerous teeth)(very little dentist can do)

NT Konus® breakthrough development: Save the unsalvageable and cure for a lifetime.

(Root sectioned detachable hygienic prosthesis along with Rest Arm at both ends) (1. Hygienic 2. Share occlusal load 3. Periodontal disease under control)

Even the remaining root cusps can be saved to control periodontitis and regain healthy gum. Remaining root cusps are no longer a waste and exist for a purpose.
Conventional fixed prosthesis problem 3 – Fracture

Dental bridge acts like a lever that loosens the crown and breaks the tooth stump.

Rest Arms pieces cannot be fabricated with fixed conventional prosthesis. Thus, unable to distribute occlusal force. After a prolonged period, tooth stump succumbs to breakage which leads to extractions and implants – a vicious cycle of conventional fixed prosthetic fabrication. On the contrary, removable and hygienic prosthesis with upside-down U-shape Rest Arms balances and distributes occlusal forces preventing tooth stump from fracture. Note: ([If Rest Arms are fabricated with conventional fixed crown, it can cause erosion of adjacent teeth where Rest Arms lie upon within 2 years due to uncleanness.]]

Conventional fixed prosthesis problem 4 – Crown loosens

Dental crown loosens causing food debris to penetrate

Conventional fixed dental bridge and crown behave similar to prying bottle caps off with a can opener. The crown loosens due to torque force of a lever. Loosened crown allows food debris to penetrate through destroying the tooth stump inside causing inevitable extractions. Adjacent teeth may be affected requiring another restoration. And the cycle repeats for every new affected tooth. New Taiwan Konus® detachable hygienic tension retaining prosthesis with upside-down U-shape Rest Arms at two ends eliminates the prying force from biting down, reducing the pressure sustained by the inner crown, thus eliminating food debris penetration due to a loosened crown.

If a large bottle represents a stable fixed crown, a small bottle represents a loosened fixed crown. The two bottles are connected with a lever representing a fixed cemented dental bridge. When chewing food, with stable fixed crown standing still, the loosened crown is pushed downward with every bite. The lever (dental bridge) transfers the force and pries the other end (where the stable fixed crown is) loose. Loose crowns allow food debris to get in and cause destruction of the remaining tooth stump and periodontal disease in the long run.

Conventional fixed prosthesis problem 5 – Food debris squeeze in gum line, Ulcerous pocket

It is very easy for gums of adjacent conventional fixed crown to become inflamed and develop ulcers (especially between the first and second mandibular molars). This is due to food debris along with bacteria seeping into the gum line forming an ulcerous sore. Destruction of bone structure is an inevitable result. NT Konus® detachable hygienic prosthesis with upside-down U-shape Rest Arm pieces can cover up the gum line, effectively blocking food debris from squeezing into the gingival sulcus.

Much easier to have food debris seep into gum line for conventional fixed restoration.

Resolving fixed restoration problems, never having to worry about food debris seeping into the gum, is truly revolutionary for dentistry. Such accomplishment gives a dentist a sense of personal and professional satisfaction.

With every bite and chew, upper and lower cusps cram food debris into gaps between the teeth. This leads to painful ulcerous sores in the gum. There isn’t one dental medical school out there with the knowledge to overcome this dilemma. ([All human teeth are bound with conventional prosthetic method at the moment. Needless to say, this sensible and rational New Taiwan Konus® technology should be taught and incorporated in dentistry education immediately in order to eliminate the outcome of decay dentists have battled for the past 40 years.])

Rest Arm Pieces (my teacher Dr. Wu Wen-Yuan’s patented invention) at both ends of NT Konus® crowns resolve prosthetic issues - fracture and food debris seeping into gum. Root sectioning method takes care of deep pocket problem. Human dentistry now enters a new era.
The major dilemmas when taking care of disabled, bedridden elderly with fixed prosthesis both medically and in daily life:

**Dilemma 1** High risk of succumbing to gingivitis and periodontitis, which leads to infections of major organs such as meningitis, endocarditis, and kidney inflammation etc.

Dilemma 2 Fixed Restoration Before and after major surgery, it is difficult to sterilize fixed dental restorations and keep infections under control which often become life-threatening during and after a major surgery.

Dilemma 3 When the disabled, wheel-chair bound, and bedridden elderly need dental care, it is difficult for dentists to remove their fixed restorations for proper treatment. Most of the time, only superficial treatment is provided. This superficial treatment can be considered deception on the dentists part as they aren't truly remedying the problem. Professionally speaking, it is not a proud moment.

Enhanced German Konus double crown prosthesis with Rest Arms is Dr. Wu Wen-Yuan's innovation. However, there are still problems when the outer crown is fitted over the inner crown – sometimes it is too tight, and other times too loose. It is not stable enough. In addition, this version is unable to resolve issue with periodontal pockets in bifurcation and trifurcations. At best, it allows cleaning of the gum area around the inner crown. Hygiene is still an issue with deep pocket. Following Dr. Wu's footsteps, I continued to modify the design and method. I have developed the New Taiwan Konus® sectioning method to solve ulcerous pocket problems as well as creating a tension retaining technique to stabilize both inner and outer crowns. We are a team working for the benefit of all humans.

Caretakers are able to remove the New Taiwan Konus® detachable hygienic restoration for cleansing. Once removed, it can be cleaned with toothpaste and a sonic toothbrush. All dilemmas mentioned above are resolved. Humankind enters a new era of healthy, rational, and humane oral care.
Mastication is resumed with innovative detachable hygienic double crowns with upside-down U-shape Rest Arms and tension retaining pin to stabilize and secure the outer crown. It is extremely hygienic and it restores normal chewing function. (Almost lifelong) A Dean of a dental school has affirmed that this would be the mainstream of future dentistry.

**Type I : All-in-One Double Crowns+Casting Post**

**NT Konus® Tension Retaining Prosthesis**

**Efficacy:** Can be preserved almost lifelong

1. Mastication restoring of a single tooth leading to the damaging of three other teeth. Outer crown can be removed exposing spacious cervical area for accessible cleaning. Even adjacent teeth can be thoroughly cleaned to prevent any further deterioration.
2. Grooves between inner crown and gum can now be cleaned. Dentists can detect inflamed area with the naked eye or with probing. (It is impossible to see decayed areas with the naked eyes for fixed prosthesis. Even the X-ray does not show anything clearly at the initial stage.)
3. Gums need to be checked periodically to see if trimming them is necessary. Allowing free gingival margin to be exposed makes cleaning and detecting possible inflammation much easier.
4. The compromised tooth stump won't fracture and lead to extractions due to fabrication of Rest Arms at both ends of outer crown. Rest Arms share stress from mastication.
5. After 6 or 7 years, the inner crown can be dislodged to check for microleakage and healthiness of tooth stump. After thorough cleaning and proper treatment, the inner crown is put back. This procedure ensures the remaining tooth stump and its surrounding bone structurally healthy. If this method is applied as the very first restoration, you can almost be sure that the prosthesis can be used for a lifetime, unlike conventional restoration having high percentage of severe tissue and bone erosion leading to inevitable extractions after about 8 to 10 years. This is why tooth extractions and dental implants are widespread all over the world. Restoring New Taiwan Konus® detachable hygienic tension retaining prosthesis can almost guarantee life time usage. No more frustrated endless cycles of corrosion, extraction, and restoration. Mankind can now enjoy sensible, rational, and humane prosthesis.

**Absolute hygienic control.**

**Occlusal force is shared and distributed**

**Fabrication and repair note:**

1. Adjust Rest Arms to an opaque shade to achieve a more natural look.
2. The wear and tear of adjacent teeth due to abrasion of supporting alloy plates can be restored. (*Method: Use indicator paper to find elevation points. Slightly reduce the elevation points in order to create ridges for occlusal surface. Place the resin paste at the shoulder of the tooth with supporting alloy plate. Place the outer crown with Rest Arms back on compromised tooth. Ask the patient to bite down. This allows the tooth with supporting alloy plates to be restored with resin composites. The resin composite will endure the wear and tear instead of the tooth enamel."
3. With tension retaining pin in place, make an accurate impression, which is then sent to technician to re-fabricate. Any broken or missing parts such as tension retaining pin, T-stud, or outer crown can be repaired with a precision driven impression. The impression is then sent to a technician for re-fabrication and returned to the dentist for restoration.
4. a. NT Konus® impression, originated from Dr. Lin Tai-Wu, is a precision driven way of making impressions. It is a technique students must master.
   b. Matching prosthesis and shade of the rest arms with natural teeth, on site, in front of patients, is also a skill students must master.
   c. Occlusal surface height must be adjusted with accuracy. It can't be a mediocre job the way conventional fixed prosthesis is done. (Patients may need to return to dentist office 2 or 3 times for adjustment.)

See Page 23 B
Over the past few decades, neither dental schools nor research institutes have come up with any breakthrough for dental prosthesis. The only solution for them to solve erosion of compromised teeth to prevent the final stage of furcation defect with super grade III lesion is extraction. This is a major reason for excessive and unnecessary dental implants.

Root sectioned and deep pocket eliminated allowing easy cleaning through tunnels. With addition of Rest Arm pieces on detachable prosthesis guarantee the salvation of severely eroded teeth.

Pic 1. This is what an originally severely decayed, odious, pus-filled, and swollen tooth (un-salvageable and must be extracted with current practice) looks like after root canaled procedure and periodontal treatment a month and a half later.

Pic 2. Bone right below bifurcation is severely eroded and reduced.

Pic 3. Underwent endodontic treatment, the post was inserted into the devitalized root canal for added retention. Then root is sectioned to two parts. Now you have two independent and structurally sound partial root posts. Trim the gum surrounding the posts. Make NT Konus® precise impression after gum recovers to a healthy state.

Pic 4,5. Fabricate inner crowns with casting balls at partial root post's positions. Bar connecting two inner crowns can be lowered to become the lever for tension retaining pin to latch on. (Both shoulders of second premolar and rear molars have been slightly reduced to fit supporting alloy plate.)

Pic 6. Rubber cap is positioned in the trough located at the ceiling of outer crown. Two or three rubber caps can be made. Tension retaining pin can also be added.

Pic 7. Furcation deep pocket now becomes tunnels and firewall. Hygiene is important. After about 4 months, damaged bone structure in picture 7 will partially grow back.

Pic 9. Upside-down U Rest Arm pieces need to be painted with opaque color for aesthetics.

Pic 10. No more food debris seeping underneath the gums due to blockage of Rest Arms.

★ ★ If there are healthy teeth adjacent to the somewhat sturdy compromised tooth, then the tooth should be saved at all costs. This also helps to restore its chewing function.

**Type II: Multi-Inner Crowns Rubber Cap Snap-On Prosthesis**

**NT Konus® Tension Retaining Prosthesis**

★ Periodontal disease and deep pocket furcation defect root section method.

★ A truly effective treatment for deep pocket bifurcation or trifurcation periodontal disease. First, section the root trunk. Eliminate the pus filled chamber allowing easy access for oral hygiene. Fabricate multi-inner crowns (2 or 3) with bars connecting them to each other and casting post or tension retaining pin at appropriate places. (Casting post can be added at inner crown or T-post can be added at neighboring teeth.) Location of tension retaining fastener should depend on the strength of sectioned roots and their remaining usage years. (Details in separate discussions)

● After root sectioned, furcation defect pocket is eliminated. Cervical area around inner crowns and adjacent teeth can be easily accessed allowing dentists to perform oral hygienic care and treatment. Unlike conventional fixed prosthesis, oral hygiene and treatment are difficult and deceiving.

See Page 23 C  • Over grown gums around the inner crown can.....
Saving partial root enables fabrication of fastener to secure and stabilize outer crowns.

**Type III : Partial Root Tension Retaining Rubber Cap Snap-On Prosthesis**

**NT Konu® Tension Retaining Rubber Cap Snap-On Prosthesis**

- After root is sectioned, pulp chamber is thoroughly cleared away and root canal is cleansed and scraped (carefully with gentle hands). If tooth stump is too loose, then extraction is inevitable. How to determine if a loosened tooth can be kept? (1) If tooth stump still contains at least half of its original height. (2) When gently shaken, the tooth feels as if there is adjacent bone structure supporting it. Then the tooth stump can be kept. Its main advantage:
  - a. Can add snap-on casting stud on the inner crown to hold and securely grasp the rubber cap in the outer crown.
  - b. Can restore the health of its surrounding bone. After endodontic therapy, tooth stump and the health of its surrounding bone can be restored with increased bone density and increased height of bone structure. If tooth stump is extracted, the healthiness of the bone cannot be restored. Its surrounding bone structure will slowly erode away lowering its height and at the same time, reduce its strength. What seems to be a convenient, easy, timesaving, trouble free solution when extracting, will lead to dental implants. After all, implants require drilling into the bone creating a perfect passage for bacteria to penetrate through and affect the rest of the body. Unless it is absolutely necessary, dental implants are highly discouraged.
  - c. If tooth stump is extracted, then relying only on Rest Arms tension retaining pin to grasp outer crown is not as stable. Having partial root allows fabrication of casting stud which is used to secure outer crown ensuring normal mastication function.
  - d. With added casting stud and rubber cap snap-on fastener, there is no need to seek out technicians or dentists for repair immediately in case tension retaining pin is lost.

- After 4 or 5 years of wear and tear, T-post at the supporting alloy plate may break off. Although the outer crown may not be torn apart by sticky food, its tension retaining pins may become loose. When a restoration only depends on tension retaining pins to grasp ahold of the T-post for security, patient runs the risk of having to find a dentist for immediate repair. If casting ball and rubber cap fastener is also fabricated, in case T-post breaks off, patients still can depend on the fastener holding crowns together. Repair can be sought out later at a more convenient time. Therefore, saving remaining tooth stump should be the most important task if at all possible. It has its purpose:
  1. Keep remaining bone structure, which allows it to return to its healthy state. Otherwise, bone slowly erodes away and height diminishes similar to sinking quicksand, which eventually affects adjacent healthy teeth bone structure.
  2. Stabilize outer crown allowing normal chewing function. Avoid embarrassment of losing T-post.

Saving partial root prevents bone loss due to extractions.
**Type IV: Replacing Implant NT Konus® Tension Retaining Prosthesis**

★★ **Condition:**
1. One or two missing teeth
2. Adjacent teeth are healthy allowing good support.
3. Patients must diligently maintain daily oral hygiene.

★★ **Parts fabrication or repairs due to breakage or falling off**

Fabrication:
1. Dentist trims rest shoulder of abutment tooth. (Upside-down U shape supporting alloy plate area trimming >0.6mm thickness)
2. Trimming of the contact surface area for attached T-post alloy plate. And
3. Trimming of 3 dented area on abutment tooth one for claw nail at the occlusal surface and two for claw nails at both sides where T-post supporting alloy plate is placed.
4. Dentists make precise and detailed NT Konus® impression for technician to fabricate including:
   1. Porcelain covered prosthetic crown with upside-down U-shape Rest Arms for the compromised tooth.
   2. Tension retaining pins, which are glued to the dented area inside at the ceiling of the outer crown.
   3. T-post with prong nails supporting alloy plate.

★★ **Whether you lose or break the outer crown, T-post, or tension retaining pin, all can be re-fabricated with accurate impressions and restored.**

**Estimated years of usage:**

(a) Assuming T-post falls off once every 4 years and can possibly be glued back 4 times, then 4 x 4 = 16 years.
(b) Assuming T-post is eroded and a new T-post must be fabricated and glued back. The above applies, it happens every 4 years. 4x4=16 years
(c) Then it is 16+16=32 years all together. After 32 years, assuming the abutment tooth has undergone root canal therapy and detachable all-in-one double crown prosthesis is in place, then this can be used for another 15 years. 32+15=47. These sets of prostheses can safely be used for about 50 years. More importantly, it won’t cause further destruction of already fragile teeth or erosion of nearby bone structure. There is no need for any more extractions or dental implants. There won’t be any major organ failure due to bacteria traveling from oral pus lesions. Dentists, surgeons, cardiologists will all have peace of mind. This safe and hygienic restoration is what dental medical school should be teaching.

**Note**
1. 1st T-post: 4x4=16 years
2. 2nd T-post: 4x4=16 years
3. Detachable all-in-one double crowns (with casting balls): 15 years (at least)

★After many years, detachable NT Konus® tension retaining restoration only needs minor repairs. Minor problems still exist; however, there won’t be any major catastrophes such as erosion of teeth and bone or infection of major organs…etc as in conventional fixed prosthesis.
With a row of edentulous (at least two missing tooth) space, mechanical support of Rest Arms is reasonable. Choosing suitable locations for tension retaining pins, T-post supporting alloy plates, and snap-on casting ball and rubber caps to grasp hold of crowns complete restoration of mastication function.

In case of severe furcation defect of the molar, dentists can base on how much tooth stump is left (height of the bone) and whether it can be effectively controlled (periodontal disease) in the future to determine if it needs to be extracted completely or sectioned with root sectioning method.

For two consecutive tooth gaps, if adjacent teeth are healthy and structurally sound, then multiple supporting alloy plates can be fabricated. More importantly, it eliminates the 5 catastrophes created by conventional fixed prosthesis:

1. Unclean gum grooves lead to severe erosion of already fragile tooth along with eroding surrounding bone structure. Furthermore, bacteria invade molar furcation causing pus-filled deep pockets. Currently, all dental school is incapable of giving correct advice and training. Immediate extractions are their usual remedy. As common dental knowledge dictates, further erosion and bone loss would cause difficulty in future dental implants.

2. Long-term infections lead toxins and bacteria into the bloodstream threatening major organs such as meningitis, endocarditis, kidney inflammation, etc. When at the beginning stages of infection (when the tooth is not too loose and chewing function is not compromised), according to doctoral vows, “first, do not harm”, dentists should find the best way to cure, not to resort to absurd ineffective practices (immediate extractions and implant). To draw an analogy, it is similar to orthopedists trying to connect two broken bones together and restore their functions. Treatment should not be profit driven. It should be in the best interests of the patients’ health.

Left picture illustrates aftermath of conventional fixed prosthesis removal.
Full Mouth (Detachable Hygienic) Tension Retaining Rubber Cap Snap-On Dental Crown and Dental Bridge

A civilized prosthesis

A safe and hygienic prosthesis for bed-ridden, wheelchair-bound disabled

The benefit of detachable hygienic tension retaining rubber cap snap-on prosthesis for bed-ridden disabled elderly:

a. In the hospital
b. In the retirement home or care center
c. At home

★★ Full Mouth Detachable Hygienic Retaining Snap-On Rubber Cap Prosthesis:
1. Check and find or establish abutment teeth with enough strength. If there are insufficient abutments in the area, then dental implant can be considered for added support and stress relief. (Should take shock absorbing, stress breaking, relieving, and cushioning into considerations.)
2. Select appropriate location for casting ball snap-on rubber cap by evaluating healthiness, stability, and years of usage of the abutment tooth
3. Bonding outer crowns should be precise, accurate, and cautious.

★★ Under normal circumstances, this type of full mouth detachable hygienic New Taiwan Konus® dental bridge can be used for a lifetime. Because:
1. Caretakers can perform oral hygiene care with sonic brush and inter-dental brush. (Erosion of abutment and surrounding bone is highly unlikely)
2. Dentists can take off outer crowns and perform effective treatment at bedside.
3. A row of welded outer crowns have their occlusal force shared by 2 or 3 abutments located at left and right side of tooth. (Highly unlikely to break)(Stress can also be shared by Rest Arm pieces)
4. With teeth facing inevitable extraction, the procedure can be conducted by removing the outer crowns. Dentists can extract the tooth at bedside, apply antibiotics, and stop the bleeding with cotton balls. Outer crowns can be put back and normal food intake can be resumed immediately. Unlike conventional prosthesis, where it is a time consuming process, it is also extremely difficult to file, cut, and dislodge the prosthesis. Furthermore, the extraction and treatment would probably take place several days after the prosthesis is dislodged. After that, patients can’t enjoy food due to being toothless. (The design of conventional fixed prosthesis is very primitive and inadequate for today’s longevity of life.)
5. If deceased, he/she maintains dignity with normal aesthetic appearance at funeral.

★★ Full mouth tension retaining prosthesis (snap-on rubber cap) is easily removable for caretakers to clean the area including gum line around inner crowns and surface of outer crowns. The bed-ridden, sick, and disabled elderly no longer have to suffer a foul stench emanating from their mouth. They also no longer need to fear infections to major organs due to toxic bacteria travelling through blood circulation. No more frustrating consequences bring by restoration of a fixed denture. Dentists no longer feel helpless. Years before the innovation of NT Konus®, the pus-filled lesions and rotten stench of conventional fixed prosthesis (including implant) really bothered patients and anyone in their vicinity. Accepting money from patients without being able to complete their service to a satisfactory level is a humiliation to the dental profession.

◆ If the fixed prosthesis (cement or screw) is restored after a dental implant, it becomes an even more frightening situation. With gum infection and bone erosion untreated for many years, when a patient underwent chemotherapy, blood spewed from the gums staining pillow. Blood spewing out the gums tends to occur upon waking up in the morning. Furthermore, inflammation of gums around implant posts is difficult to heal. It is troublesome for patients and stressful for caretakers. Incapable of taking care condition as such, conventional fixed prosthesis is truly an absurd design that lacks the foresight. It is this kind of absurd dental design that renders dentists helpless.

Feasibility analysis of the new technology:

- Bedridden, sick, and disabled elderly can easily clean around inner crowns and surface of outer crowns.
- Bedridden, sick, and disabled elderly can apply antibiotics, stop the bleeding with cotton balls, remove and replace outer crowns at bedside.
- Bedridden, sick, and disabled elderly can resume food intake immediately after extraction and treatment of tooth. No more time consuming extractions, treatment, and recovery processes.
- Bedridden, sick, and disabled elderly can maintain dignity and aesthetic appearance without the help of dentists.
- Bedridden, sick, and disabled elderly can easily enjoy food and normal daily activities without long-term dependency.
- Bedridden, sick, and disabled elderly can continue their normal life without the need for hospitalization and expensive surgery.
- Bedridden, sick, and disabled elderly can save a lot of money for other essential expenditures.

Conclusion:

The new technology of Full Mouth Detachable Hygienic Tension Retaining Rubber Cap Snap-On Dental Crown and Dental Bridge complies fully with the concept of humanistic care. It is a rational and humane design more appropriate for human’s oral hygiene care. It is truly a blessing to bed-ridden, disabled, and wheelchair-bound elderly.
Snap-On Rubber Cap NT Konus®
Prosthesis for incisors

Below is a picture depicting the conventional method of restoring an incisor with a reinforced post. While arguably pleasing in appearance, the tooth is significantly weak and does not have the strength and durability it needs to function in mastication. (Missing support and stress relief design) This conventional method taught by dental school usually ends up succumbing to loosening of posts or breakage of root stump, an inevitable outcome after about 10 to 15 years. This type of substandard design needs immediate improvement.

Detachable hygienic New Taiwan Konus® incisor prosthesis with supporting alloy plates on the sides eliminates:

1. Tooth fracture, breakage, and loosening problems
2. Cervical region hygiene and inflammation problems.

With new improved NT Konus® design, just a simple snap-on rubber cap is enough to hold inner outer crowns together. This solves the cervical region inflammation problem. Furthermore, there is a supporting alloy plate added to relieve stress and prevent breakage of the fragile tooth. This is a state-of-the-art worry-free design which meets medical standards.

Due to uneven occlusal force and inflammation of gum, not only this incisor has shifted its position, it is also very loose. Under current practice, this tooth must be extracted and restored either with implant or 3 unit dental bridge which requires large reduction on adjacent healthy teeth. After about 8, 9, or 10 years, inadequate tooth structure of abutment teeth leads to tooth decayed and the cycles repeat for every damaged tooth. To summarize the main cause: 1. Food and bacteria trapped underside the crown and bridge. 2. No stress relief design to distribute occlusal force. Detachable NT Konus® with supporting alloy plate has solved these problems.

In the early days of my practice, I used Dr. Wu Wen-Yuan (German) Konus (single) + Rest Arms to add support and relieve stress for the incisor.
1. Allow thorough cleaning. Prevents foul stenches and rotten food debris. Prevents tooth breakage and additional damage to adjacent teeth.
2. Stress caused by occlusal (biting) force is shared by several teeth. There are also Rest Arms (laid on adjacent healthy teeth shoulders) to share stress preventing breakage. This is a stable restoration which can be used for a lifetime.
3. With precise NT Konus® impression method and on-site opaque coloring, aesthetic satisfaction can be achieved.

Incisor of an elderly no longer suffers consequences of conventional fixed prostheses — loose and shaky, foul-smell, and pus-filled erosion. Also, when resting eternally, he/she keeps a natural look at funeral.

Without Rest Arms at both ends, this tooth succumbs to breakage, fracture, loosening, or falling off.
Disasters caused by Implants + Fixed Prosthesis

In terms of hygiene, maintenance, and stress relief, fixed prosthesis + implant have proven to be unreliable and problematic. Change and improvement are necessary.

Complications caused by Implant + fixed prosthesis:

1. Food and bacteria trapped around cervical area or underside of fixed prosthesis are difficult to reach for cleaning especially for mandibular molars.
2. Due to erosion of bone structure caused by periodontal disease, when bone density or volume is inadequate, bone grafting is required. However, the relationship between new bone growth, receptive bone, and its durability are of concern. The strength of the new bone foundation in holding the implant post is questionable too.
3. For bed-ridden, disabled, and wheelchair-bound elderly, it is extremely difficult to remove fixed prosthesis for cleaning. After a prolonged period, food and bacteria trapped in the gums where the implant post is causes gum to spew blood uncontrollably. Elderly patient often wakes up in the morning with a mouthful of blood and blood stains covering his pillow case.

This patient is 50 years old with pancreatic cancer. After chemotherapy (1st right: implant central incisor, 2nd right: natural lateral incisor), blood spewed out of his gums. With full blown periodontal disease and his aforementioned two teeth having the most serious problems, every time after his chemotherapy, the patient felt extremely fatigued and weak. He said he dreaded waking up every morning. Waking up to a mouth full of blood and seeing his pillow case covered with blood really frightened him. I managed to remove fixed dental bridge, extracted severely loosened central incisor implant post and the natural lateral incisor. When I cleansed the wound, I discovered the erosion had already penetrated his sinus. Then I realized natural teeth or implant, as long as it is cemented, without removable capability for hygienic care, it eventually rots and depletes bone structure. Currently, this deceiving, mind-boggling practice is a ticking time bomb (implant+fixed prosthesis). This disastrous prosthesis is what the general dentistry practice does for restorations. Such a destructive restoration over long periods is no different than slowly food poisoning our body. With these thoughts in mind, isn't it time for highly prestigious dentists who went through rigorous medical school training to stop such senseless restorations immediately and find an alternative?

One of the major infections occurs at the gum incision and its surrounding tissues. This eventually may lead to gingivitis. It is like having an IV needle through the skin directly into the vein where the peripheral IV many lead to infection if left too long. Unless an implant is absolutely necessary, hygiene is of vital important at the incision area. Past several decades have already proven it is difficult to keep natural teeth as well as fixed prosthesis clean. Therefore, it is extremely important to have a detachable prosthesis in order to attain highest cleaning standard. This is even more important for the elderly who are sick and disabled. Low level crude fixed dentures are a surefire way for sick and disabled elderly to suffer the worst case oral conditions. Is this what the so-called erudite and supposedly skillful dental professionals intended? They know its disastrous consequences but are unable to make improvements on century old adversities. (These past few decades, dental schools and institutions were all aware the consequences of conventional fixed prosthesis. However, no one has come up with a rational and sensible improvement. For the past 40 years, schools teach the same material year after year – a restoration which damage teeth and bone, or wasting time on writing and publishing papers on tedious issues.)

1. When implant + fixed prosthesis is restored for the second molar, difficulty in cleaning may lead to swelling and inflammation of the tissues. After a long period of time, the symptoms may lead to gradual damage of the jawbone causing bone loss. (Of course the titanium post won’t be eroded.)
2. Other problem; all occlusal force concentrates on this molar. Too much load may lead to damage of the jawbone.
3. Oftentimes, in the process of implant, pre-existing problems of jawbone or partial failure of bone grafting is the main reason of sunken bones shown in the X-ray. Implant post can still be inserted; however, detachable hygienic crown and bridge should be restored to keep incision and surrounding area clean. This prevents microbial infections invading the entire body. Shock absorbent for crown and bridge on bone should be taken into consideration as well.
Pic A: Dental implant in its early years. It is relatively reasonable considering it satisfies the basic guidelines of keeping gums and cervical area underneath clean.

Pic B, C: Nowadays for aesthetic reasons, an implant is drilled and screwed deep into the bone defying basic guidelines of periodontology. How can anyone guarantee the hole at the base of the bone won’t trap bacteria and food debris over the years? Perhaps it is satisfactory for 3 to 5 years. What about after 7, 8, or 9 years? Will it still be healthy? You can’t be proud of yourself if it is satisfactory for a short time of 5 years. You must use adjacent healthy teeth as a standard of comparison.

★★ Pic C, C-1: What is more absurd is the unnecessary implant of molars for aesthetic reasons. Not only does it defy periodontology basic hygienic rules—keeping gums shallow and short, drilling a hole and applying a long and wider base post is a surefire way to cause erosion after a prolonged period. Eventually accumulation of bacteria leading to gum inflammation will turn into full-blown periodontal disease. This piece of illogical dental work will counter-attack with profound bleeding in the mouth upon waking up in the morning. There will be so much bleeding that the pillowcase will be stained with blood.

As for relieving stress from vertical biting force and lateral force, tripod multi-legs implant method is more advantageous than midpoint single post implant method (in terms of biomechanical resistance, surface bonding of bone tissues and bone itself). With added support from two titanium posts situated close to the rigid cortical bone and the solid center cortical bone between two posts at the top, it definitely provides more strength and stability than midpoint single implant post sitting largely at the soft, fine trabecular (spongy) bone.

This titanium Blade Type plier I have acquired in the early years of my practice can easily cut 2, 4, 6, or 8mm long titanium screws (at the thread) of any desired length. Cutting about 1.8mm ~ 3.0mm at the thread has led me to develop multi-posts endosseous implant method. This simple, hygienic, method without a large amount of bone grafting required is a more logical method in terms of stress relief, hygiene, and easy future maintenance.
Whether the tripod implant method is used with 3 or 4 legs, its selection of screw post locations, bone condition along with elimination of stress break are all clearly planned. They are also easily adaptable when compared to midpoint single post implant method. Top with detachable hygienic prosthetic restoration, and it can maintain the health and hygiene of implants for a long time.

1. Ease of cleaning with inter-dental brush, sonic brush, and self-produced suction (negative pressure).
2. By distributing the stress and pressure, load balance is achieved.

As for relieving stress from vertical biting force and lateral biting force, tripod multi-legs implant method is more advantageous than midpoint single post implant method (in terms of biomechanical resistance, surface bonding of bone tissues, and bone itself). With added support from two titanium posts situated close to the rigid cortical bone and the solid center cortical bone between posts at the top, it definitely provides more strength and stability than midpoint single post implant sitting largely at the soft, fine trabecular (spongy) bone.

1. There is no need for bone grafting, small posts can be easily placed at the alveolar crest bone. With more available space to choose at the alveolar crest ridge, multi-posts can be implanted in staggered positions. Multi-inner crowns with levers connecting each other conjugated as one entity can be placed over the small implant posts. To complete the implant, restoration with connected detachable rubber cap snap-on multi outer crowns (as one unit), along with Rest Arms at both ends. This restoration reduces (1) vertical stress from mastication; and (2) prevents a pendulum effect from lateral force.
2. Outer crown can be removed allowing easy cleaning of multi-inner crowns with inter-dental brush and sonic brush.

NT Konus® evenly distributed posts implant method:
1. The location for titanium screw posts on bone can be easily chosen and assigned.
2. The connection of posts conjugating all posts as one unit enabled support, distributes occlusal force evenly, and alleviate stress break.
3. If neighboring teeth are still healthy, then laying upside-down U-shape Rest Arms on healthy teeth shoulder alleviates stress and prevents prosthesis from tilting and swaying.
4. Height of levers connecting each small inner crown should be appropriate, allowing inter-dental brushing and sonic brushing for necessary hygiene control. All the above mentioned are key elements of designing rational and ideal implants.
5. Tightness of the tension-retaining pin is self-adjustable. There is no need to waste time scheduling a dentist appointment for assistance.

Bone mass no longer exist
Bone mass still exist with biomechanical support, able to store and release nutrients, and allows blood and bone marrow to circulate.
Due to the mobile removable characteristic of the prosthesis, the base for implanting posts can be widened with the use of alveolar crestal bone.

With an enlarged base for post locations, the center tooth sockets where decayed teeth used to exist should definitely be avoided. Positioning posts at the alveolar crest cortical bone around the tooth sockets forming multi-legs support provides a sturdy entity with balanced distribution of occlusal forces.

Placing multi-inner crowns connected by levers over the implant posts creates a sturdy multi-legs support entity enabling occlusal load to be evenly distributed. It is easy for dentists to perform checkups and treatment allowing for good hygiene. Overall, it is a well-thought-out and humane implant design. This design is especially convenient for the bedridden and disabled elderly. The conventional fixed prosthesis is crude, outdated, without foresight, and without a good remedy for its consequences. Conventional fixed prosthesis can be likened to installing a pus-filled landmine in the mouth waiting for it to explode at old age.
For the toothless area at the lower left of the picture above, the alveolar crest is very thin and narrow. With insufficient thickness and depth, only a diameter of $\varnothing$ 2.5mm～$\varnothing$ 2.8mm and length of 4~8mm posts are suitable for use in this case. Therefore, positioning posts in a staggered manner as in tripod effect, placing levers connected multi-inner crowns over the posts, and fabricating a connected multi-outer crown (one occlusal surface entity)(with precise welding) with snap-on rubber cap are the essential elements to complete a rational, hygienic, and load balanced dental implant restoration.

Appropriate height and width between each inner crown allows easy cleaning with inter-dental and sonic brush. Cleaning can be done by caretakers or patients themselves.
5 Major Fixed Prosthesis Problems

New Taiwan Konus® Detachable Hygienec Tension Retaining Prosthesis

Selection of Posts Locations & Special Designed Detachable Hygienic Prosthesis

Page 21 A

1. Hard to clean cervical gum area and in between teeth causing further decayed (Images A)
2. Periodontal disease invaded roots causing severe furcation defect. Dentists are at their wit's end. (Images A)
3. Excessive occlusal force on fixed prosthesis (without Rest Arms design) may easily cause fracture of tooth stump. If Rest Arms laying on abutment teeth cannot be removed for cleaning, then the contact surface of abutment teeth will succumb to erosion.
4. Fixed dental crown and bridge act like a can opener at work, with a lever as handle(bridge) prying loose the cap(crown). Loosened crown provides a passage for bacteria to penetrate through causing stench, decayed, and destruction of tooth stump. (See Image B)
5. Food debris leaks into underside of dental crown causing gum inflammation and bone destruction periodontal disease.

Page 21 B

1. Unable to remove fixed prostheses for cleaning resulted in erosion for a prolonged period. Pus, germs, bacteria, and toxins travels via blood vessels invading all major organs throughout his body.
2. Even during an emergency surgery, it is difficult to keep oral cavity sterilized.
3. For bedridden, disabled, and wheeled chair bound patients, it is hard for caretakers to clean teeth and dentists to provide proper treatment.

Page 21 C

1. With detachable hygienic tension retaining prostheses, gum surrounding the area and its neighboring teeth can be cleaned on a daily basis preventing the tooth itself, adjacent teeth, and bone underneath from further destruction. If this method is used as the first set of restoration when the problem first occurred, it is nearly impossible to suffer more erosion due to hygienic problem.
2. T-stud metal alloy with prongs is glued on adjacent tooth with resin cement making it difficult to fall off.
3. If any parts are fallen off or broken, repair can be easily done with re-fabrication made from precise NT Konus® dental impression by the technician.

Page 21 D

1. The flange of detachable prosthesis can be expanded in order to take advantage of alveolar crestal bone. Thus, more base available for implant. (Similar to tripod with multi-legs providing occlusal surface more stable support)
2. Small implant screws can be drilled into the expanded stable cortical bone. This also avoid uncertainty of bone grafting and failure due to infections.
It is hard to clean the gaps between the gums and prosthetics. After a prolonged period, inflammation and accumulation of pus filled pockets are inevitable. Not only does it destroy the tooth roots underneath the prosthetics, it also progressively destroys the surrounding bone. Bacterial toxin gets into blood vessels, which circulate the body infecting every possible organ with possible diseases such as meningitis, endocarditis, etc. It is one of the major sources of infection that doctors fear.

Unable to clean gingival sulcus (space between gum and teeth) thoroughly, years of infection have already invaded the furcation at the root trunk and formed a pulp chamber. This is essentially “tooth cancer” in which all dentists would advice immediate extraction followed by a dental implant. What about the consequences of the implant?

Conventional fixed dental crown prosthesis with abutment teeth on two adjacent sides can be interpreted as a can opener theory in which the prosthesis acts as a fulcrum and the abutment teeth on each side act as levers. When biting force lands unevenly on one end of the lever (abutment tooth), it is applying force at one end of the lever to loosen the cap (the prosthesis), thus, providing passage for bacteria and toxins to seep through resulting in destruction of tooth roots, abutment teeth, and at times affecting additional neighboring teeth.

1. If detachable hygienic tension retaining prostheses are used from the very start, it is almost impossible for teeth to deteriorate into irreversible situations. Tooth extractions and dental implants as a result of uncleanness of gingival sulcus and surrounding area would be avoided. Dentists and patients can effectively control periodontal disease.

2. To solve the destruction accrued from chewing force, an upside-down U shape Rest Arm at the end of the compromised tooth is fabricated to gain support from neighboring teeth thus relieving stress on the compromised tooth. Consequently, cracking and breaking of decayed teeth won’t occur. With this design, extractions and dental implants can also be avoided.

As long as there are healthy teeth next to the edentulous space, NT Konus® detachable prosthesis can supersede implants. The prosthetic crown is fabricated with an upside-down U shape Rest Arm at both ends which can lay on shoulder of the healthy teeth. Chewing function is then resumed normally. In addition, there is a T stud tension padlock alloy plate glued to the side of healthy teeth. The prosthetic crown is now secured in place without the concerns of being lifted by sticky food. Another advantage includes not having to drill a hole in the jawbone for implant which avoids the creation of a passage for bacteria to invade. Dentists only need to worry about filing down small area on healthy teeth and making precise impressions. All the other jobs of constructing custom made restorations and dental appliances belong to dental technicians. Even if patients break or lose parts of restoration, repair can be easily done with another precise impression sent back to technicians to re-fabricate. (More details in later chapter)

Restore detachable hygienic dental bridge right from the start. Area between gum and prostheses can be thoroughly cleaned. Rest Arms for the compromised tooth relieve stress and distribute occlusal force to its neighboring teeth. This prosthesis can be used for a lifetime. No further tooth decay, no more extractions, and no more implants. Only minor repair is needed.

For maxillary molar furcation defect, this tooth supposed to be extracted. However, after applying the New Taiwan Konus® root sectioning method to cut open at the furcation eliminating the pus filled pocket, this area becomes easy access tunnels cleanable by inter-dental brush(similar to firewall). Restoring with multi-inner crowns and detachable outer crown with add-on upside-down U-shape Rest Arms at the side, a tooth is not only saved, its chewing function is also restored, and it can be used safely for a long time. It is beneficial to mankind. A dentist is at peace with their work when they are truly helping their patients.

Partial root stumps are saved for a reason. An Inner crown with a stud can be set on top of the stump. Outer crowns with rubber caps can be pressed onto the stud in order to bind them together. Gum area surrounding root stumps can be cleaned; therefore, effectively prevent them from further deterioration. Health is restored for gums and tooth stumps enabling healthy neighboring bone structure. On the contrary, if root stumps are extracted, bone surround this area recedes as time progresses affecting adjacent healthy teeth as well. (More details in later chapter)
Distal end of mandibular second molar can now be kept clean since outer crown is removable. Cervical area around inner crown can be brushed and cleaned. Gum at the distal end will not be inflamed. Area adjacent to first molar can also be cleaned thoroughly. Removal of outer crown also allows dentist to effectively care for the cervical.

Conventional fixed prosthesis where dentists are unable to treat their patients effectively are deceiving. After several years, severe cases of decay lead to extractions or even worse, dental implants. Implants are a perfect man made passage for bacteria to get into organs to cause infections.

Due to financial reasons, instead of constructing three crowns in a row, patient resorted to restore only one NT Konus® crown for the last molar. Since its nerve is vital, tension retaining pins are added to secure the outer crown. (Snap-on button and rubber cap can't be used in this case.) Removable outer crown allows easy cleaning for distal surface of inner crown. Moreover, it allows easy access for dentists to perform hygiene work effectively. Unlike conventional fixed restoration or even our own natural tooth, hygienic work for distal surface of molars is extremely difficult and mostly ineffective which inevitably leads to furcation defect after a prolonged period (especially at old age.) When outer crown is removed, area between 1st molar and 2nd molar is wide enough for thorough hygienic work. Keeping this area clean means healthy gums and tissues and free of periodontal disease. Whereas majority of populations with hard to reach gaps between molars, these gaps are the perfect passage for pus-filled, smelly as pigsty, stench, ulcerous pocket to form. Removable outer crowns allowing easy access to hygienic work means humans no longer have to suffer pigsty smelled bad breath. It is a major step toward oral health which brings better lives for all human being.

With Rest Arms share the occlusal force, NT Konus® restoration is much less likely to invoke tooth fracture compare to conventional fixed restoration.

Overgrown gums around the inner crown can be trimmed periodically for easy examination to ensure healthy gums and teeth. This provides essential oral hygiene (Similar to clean and healthy undersides of fingernails)

Daily hygiene care plus periodic check-up with dentists ensure healthiness of gum and teeth.

The wear and tear of supporting alloy plate on abutment tooth can lead to increased acidity of tooth. This can be filed and restored with resin composite. (Refer to teeth surface restoration method.)

1. Tension retaining pins can be constructed from impressions. At the same time, technicians can accurately position and glue the pins. When the crown and T-post supporting alloy plates are done and sent back to the dentist, the dentist only needs to clean the abutment teeth surface and glue the T-post supporting alloy plate onto the teeth (position3 prong nails at 3 dented area). Then the prosthetic crown can be accurately placed in position. Once prosthesis is restored, check for how tight fit between Rest Arms and T-post alloy plates.
2. Dentists need to check and possibly file down to adjust crown’s occlusion height.
3. Have patient stand one meter away from the dentist. Ask the patient to talk while the dentist checks for consistency of color against real teeth. Adjust color of restoration on the spot. (Dentists must own opaque adjustment tools.)

A. Change conventional abutment tooth (first premolar) to All-In-One Double Crown + Casting Post NT Konus®prosthesis. Extend the supporting Rest Arm to canine which alleviating force endured by abutment tooth, at the same time, preventing stump fracture. 2nd molar is sturdy and healthy enough. The next step is to fabricate a T-post supporting alloy plate for the 2nd molar. However, concerning with occlusal forces overload on two missing teeth area, additional supporting plate is fabricated and extended to wisdom tooth. This extension not only shares occlusal forces, moreover, it can prevent any food debris getting stuck between teeth. This whole area’s occlusal force and leakage of food debris problems are solved – the ultimate goal of rational, hygienic, and sensible solution for 21st century oral health care.

B. A suitable location for casting ball snap on rubber cap can be determined by dentists after examining the stability of the root stump and its possible years of usage.

C. Upside-down U-shape Rest Arms should snugly fit on shoulder of abutment teeth. Otherwise, Rest Arms hanging in the air cannot share chewing pressure properly. This may lead to overloading of other abutment tooth causing possible damage or fracture.

D. Adjust color of Rest Arms and supporting alloy plates as close to natural teeth color measured at one-meter distance.