Vol: 3. Issue: 02. November 2016

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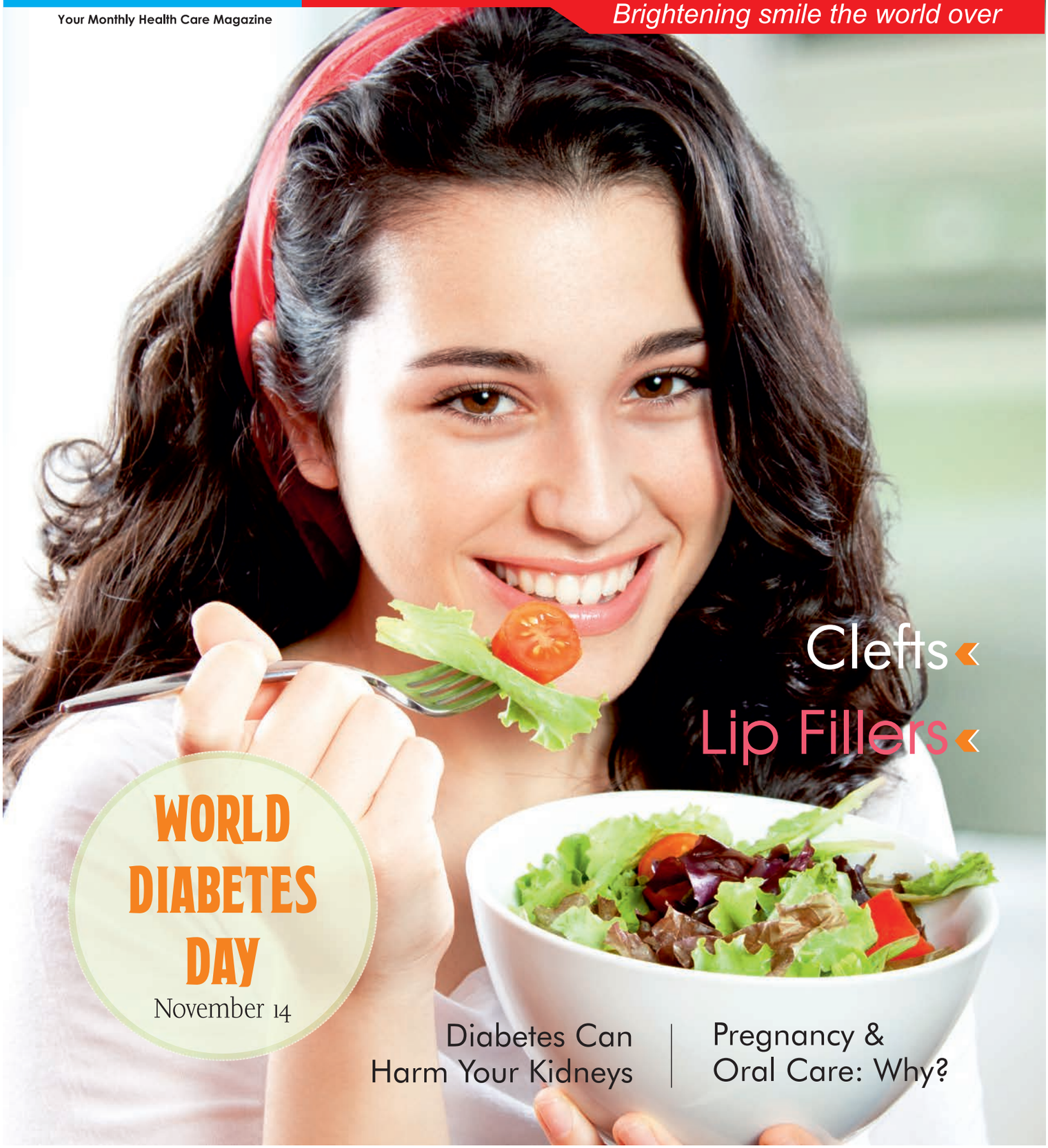
THE DENTCARE

Your Monthly Health Care Magazine

Brightening smile the world over



Clefts

Lip Fillers

WORLD DIABETES DAY

November 14

Diabetes Can Harm Your Kidneys

Pregnancy & Oral Care: Why?

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THE DENTCARE

Your Monthly Health Care Magazine

Brightening smile the world over

EDPRESS

Make November your reason to awaken the child within!!

There is so much we ought to learn from them and so much more, we need to give back to them as well.

I reaffirm that we should, without fail.

The “Children's” edition of The DentCare is dedicated to achieve this end.

What surprises me though is that both Children's Day and World Diabetic Day share a common platform for celebration, especially when I thought that the only visible link between the two was a “sweet tooth”!!

Humor apart, the spot light is without doubt on Diabetes and Kidney disease.

Parents need to be alert to catch their children young while watching them grow and ensuring that they get across to the right 'kid stop'.

For Parents-to-be, oral care is a must know. Being dent aware during pregnancy is equally essential. Know more on clefts is valuable information for you. We would like to introduce you to the write food technique through “alphabetic eating”. Food for thought, I must add.

Awaiting your discovery is worthwhile insight on breathlessness and an amazing way to say no to…

We have not disappointed the 'smile professional' too, by offering a novel clinical view on implants and providing advanced digital solutions from our world renowned stable.

The lasting moment that has made our spirits bright is embellished in these pages. Find out how?

Dear Reader, as you relish our delightful literary platter, we urge you to dent go this season or make a conscious effort to enjoy a smile trip in God's own, even as you search for ample occasions to relive your waning innocence.

Yours truly,

Prof. (Dr.) George P. John

Owner, Publisher & Printer, Mr. John Kuriakose has printed at Fivestar offset Printers, Nettoor, Cochin-40. Published from DentCare Dental Lab Pvt. Ltd., Nas Road, 130 Junction, Muvattupuzha, Ernakulam, Kerala, India 686661. Edited by Prof. (Dr.) George P John.

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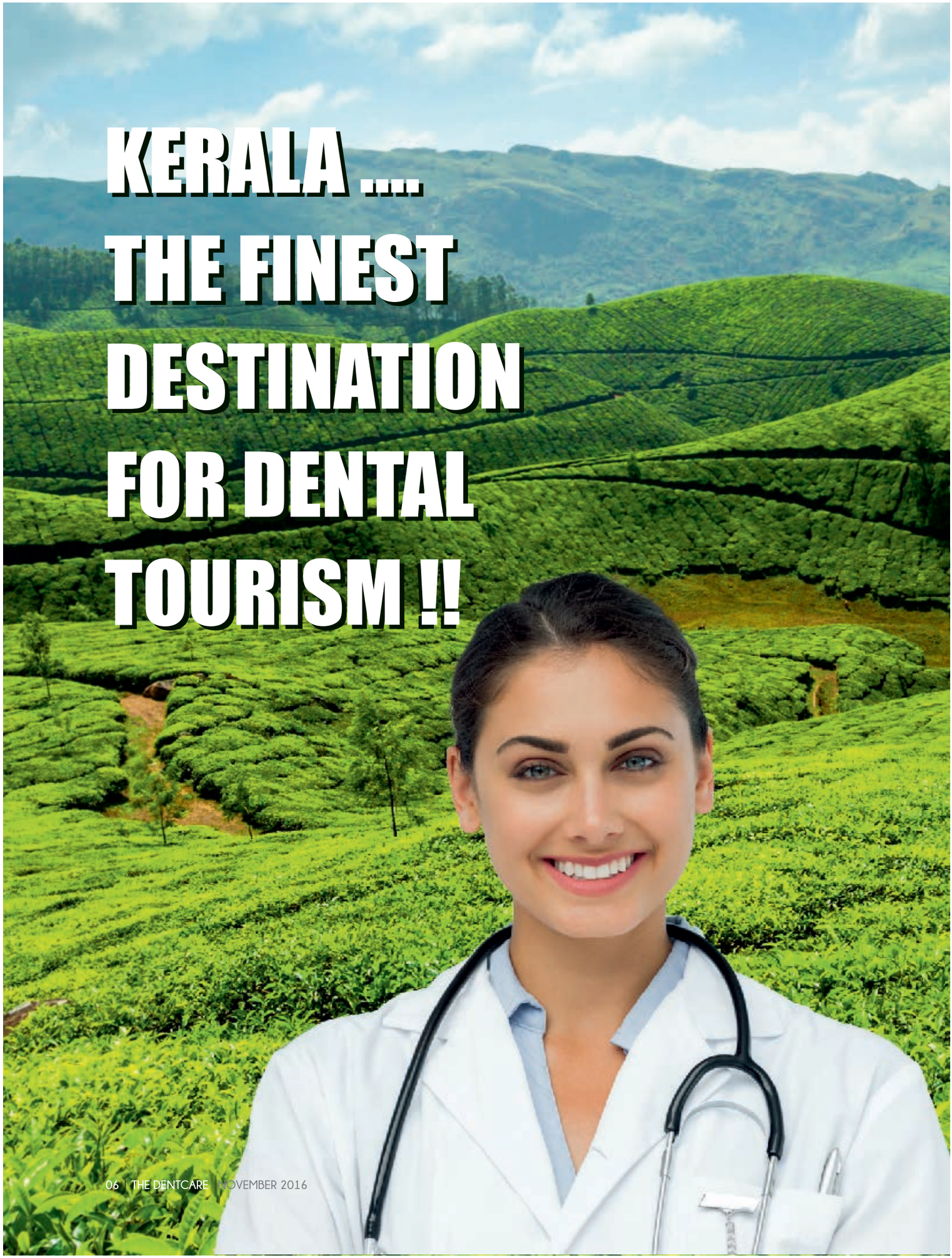
KERALA .... THE FINEST DESTINATION FOR DENTAL TOURISM !!



Dr. Mahmood Moothedath
Head
Department of Oral Health
Qassim University
Kingdom of Saudi Arabia

People all over the world have been visiting India to explore its scenic beauty. Nowadays these tourists are not only here for sightseeing, but for availing reasonable dental treatment while they travel.

Dental treatment is truly expensive abroad and getting treated without dental insurance can be a complex task. So tourists abroad are now looking at the option of getting dental treatment done while they are touring.

Dental tourism has come out as a breathing space for those seeking low cost dental treatment and India has emerged as a major tourist destination for dental treatment within the means.

Dental tourism involves individuals seeking dental care outside of their local healthcare systems and may be accompanied by a vacation. Dental tourism is a subset of medical tourism. In Europe, it is commonly known as a dental holiday or else, dental vacations.

Dental tourism is growing worldwide as the world becomes more interdependent and competitive. Globalisation has made advances in techniques, materials and technologies cross borders, enabling dentists in "developing countries" to provide dental care at significant low cost when compared with their peers in the developed world.

Reasons for travel

Medical tourism is often generalized to travel from high–income countries to low–cost developing economies. In a similar way, the dental tourists' prime reason of travel is also for price considerations. Apart from this, other reasons of travel for health care include differences between the funding of public healthcare or general access to healthcare.

Pricing and Quality

Dental tourists travel chiefly to take advantage of lower prices. Reasons for lower prices are many: dentists outside the “developed world” are able to take advantage of much lower fixed costs, lower labor costs, less government intervention, lower education fees and expenses, lower insurance costs, equally competent materials with lower cost etc.

Much of the bureaucratic red–tape that engulfs businesses in the developed world is eliminated in developing countries and dentists are free to focus on their trade – dentistry. Because of this, the procedures such as dental implants, porcelain veneers and much more cosmetic treatments which are simply financially out of reach for many people in the developed world are made affordable.

Much of the debate about dental tourism and medical tourism in general centers are on the question of whether or not price differentials imply quality differentials.

Another concern is whether or not large scale dental procedures can be safely completed in a relatively short, "holiday-sized" time period. Another issue is the lack of an independent inspection committee for dental similar to the Joint Commission International for medical.

Visitors coming from US, UK and other nations expect much better savings on dental costs. They can set aside substantial amount of money on most dental treatment procedures, even after the totalling on travel, lodging etc. Pricing and qualifications of the dentists may be researched through websites or by contacting the dentists.

Process flow

1. Traveller either contacts tour operators or surgeon directly. The queries are answered and schedule is fixed.
2. Tour operators arrange all the documents and facilitate the trip.
3. Traveller comes to India and undergoes the treatment.
4. Post treatment, tour operators organize the trip and provide all the facilities.
5. Traveller may need to visit the doctor again as per treatment required.
6. Traveller leaves the country and remains in contact with the doctor.

Dental tourism in India has turned out to be the widely accepted sector of medical tourism. Dental clinics in India have ultra-modern amenities, with highly proficient and skilled dentists who are crucial for dental implants and all other major and minor procedures.

Proficiency of the health care workers in English language is another reason for opting India as a hub of dental tourism. Dental appointments in the developed world are always notorious for the prolonged time; countering this in India, it is much more time saving with superior quality of care.

Some of the Indian states have already established themselves as prime destinations for health care and medical tourism.

The State of Kerala is a prime example. Doctors from Kerala are highly appreciated all around the world for their degree of professionalism and compassionate care.

Advantages of Dental Tourism in Kerala

- Kerala offers plenty of high quality modern dental offices by top experts in the field of dentistry with lower treatment cost.
- Quality of treatment: large pool of doctors, nurses and paramedics, world class dental clinics.
- Strength: over 10,000 professional dental surgeons.
- Kerala is a perfect holiday spot, because it has wonderful long stretching golden sand beaches and lush tropical vegetation all over the place. While you are here for dental treatment, you will also be able to get into special meditation or yoga classes.

You will experience the small state of Kerala, in bigger ways because……!

- ✓ Kerala has ample resorts located strategically in many magnificent parts; in the high ranges, riverfronts, beaches, lake banks, islands, treetop houses, in the form of tents, wood houses, chalets as well as great heritage home stays.
- ✓ Experience the eventful and spectacular house boat trips through the backwaters of Kerala.
- ✓ Feel and enjoy Kerala's Monsoon. June, July and August are full of rainy days.
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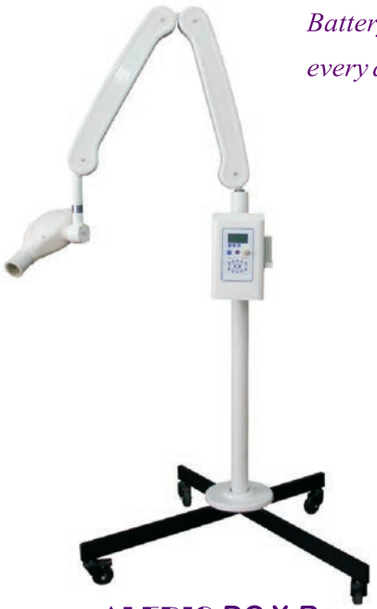

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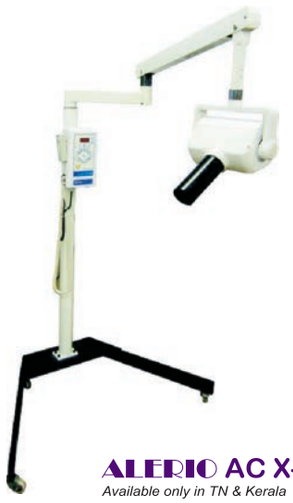

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WORLD DIABETES DAY

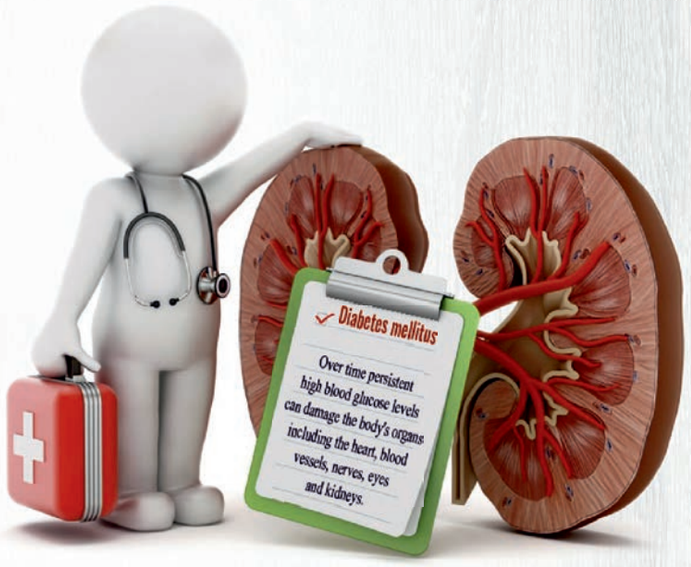
NOVEMBER 14

World Diabetes Day (WDD) was created in 1991 by International Diabetes Federation and the World Health Organization in response to growing concerns about the escalating health threat posed by Diabetes. Under the theme, **'Eyes on Diabetes'**, WDD 2016 will highlight the importance of **integrating screening for Diabetes complications into ongoing care** for people living with Diabetes.

Act today to change tomorrow.

DIABETES can harm your KIDNEYS

Dr. Jayant Thomas Mathew
Professor and Head
Department of Nephrology
Amala Institute of Medical Sciences
Thrissur, Kerala, India



Diabetes mellitus (DM) is a condition where a person has high blood sugar levels. In very simple terms, this is either because the pancreas does not produce enough insulin or because the body does not respond to the insulin that is produced.

Type 1 DM results from the body's failure to produce insulin and requires the person to inject insulin. This is also known as "insulin–dependent diabetes mellitus" (IDDM).

Type 2 DM results from insulin resistance, where cells fail to use insulin properly. This is also referred to as “non–insulin–dependent diabetes mellitus” (NIDDM).

A third form, **Gestational diabetes**, occurs when pregnant women without a previous diagnosis of diabetes develop a high blood glucose level.

Over time persistent high blood glucose levels can damage the body's organs including the heart, blood vessels, nerves, eyes and kidneys. This damage is referred to as 'diabetes–related complications'. These complications are serious and can be life–threatening.

However, with appropriate lifestyle changes and attention to blood glucose control, people with diabetes can substantially reduce the risk of these complications.

The number of people suffering from diabetes mellitus is increasing in India and all over the world. The important impact of this is an increase in the incidence of diabetic kidney disease, which is one of the worst complications of diabetes and carries high mortality. Early diagnosis and treatment can prevent diabetes kidney disease.

Diabetic Nephropathy (DN) is the leading cause of chronic kidney disease (CKD) and is responsible for 40–45% of newly diagnosed patients with end stage renal disease (ESRD).

In diabetics with established CKD, meticulous therapy can postpone the stage of dialysis and transplantation significantly. There is an increased risk of death from cardiovascular causes in patients with diabetic kidney disease. Hence, early diagnosis of diabetic kidney disease is extremely essential.

Diabetic Nephropathy can be divided into five stages based on urine albumin excretion and kidney function. Albuminuria means the presence of albumin in urine. Microalbuminuria means the presence of tiny amount of protein in urine (urine albumin 30 to 300 mg/day) which cannot be detected by routinely performed urine test but is only detected by special tests.

To diagnose diabetic nephropathy correctly, two out of the three tests for microalbuminuria need to be positive in a three to six–month period in the absence of a urinary tract infection. In this stage, disease can be prevented and reversed with meticulous treatment.

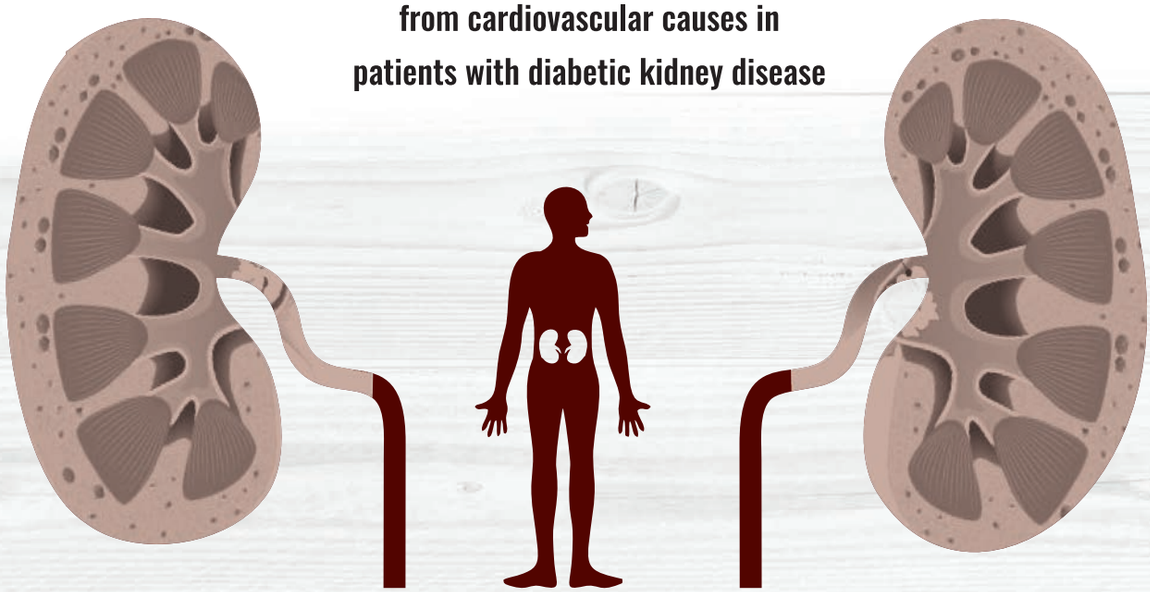
In addition to the risk to kidney, microalbuminuria independently predicts a high risk of developing cardiovascular complications in diabetic patients. Macroalbuminuria means loss of large amount of protein in urine (urine albumin > 300 mg/day) which can be detected by routinely performed urine dipstick test.

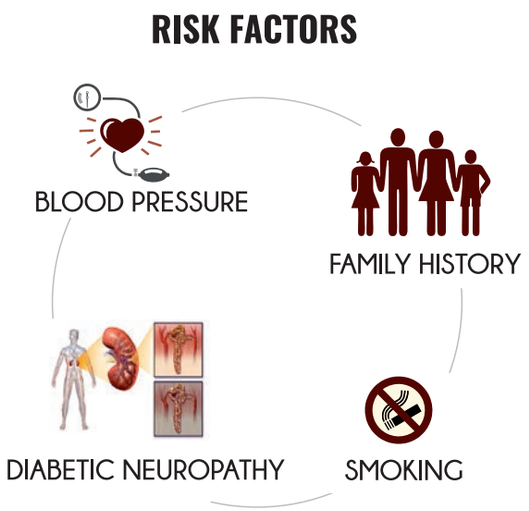
Majority of patients with Type 2 DM have microalbuminuria or overt nephropathy (macroalbuminuria) at the time of diagnosis of diabetes. This is because the disease may have been present for several years before the diagnosis is made.

In addition, concomitant presence of hypertension at the time of diagnosis also contributes to the high prevalence of microalbuminuria. Once overt proteinuria sets in, the disease is progressive; all that can be done at this stage is retarding the rate of progression. Stage 5 is end–stage renal disease.

It is difficult to predict which diabetic patient will develop diabetic kidney disease.

There is an increased risk of death from cardiovascular causes in patients with diabetic kidney disease





Major risk factors include:

- Diabetics whose blood pressure and sugars are poorly controlled
- Those who have a family history of diabetes and chronic kidney disease
- Those who have eye problem (diabetic retinopathy) or nerve damage (diabetic neuropathy)
- Those who are obese and have high serum lipids
- Presence of protein in urine
- Diabetics who are smokers

Diabetic kidney disease should be suspected in a diabetic patient if there is:

- Passing of foamy urine or presence of albumin / protein in the urine.
- Development of high blood pressure or worsening of pre–existing high blood pressure.
- Development of swelling of the legs and face; reduced urine volume or weight gain (from accumulation of fluid).
- Decreased requirement of insulin or anti–diabetic medications. History of frequent hypoglycemia (low sugar level). Better control of diabetes with the dose of anti–diabetic medications with which diabetes was controlled poorly in the past.
- Diabetes controlled without medicine. Many patients feel proud and happy with the “cure” of diabetes, but the unfortunate and actual fact is that the person has worsening kidney failure.
- Presence of symptoms of chronic kidney disease (weakness, fatigue, loss of appetite, nausea, vomiting, itching, pallor and breathlessness), which develops in later stages.

Patients with kidney failure due to diabetic kidney disease are prone to hypoglycemia and therefore need modification in drug therapies for diabetes

The important tests used to diagnose diabetic nephropathy are the urine test for protein and the blood test for creatinine.

Blood test for creatinine reflects function of the kidney and the value of serum creatinine increases in the later stage of diabetic kidney disease.

In Type 1 DM, microalbuminuria test should be done after 5 years of onset of diabetes and every year subsequently. In Type 2 DM, microalbuminuria test should be done at the time of diagnosis and every year subsequently.

The common methods used for the detection of albuminuria are:

Spot urine test : This test is performed by a reagent strip. It is a simple test which can be performed in an office practice and is less expensive but is less accurate.

Urine albumin–to–creatinine ratio : Urinary albumin–to–creatinine ratio (ACR) is a more specific, reliable and accurate method of testing albuminuria. In early morning urine sample, albumin–to–creatinine ratio (ACR) between 30–300 mg/g is diagnostic of microalbuminuria (normal value of ACR < 30 mg/g).

24–hour urine collection for albuminuria : Total urine albumin 30 to 300 mg in 24 hour urine collection suggests microalbuminuria. Although this is a standard method for the diagnosis of microalbuminuria, it is cumbersome and adds little to prediction or accuracy.

Standard urine dipstick test (often reported as “trace” to 4+) : It is the most widely and routinely used method for detection of protein in urine. In patients with diabetes, standard urine dipstick test is an easy and quick method to detect macroalbuminuria (urine albumin > 300 mg/day).

Treatment of diabetic kidney disease includes most importantly proper control of diabetes. Meticulous control of blood pressure is an equally important measure to protect kidney. Measure blood pressure regularly and maintain it below 130/80 mm Hg. Treatment of hypertension slows the progression of chronic kidney disease.

Angiotensin converting enzyme inhibitors (ACE–I) or angiotensin receptor blockers (ARB) are antihypertensive drugs that have special advantage in diabetic patients. These antihypertensive drugs have additional benefit of slowing the progression of kidney disease.

For maximum benefit and kidney protection, these drugs

are administered at the earliest stage of diabetic kidney disease when microalbuminuria is present. To reduce swelling, drugs which increases volume of urine (diuretics) are given along with restriction of salt and fluid intake.

Patients with kidney failure due to diabetic kidney disease are prone to hypoglycemia and therefore need modification in drug therapies for diabetes. Short acting insulin is preferred to control diabetes. Avoid long acting oral anti–diabetic agents. Metformin is usually avoided in patients with serum creatinine levels more than 2.0 mg/dl, due to risk of lactic acidosis.

In diabetic kidney disease with high creatinine, all measures of treatment of chronic kidney disease should be followed. There is need to evaluate and manage cardiovascular risk factors aggressively (smoking, raised lipids, high blood glucose, high blood pressure etc.).

A patient having diabetic kidney disease with advanced renal failure is in need of dialysis or kidney transplant.

Gradual, progressive and irreversible loss of kidney function over several months to years is called **chronic kidney disease** (CKD). It is a silent disease and often goes unnoticed.

In the early stages of CKD, signs or symptoms are few. Common symptoms include weakness, loss of appetite, nausea, swelling of feet, high blood pressure etc.

The presence of protein in urine examination, high creatinine in blood test and small contracted kidneys on sonography are the most important diagnostic clues of chronic kidney disease. The value of serum creatinine reflects the severity of kidney failure and this value increases progressively in this disease.

In the early stage of CKD, the patient needs proper medicine and dietary modifications. There is no treatment which can cure this disease. But the aim of the treatment is to slow down the progression of the disease, prevent complications and thereby keep the patient well for a long period, in spite of the severity of the illness.

After a long period, it reduces to a stage where the kidney stops working almost completely. This advanced and life threatening stage of disease is called the **end stage renal disease** (ESRD).

When the disease progresses to ESRD, more than 90% of kidney function is lost (serum creatinine is usually more than 8–10 mg/dl). The only treatment options available at this

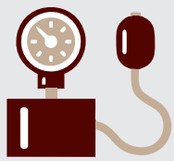
Common Symptoms of DIABETIC KIDNEY DISEASE

Weakness

Loss of appetite

Nausea

Swelling of feet



High blood pressure

stage are dialysis (hemodialysis and peritoneal dialysis) and kidney transplantation.

Dialysis is a filtering process to remove waste products and excess fluid from the body that accumulate in the body when the kidney stops functioning. It is not a cure for CKD. In the ESRD, the patient needs lifelong, regular dialysis treatment (unless the kidney is transplanted successfully).

Hemodialysis (HD) is the most widely used form of dialysis. With the help of a special machine, waste products, excess fluid and salt are removed from the body. Continuous ambulatory peritoneal dialysis (CAPD) is another form of dialysis modality which can be carried out at home or at the work place without the help of the machine.

Kidney transplantation is the most effective treatment option and the only curative treatment modality of ESRD.

Prevention of DN

Efforts at preventing DN should be at the primary, secondary and tertiary levels.

Primary prevention aims at preventing diabetes in the population. Lifestyle modifications that have been shown to prevent or delay the development of diabetes include regular physical exercise and weight control. Exercise also reduces percentage of total and abdominal fat, improves blood lipid levels and insulin sensitivity and decreases blood pressure.

Secondary prevention entails strict control of blood glucose, lipids and blood pressure levels.

Tertiary prevention involves screening for proteinuria and instituting appropriate treatment.

Diabetic kidney disease can be prevented to a certain extent by regular follow up with the doctor. Achieve good control of diabetes. **Keep hba1c** (glycated hemoglobin) **level < 7. Keep blood pressure below 130 / 80mm hg**.

Use ACE–I or ARBs group of antihypertensive drugs (under the supervision of a doctor). Restrict sugar and salt intake and eat a diet low in protein, cholesterol and fat. Check kidney functions at least once a year by urine test for albumin and the blood test for creatinine.

The patient with diabetic kidney disease should immediately contact doctor in case of:

- Rapid unexplained weight gain, marked reduction in urine volume, worsening of swelling or difficulty in breathing.
- Chest pain, worsening of pre–existing high blood pressure or very slow or fast heart rate.
- Severe weakness, loss of appetite or vomiting or paleness.
- Persistent fever, chills, pain or burning during urination, foul–smelling urine or blood in urine.
- Frequent hypoglycemia (low sugar level) or decreased requirement of insulin or anti–diabetic medications.
- Development of confusion, drowsiness or convulsion.

Back To Homemade

Ms. Sneha Shanoj
Nutritionist
Kottayam, Kerala, India

Strawberries are nutrient rich fruits packed with vitamins, fiber and particularly high levels of antioxidants known as polyphenols. They are a sodium-free, fat-free, cholesterol-free, low-calorie, juicy and sweet delicious fruits.

The health benefits of strawberries includes improved eye care, proper brain function, relief from high blood pressure, arthritis, gout and various cardiovascular diseases. They boost your body's immune system, prevent various types of cancers and reduce the signs of premature aging.

If you love to have jam, just take a moment to think what is stopping you from making your own home made jams. Here is what you can look forward to once you have found strawberries.

Try this healthy homemade recipe for a strawberry jam without any preservatives.

Ingredients

Strawberry – 250gms
Powdered jaggery or sugar – $1\frac{1}{4}$ cup
Lemon juice – 1tbsp (Optional)

Method of Cooking

- ☐ Clean and chop the strawberries finely.
- ☐ In a pan, take the strawberries, jaggery (or sugar) and lemon juice.
- ☐ Mix well and keep the pan top on low to medium flame.
- ☐ The strawberries will leave their juices and begin to cook.
- ☐ Stir at intervals till the strawberries soften and are cooked.
- ☐ Keep on stirring, when the mixture starts to leave the sides of the pan, it means it is done.
- ☐ Cover the pan with a clean kitchen towel and let the jam cool.
- ☐ Add it to a small sterilized jar, bottle or a clean bowl.

Plate Test

Take a spoonful of the strawberry jam on a plate and let it cool. If it sets on cooling and there is no water separation, it means that the jam is done.

Nutritional Value
Serving Size: 250g

Total Carbohydrate	–	24.5 g
Protein	–	1.75 g
Fat	–	0.5 g
Fiber	–	2.75 g
Calcium	–	75 mg
Phosphorus	–	75 mg
Iron	–	4.5 mg
Energy	–	110 kcal

Enjoy your delicious strawberry jam...

"CLEFTS"

Dr. Sandhya K
Senior Resident
Department of Oral and Maxillofacial Surgery
Government Dental College
Kottayam, Kerala, India

Clefts of the lip and palate are the most common congenital birth anomalies.

Majority of untreated clefts are where poverty, illiteracy and misinformation are rampant and access to medical resources is scarce. There are widespread superstitions and social taboos associated with the condition in many parts of our country.

What is cleft lip and palate?

In the embryo, the face begins to develop at the end of the fourth week and is complete by the end of the eighth week of pregnancy.

As a baby develops during pregnancy, specialized cells (neural crest cells) from each side and a structure (called frontonasal process) from above grow towards the center and join together to make the lips, mouth and other facial structures.

A cleft lip occurs due to failure of fusion, abnormal directional growth or breakdown of tissue that makes up the lip (two maxillary processes and the medial nasal processes) before birth. The resulting cleft can be a small slit or it can be a large opening that goes through the lip into the nose.

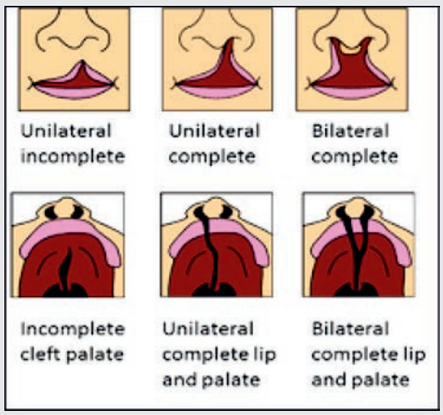
The roof of the mouth (palate) is formed between the sixth and ninth weeks of pregnancy. A cleft palate happens if the tissue that makes up the roof of the mouth (primitive palate anteriorly and two palatal process on either side) does not join together completely during pregnancy. As a result, the palate will be open. In some cases, only part of the palate will be open.

Causes of cleft lip and palate

The cause of orofacial clefts among most infants is unknown.

However some of the suggested risk factors are:

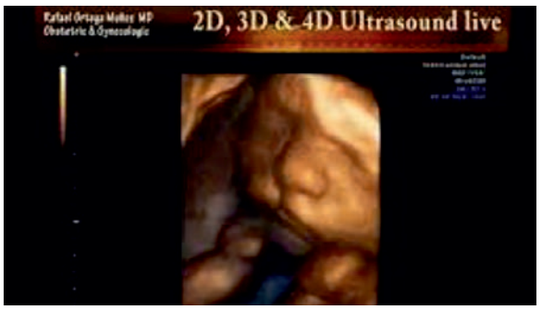
- ✓ A positive family history – which indicates the role of genetic factors



- ✓ Diabetes – women with diabetes diagnosed before pregnancy
- ✓ Use of certain medicines – antiepileptics such as topiramate, valproic acid or phenytoin; excessive use of antibiotics and steroids during the first trimester (the first 3 months) of pregnancy
- ✓ Exposure to radiation
- ✓ Stress
- ✓ Maternal age – older the mother, greater the chance of incidence of congenital anomalies
- ✓ Smoking and alcohol consumption – women who smoke during pregnancy are more likely to have a baby with an orofacial cleft than women who do not smoke

How to detect cleft lip early in pregnancy?

Orofacial clefts, especially cleft lip can be detected with ultrasound, beginning around the 13th week of pregnancy. As the fetus continues developing, it may be easier to accurately diagnose a cleft lip. Cleft palate that occurs alone is more difficult to see using ultrasound.

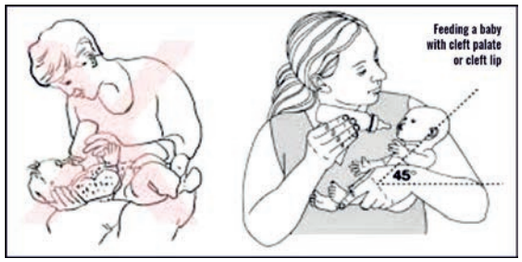


If prenatal ultrasound shows a cleft, the gynaecologist may offer a procedure to take a sample of amniotic fluid from the uterus (amniocentesis). The fluid test may indicate that the fetus has inherited a genetic syndrome that may cause other birth defects.

How to feed such babies?

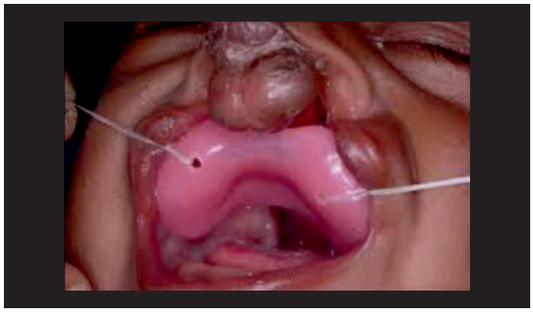
The baby can swallow normally if fed directly to the posterior part of mouth using specially designed nipples with elongated and bigger opening. Spoon feeding can also be done.

Breast and bottle sucking is difficult due to the inability to develop negative pressure in their mouth. Avoid feeding the child in a lying down posture. Frequent burping is required as the child will swallow a lot of air. Palatal obturator can also be used.



Associated problems

Abnormal tooth development, speech difficulties, hearing difficulties and esthetic problems leading to psychological trauma and social isolation are commonly seen.



Management protocol for the cleft patient

Immediately after birth	• Counseling the parent. • Pediatric and geneticist consultation. • Proper feeding instructions. • Hearing tests.
2 weeks	• Surgical repair of cleft lip.
12-18 months	• Surgical repair of cleft palate. • Speech pathologist consultation after three months of palate repair. • Psychological evaluation, speech therapy, treatment of middle ear infection (if present) should be continued.
7 years	• Orthodontic treatment and dentofacial orthopedics if necessary.
9-12 years	• Pre alveolar bone grafting.

Conclusion

Giving birth to a baby with a cleft can have a profound psychological impact both on the parents and the child. A medical approach to the problem can help in early diagnosis and proper management of a cleft child, thus improving their quality of life.

The Breath Of Life...

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A few months ago, my family and I were on a train travelling to Bengaluru. It was a dusty evening and the cabins around were all quiet except for the regular sound of the billowing engine.

Few hours into the journey, we heard a great commotion along the corridor. Curiosity made me walk over to the place, where I found a huge crowd of people around someone in the next coupe.

As it was quite impossible to get to the exact scene, I could not understand what was happening. Just as I decided to return back to my seat and check it out later, I heard someone calling out for a doctor or medic on–board. Wondering if I could be of any help, I answered their call.

The crowd made a small way for me to hardly squeeze through and once in the coupe, I saw amongst the huge crowd, a teenager gasping for breath. He was almost pale with the effort of breathing and on the verge of losing consciousness.

I immediately urged the crowd to back off as they were cutting out his limited oxygen supply. Luckily the Travelling Ticket Examiner was around and came to my aid in controlling the crowd.

As the crowd was clearing, I got a small plastic bag and asked the boy if he had any inhalers for asthma with him. Luckily, he pointed out to his bag. On finding the inhaler, I added ten puffs into the bag and made him take slow deep breaths with it. In a matter of minutes, he seemed to have attained significant relief. It was heartening to see the kid smile in peace.

This form of asthma exacerbation is not an isolated or extraordinary situation, but if left uncared for could be potentially life–threatening!!

You may live for days without food but not even for a few minutes without your breath!

Breathlessness is a symptom that is heard very often, but seldom understood.

Firstly let us see what encompasses the term breathlessness or dyspnea – a word meant to explain any difficulty or shortness of breath.

It may occur all of a sudden (acute) or progress gradually over time (chronic). The simple way of understanding the cause of breathlessness is that it happens when the body needs more oxygen than what it is getting now and thus you compensate for this increased demand by breathing faster and harder, thus straining yourself.

The causes leading to shortness of breath are many. For an overview, we could group them into:

1. Respiratory

- ☐ Asthma
- ☐ Chronic obstructive pulmonary disease
- ☐ Pneumonia (Lung infection)
- ☐ Pulmonary embolism (clot in pulmonary artery cutting of blood and oxygen supply to lungs)
- ☐ Tuberculosis
- ☐ Tumors

2. Cardiac

- ☐ Pulmonary edema (Fluid in lungs due to failure of pumping mechanism of heart)
- ☐ Myocardial infarction (Heart attack)

3. Traumatic

- ☐ Open or closed injury to lung tissue or ribs
- ☐ Pneumo / Hemothorax (Air or blood within the protective layers of lung)
- ☐ Foreign body aspiration (Choking)

In case of choking on a foreign object, encourage the patient to cough continuously until the object is out and if he cannot cough, perform the Heimlich maneuver, if appropriately trained

As we observe World Pneumonia Day on November 12th, let us take home a few important steps to combat common breathlessness situations.

It is not easy for anyone to identify the correct cause of breathlessness during an emergency setting, so the best strategy is to ensure maximum awareness among the public regarding what steps to take during sudden onset of breathlessness.

Here are a few **FIRST AID** pointers to keep in mind on various such occasions.

1. First and foremost do not panic or make the patient panic.
2. Keep the patient in high fowler's / propped up (sitting in 90 degrees) position and avoid overcrowding.
3. In case of a known asthmatic, ask for any inhaler available, add ten puffs into a plastic bag and ask the patient to take slow deep breaths from the same.
4. In case of choking on a foreign object, encourage the patient to cough continuously until the object is out and if he cannot cough, perform the Heimlich maneuver, if appropriately trained.
5. In case of suspected pneumonia or chest infection, never use over the counter medicine, visit doctor immediately.

6. In case of nasal congestion causing breathlessness, try steam inhalation through each nostril for 10 minutes each along with saline nasal drops.
7. In case of severe allergic reaction, remove the irritant whether food, medicine etc. If you are carrying an Epipen (pre–filled injections with adrenaline), use it or consult a doctor immediately.
8. In case of suspected heart attack, keep the patient away from exertion and use the emergency tablet (Isosorbide dinitrate) under the tongue – only if earlier prescribed by a doctor for the patient and consult doctor immediately.
9. In case of a breathless patient becoming unconscious for any reason, check for pulse. If the pulse is present, ensure the patient is kept lying down, turned to left side with the hand on the same side folded to support head and the opposite hand supporting the patient's chin (recovery position) in order to keep his / her airway without any obstruction and to prevent secretions / vomitus from entering the lungs.
10. Always carry an allergic food and medicine list with you where ever you go.

In all of the above mentioned cases, immediately alert the emergency medical services of your area for expert care while you are administering the discussed first aid.

Last but not the least we all know that **Prevention** is always and definitely better than cure.

1. If you are aware you have a condition causing breathlessness or impending breathlessness, carry your medications with you.
2. Wear a medic alert tag which has a small slip mentioning your disease and the emergency contact numbers.
3. Ensure you have your inhalers with you if you are an asthmatic.
4. Take preventive vaccines available like pneumococcal vaccine to prevent infections for susceptible patients.
5. Get adequate exercise and avoid obesity.
6. Get regular health checkups to keep any risks under control.
7. Avoid or quit active and passive smoking, as this is the sole culprit for exacerbating almost all causes of shortness of breath.
8. Wear a face mask, whenever there is lot of dust.
9. Any unconscious patient who vomits has to be put in the left lateral recovery position to avoid aspiration to lungs.
10. A patient who is prone to develop allergic asthma must know their triggering factors by doing a skin / blood allergic test and try to stay away from these allergens.

A final piece of advice to everyone – whatever maybe the reason for your breathing problem, there is always a solution – so please consult a physician to keep breathing easy!

"EXCLUSIVE" PEDIATRIC DENTAL CLINICS IN INDIA

Dr. Arnab Sengupta
Consultant Pedodontist
Gurgaon, Haryana, India

In a developing nation like ours, excessive consumption of refined food products and extreme dietary habits related to lifestyle from an early age, results in overall poor oral health of children of the nation.

Dental Caries (Dental Decay) has become an epidemic, which needs to be dealt with on an urgent basis.

The age group of 0–18 years is the most important period of growth and development, both physically and psychologically, in a child's life. A child suffering from severe dental caries and having overall poor oral health status, will neither be able to eat properly nor smile with confidence; eventually degrading the overall quality of life as a child.

The American Academy of Pediatric Dentistry (AAPD) supports the concept of a **'Dental Home'** for infants, children, adolescents and those with special health care needs. The dental home is inclusive of all aspects of oral health that result from the interaction of patients, parents, dentists, dental professionals and non-dental professionals.

This concept is derived from the American Academy of Pediatrics (AAP) definition of a **'Medical Home'**, which states that primary pediatric health care is delivered or supervised best by qualified child health specialists.

Such a Dental Home concept and treatment modality for children can be best achieved at an Exclusive Pediatric Dental Facility only.

These Exclusive Pediatric Dental Facilities provide a specialized, amiable ambience (theme based) with the infrastructure designed specifically for rendering preventive and therapeutic protocols, exclusively for kids, adolescents and those with special health care needs.

The equipment, dental materials, sedation protocols and trained staff make the facility seem like a **'Second Home'** for the child, thus, allaying fear, anxiety and pain before, during or after procedures.

The cornerstone philosophy of this concept is **'Prevention along with Painless Therapeutics'**, making every dental visit a memorable one for the child.

No More Sinus Lift

Courtesy: Hybrid Implants

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Hybrid implant is a versatile implant, designed to overcome the limitations of endosseous implants. It is a combination of subperiosteal and endosteal implant.

The major advantage of this implant system is that it can be used in atrophic ridges of both maxilla and mandible with comparative ease than an endosteal implant, thereby avoiding sinus lift and bone augmentation procedures.

Introduction

Replacement of missing teeth has evolved from removable dentures to fixed dentures and more recently to implants.

Dental implants are an extraordinary blend of art and science. They are intended to substitute missing teeth in maxilla or mandible. Made of titanium, dental implants are securely anchored in the jaw and serve the purpose of roots for dental crowns.

In many cases, dental implants and mini dental implants, which is the smaller version, are considered as the best option for replacing missing teeth. They are even used in dental bridges or partial dentures and also in providing support for dentures.

Dental implants offer several advantages over other tooth replacement options as they look like, feel like and also function like real teeth!

By placing dental implants, the surrounding teeth are also left untouched. Finally, dental implants are exceptionally reliable. Year after year, dental implants have shown high success rates, lasting for 15 – 20 years or more.

The success of conventional implants is always based on the quality and availability of bone. Due to advancing age and loss of teeth, the alveolar bone undergoes resorption while the maxillary sinus undergoes pneumatisation.

Sinus lift, nerve lateralization, bone grafting, inferior alveolar nerve bypassing, zygomatic implants, "All On Four" technique etc. are some of the technique sensitive procedures used for placement of implants over atrophied jaws.

In severely atrophied jaws, at times, none of these techniques may work out.

There are situations where endosseous implants may damage the nerve or perforate the maxillary sinus. In certain cases, graft material rejection occurs which is usually followed by total fixture failure. Placement of an implant on an atrophied jaw is always a challenge for an Implantologist.

Keeping in mind the above mentioned difficulties, we initiated a search for an implant system which would be cost effective, easy to use and having adequate strength to support any prostheses.

Design

The implant consists of a long malleable plate having a length of 35–45mm, thickness of 0.4–1mm and breadth of 3–4mm with screw holes and a stump called abutment.

Anterior Implant size – 2.5mm diameter abutment; plate 0.5mm thick; 35mm length.

Posterior Implant Size – 3.5mm diameter abutment; plate 0.5mm thick; 35mm length.

A 3mm diameter abutment implant is also available. Diameter and length of the abutment and length and thickness of the plate can vary as per the requirement.

Screw size can be selected according to the availability of the bone at the site of placement (2mm diameter and length can vary from 4–12 mm).

The implant is a prefabricated malleable thin elongated laminar plate having a vestibular anchoring part with at least three screw holes and a lingual or palatal anchoring part with at least two screw holes for fixing at the most appropriate area of the jaw bone by means of screws.

The length of the abutment can be cut to sizes as required. The plate, abutment and screws are made of titanium alloy (Ti6Al4V). The screw holes on the vestibular and lingual / palatal plate are positioned in such a way that screw ends do not meet each other.

The implant consists of a long malleable plate having a length of 35 – 45mm, thickness of 0.4 – 1mm and breadth of 3 – 4mm with screw holes and a stump called abutment

Procedure

Alveolar process of maxilla or mandible is exposed by a mucoperiosteal flap under local anaesthesia. The implant is moulded to the contour of the alveolus in such a way that the abutment projects into the oral cavity in the direction to be replaced.

There is a high chance of plate exposure if the plates are not well adapted to the alveolus. To avoid plate exposure, the surgeon should make a groove on the crest deeper than the thickness of the plate and as wide as the width of the plate.

If the plate is properly dipped inside the bone, plate exposure can be avoided and the possibility of bone growing over the plate is higher. In case of patients with thin mucosa, the plates can be covered with grafts, platelet rich fibrin and membranes to avoid anticipated plate exposure in future.

The implant is fixed to the alveolar bone using titanium screws. The

surgical part is completed by closing the mucoperiosteal flap to its normal position and covering the plates and screws of the implant.

The abutment will be the only part of the implant that is exposed to the oral cavity.

Discussion

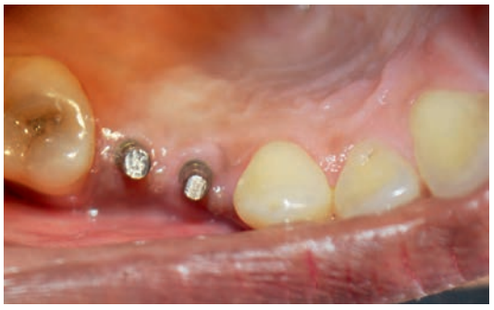
The concept of Osseo integration proposed by Branemark et al and the replacement of lost teeth by implants has revolutionized oral rehabilitation with significant advancement in restorative dentistry.

In Prosthodontics, implant success rates as high as 78–100% has been reported. Despite these success rates, certain limitations are still encountered in implanted sites. The major drawbacks of the endosseous implant are

(1) The width of the bone in the bucco-lingual direction is crucial as more than 1mm of bone should be around the endosteal implant.

(2) The length of the root form implant is often 8mm upwards. If the length is decreased due to inadequate bone height, the diameter of the implant has to be increased to achieve adequate bone–implant interface.

(3) There is a risk of involvement of neurovascular bundle in the mandible, if the height of the crestal bone is not adequate. 2mm distances have to be maintained to avoid nerve injury.



Healing around the implant abutment after 1 month

(4) In the sinus area of the maxilla, if the vertical thickness of the bone is less than 5mm, then 'sinus lifting and bone grafting' is required, which is a major technique sensitive surgical procedure. More than six months is required for the take up of the graft. Moreover, the bone formation is unpredictable.

(5) The angulation of the abutment is crucial in the implant placement. Control of the angulation of the abutment sometimes becomes difficult in certain situations.

(6) Higher cost of the armamentarium eventually leads to increased treatment charges.

(7) Highly technique sensitive procedures necessitate specialized training.

Keeping in mind the above concerns, we developed an implant system that can easily overcome the difficulties and is less technique sensitive requiring minimum need of armamentarium for implant placement.

There was no significant bone loss around the anchoring screws in the post operative CBCT evaluation. All patients were given prosthetic crowns after a period of 3 months during which time no temporary crowns were placed.

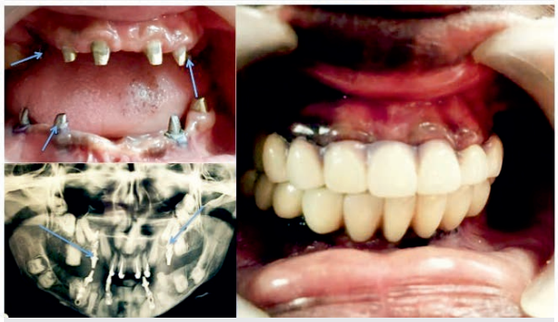
The distinguishing features of the implant system are:

(1) The implant is a plate which is malleable, with an abutment projecting from its central area. The plate has got screw holes on the two arms extending from the abutment. The arms can be of variable length, width and thickness.

(2) The abutment is a projection from the central part of the plate. The height, width, taper and slots on the abutment, are variable according to the requirement.

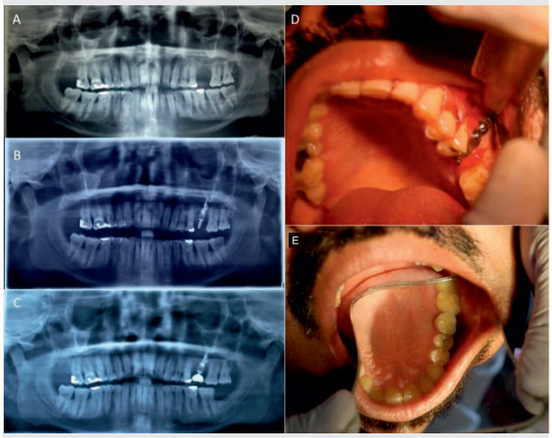
(3) The implant design overcomes the height and width problem of alveolar bone, as it hugs the bone and is fixed to the cortical bone using screws.

Some interesting case pictures treated with Hybrid implant to prove its versatility



A case of partial anodontia treated with Hybrid implant as the extraction of the impacted teeth can weaken the bone and can lead to debilitation

A case of reduced vertical height and lowered maxillary sinus floor which required sinus lift and bone augmentation was rehabilitated with Hybrid implant



A: Pre Op OPG; B: Post Op OPG – 6 Months;
C: Post Op OPG – After crown placement; D: Intra oral view;
E: Post Op Intra oral view – after 18 months

(4) The implant system helps to minimize the risk of nerve damage as it is subperiosteal in placement and fixed by screws of variable length to the bone. As the screw holes are multiple, one can select the screw hole which is not in proximity to the nerve.

(5) In the sinus area of the maxilla, the thickness of the bone between the sinus and oral cavity at the alveolar crest is often less to support an endosteal implant. This is overcome by the proposed implant as it is subperiosteal, hugs the bone and is fixed to the cortical bone. This avoids sinus lift bone grafting which is a very technique sensitive major surgical procedure. Moreover 6 months is required for the take up of the bone graft which is unpredictable. Only after its take up and ensuring the thickness of bone, the endosteal implant can be placed.

Conclusion

The first hybrid implant placement of this design was carried out four years back following ethical committee approval and finite element analysis. All the cases were critically followed up after placement with good success rate.

Hybrid implants show good stability and minimum patient discomfort during evaluation in the postoperative period. Longer period of follow up and multi-centric studies are required for a more confirmative efficacy about the hybrid implant system.

Acknowledgement

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DENTCARE DAY-2016

MAKING SPIRITS BRIGHT

23rd October

@ CIAL Convention Centre,
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DENTCARE DAY - 2016

PREGNANCY AND ORAL CARE : WHY?

Dr. Nisha Tewathia
Consultant Pedodontist
Mumbai, Maharashtra, India

The condition of your gums may affect your pregnancy and the health of your baby. And preventing tooth decay in your own mouth can help your baby have healthier teeth, too. After your little bundle of joy joins the world, their oral health is in your hands.

Being pregnant affects nearly every aspect of your life, including your oral health. There is a bit of folk wisdom that calcium is lost from the teeth of pregnant women during pregnancy. Thankfully, this is just a myth.

However, they may experience some changes in their oral health because of pregnancy and the accompanying surge of hormones. In particular, gum tissues may respond differently to plaque and women with gingivitis are likely to see their condition worsen during pregnancy.

The condition of your gums may affect your pregnancy and the health of your baby. And preventing tooth decay in your own mouth can help your baby have healthier teeth, too. After your little bundle of joy joins the world, their oral health is in your hands.

Here is what you need to know to protect yourself and your baby.

Tooth decay and your baby's oral health

Children are more likely to get cavities before the age of 5 if their mothers have untreated tooth decay. Why?

Tooth decay is an infection caused by certain types of bacteria.

Moms with untreated cavities have high levels of these bacteria in their oral cavity. So chances are higher that they will pass them on to their children.

Babies can get these bacteria through: kissing, sharing utensils, using a pacifier that someone has cleaned off with saliva and putting the baby's hand in your mouth and then in the baby's own mouth.

What you need to know?

Here is what you can do to reduce your baby's risk for early tooth decay.

Get cavities treated before pregnancy, if you can. If not, it is important to get treatment starting in the first trimester. The only things to be avoided during the first trimester are routine X–rays and nitrous oxide anaesthesia. You can safely receive treatment throughout your pregnancy.

Brush at least twice a day. Floss every day. Use chewing gum and mints that contain Xylitol, a natural sugar substitute. Studies have shown that it destroys decay causing bacteria.

Periodontal disease and your baby's health

Periodontal disease is the result of poor brushing and flossing habits. It can cause tooth loss if hygiene is not improved or if it is left untreated. Periodontal (gum) disease is also a bacterial infection.

At first, the gums become red and swollen. They often bleed when you brush. Dentists call this gingivitis. With time, gums can pull away from the teeth. Teeth can become loose. Without treatment, periodontal disease can lead to tooth loss.

During pregnancy, increase in the hormones, estrogen and progesterone can lead to what is known as “pregnancy gingivitis”. Many women notice puffy gums that may bleed during brushing.

Pregnant women are also at risk for developing inflammatory, noncancerous tumours when swollen gums become irritated. This usually starts during the second month of pregnancy and goes away after the baby is born.

Gum disease that exists before pregnancy can increase the risk of problems such as

- Premature birth (before 37 weeks)
- Low birth weight (less than about 5.5 pounds)

Research suggests an association exists between preterm, low birth weight babies and mothers with gingivitis. Excessive bacteria from the gums can enter the bloodstream, negatively affecting the body's labour reflexes.

A common treatment for periodontal disease is scaling and root planing. This involves cleaning the visible parts of the teeth as well as the roots.

Some studies have found that pregnant women who get this treatment have a lower risk of premature birth and treatment given during pregnancy is safe for both the mother and the unborn baby.

Periodontal disease may also contribute to Pre–eclampsia. This condition increases blood pressure. Pre–eclampsia affects about 5% of pregnant women. It can be dangerous for both the mother and baby. The only cure is giving birth. This can put the baby at risk if the pregnancy is not full term yet.

What you can do?

If you are planning a pregnancy, visit your dentist for a check–up. He or she can tell you if you have gingivitis or periodontal disease. Getting treatment early may reduce your risk for problems later.

If you are already pregnant and concerned about periodontal disease, visit your dentist as soon as possible. Practicing good oral hygiene can help prevent any complications during pregnancy.

Pregnancy related conditions of the mouth

Pregnancy granuloma

This is a growth on the gums that occurs in 2% to 10% of pregnant women. It is also known as a pregnancy tumour, though it is not cancerous. This growth is not dangerous, but can be uncomfortable.

They are often found near the upper gum line. The tumours are usually left untreated because they resolve on their own after the child's birth, but if it interferes with a woman's ability to eat or care for her teeth, the dentist may elect to remove it.

Tooth erosion

If you have severe morning sickness, the enamel on some of your teeth may become eroded. This happens when stomach acids wash over the teeth during vomiting. If you vomit, do not brush right away. Instead, rinse your mouth with a mixture of baking soda and water or use an over–the–counter rinse made for reducing the acid level in your mouth.

Dry mouth

To help dry mouth, drink plenty of water. You can use sugarless candy or gum to stimulate your saliva flow. Experts recommend gum or candy that contains Xylitol. This sugar substitute also destroys cavity causing bacteria.

Visiting the dentist while you are pregnant

A visit to your dentist can make a difference.

It is important to let your dentist know about the pregnancy, so that they can adjust the treatments or postpone particular procedures when necessary. Some treatments are safe during pregnancy.

If you are already pregnant and concerned about periodontal disease, visit your dentist as soon as possible. Practicing good oral hygiene can help prevent any complications during pregnancy

Many pregnant women are too excited about the baby that they forget one of the most important things to do during pregnancy is to take care of their own oral health

Check–ups

Visit your dentist as soon as possible. Consult your dentist and your physician about the safety of any non–emergency oral procedures that you have scheduled prior to your pregnancy.

The best time for a pregnant woman to receive a dental treatment procedure is between the fourth and the sixth month. X–rays should typically only be taken during pregnancy when needed for an emergency. Your dentist or physician may recommend postponing elective procedures until after your baby is born.

In your first trimester, avoid routine X–rays and nitrous oxide anesthesia.

Professional cleaning of your teeth and check–ups every six months is important for keeping up with oral health. Regular brushing and flossing, along with the use of a mouthwash, can help control plaque and gingivitis keeping the gums free from irritation and preventing pregnancy tumours.

Emergencies

You should get emergency dental treatment at any point during your pregnancy if it will relieve your pain, decrease stress or prevent infection. Your dentist should consult with your obstetrician if there are questions about the safety of medicines or anaesthesia.

Other treatment

You can get routine dental care throughout your pregnancy. Routine care includes cleaning of your teeth and treatment of gum disease and cavities. In the last trimester, lying down in the dental chair may become uncomfortable.

X–rays

The foetus is most susceptible to radiation between the 2nd and 6th week of gestation. Diagnostic radiation should not be withheld during pregnancy. Advances in technology have made dental X–rays much safer.

Digital X–rays use much less radiation than older systems that use dental films. Studies have shown that using a lead apron will protect you and your foetus from radiation.

Medicines

Ideally, you should avoid taking any medicines during pregnancy, especially during your first trimester. However, sometimes this is simply not possible. Most common dental drugs can be used during pregnancy. Still, some sedatives and certain antibiotics should be avoided. Your dentist will know what to prescribe or will discuss it with your obstetrician.

Many pregnant women are too excited about the baby that they forget one of the most important things to do during pregnancy is to take care of their own oral health.

It is normal to get busy preparing for your big day, but you need to pay close attention to your dental health as well. It is during pregnancy that you are more prone to developing a range of mouth problems. It is, therefore, important to watch out for the risks and take all the necessary action to avoid them.

THE BIG PICTURE

The DentCare team marked its presence at the 8th Annual World Dental Show from 7 – 9 October, 2016 at the Bandra – Kurla Complex, Mumbai, Maharashtra, India.

ANOTHER FEATHER IN THE CAP

Shri. John Kuriakose, Managing Director, DentCare Dental Lab Pvt. Ltd., receives the "Junior Chamber International Outstanding Business Man Award" from Shri. P. J. Joseph, MLA.

Catch Them YOUNG; Watch Them GROW

Development of the face and jaws that house teeth is a long process that starts from intrauterine life to about 20 years of age. During this period, both genetic and local environmental factors influence its growth and development.

Development of occlusion also takes place during this period. Occlusal development is a sequential and timely event that is closely related to facial development. Establishment of good dental occlusion is very essential for the normal and harmonious development of the face.

By applying a holistic approach, we can treat a disease from its root cause itself, for eg. High blood pressure is a condition and not a disease as such due to multiple reasons. To be more effective in reducing high blood pressure, we have to find out its root cause rather than taking a pill alone to control it.

> Occlusal development is a sequential and timely event that is closely related to facial development

Ignoring the root cause that causes high blood pressure and controlling with medication may initially give good results but at a later point in time, it will lead to more complications that need a radical approach.

This approach is applicable even to a dental condition eg. Malocclusion, where by treating the condition (current approach), good results are seen initially but the after effects, mostly hidden, in the long term can prove to be more alarming.

Untreated malocclusion can result in a variety of problems, including susceptibility to dental caries, periodontal disease,bone loss,temporo mandibular disorders and undesirable craniofacial growth changes.

Moreover, the child's 'appearance' may be harmed, which can be a social handicap. The benefits of improving a child's appearance at an early age should not be undervalued.

The goal of many clinicians who provide early treatment is not only to reduce the time and complexity of comprehensive fixed

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appliance therapy but also to eliminate or reduce the damage to the dentition and supporting structures that can result from tooth irregularity at a later age.

In short, early intervention of skeletal and dental malocclusions during the primary and mixed dentition stages enable the greatest possible control over growth changes and occlusal development, thus improving the function, esthetics and psychologic well–being of children.

Divine proportion: beauty lies in the eyes of beholder

There is much debate as to whether facial abnormalities are caused by genetics or environmental factors. Many doctors and researchers believe that abnormalities such as long faces; short faces; skeletal II's and III's; small, narrow palates and others are strictly due to genetics while others believe it is environmental.

Perhaps both are right and they may be due to both genetics and environmental factors. However, as healthcare practitioners, we must make a firm decision as to which of the two factors predominate.

An excellent hard tissue analysis for evaluating lateral profiles is the Jefferson Analysis. It is based on the divine proportion, since in almost every instance faces are made more beautiful when treated to this analysis.

This analysis assesses the antero–posterior (AP) position of the maxilla and the mandible and assesses lower facial vertical height. The diagnostic interpretation is visual and simple.

In an ideal face, in both children and adults, the anterior tip of the maxilla, the Anterior Nasal Spine (ANS) and the anterior portion of the mandible, Pogonion (P), should be within 2 mm of the anterior arc.

Assessment of lower facial vertical height is simple. In an adult face, 18 years and older, the Menton (M) should be within 2 mm of the age 18 vertical arc. At age 4, the Menton should be within 2 mm of the age 4 vertical arc.

From age 4 to age 18, the Menton grows downward at a rate of 3/4mm (0.75mm) per year (Fig. 1). The analysis shows that this individual's maxilla and mandible are almost perfectly positioned, both antero–posteriorly and vertically. It is extremely rare to find individuals with such nearly perfect alignment.

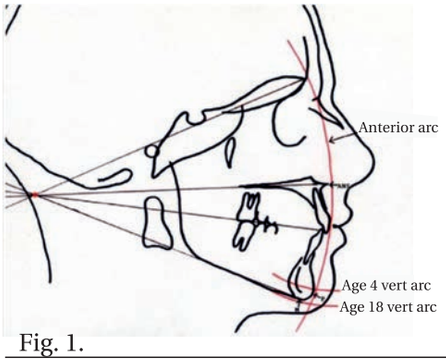


Fig. 1.

There are 9 skeletal types: I, IIA, IIB, IIC, IIIA, IIIB, IIIC, BR and BP (Fig. 2). Each has an upper and a lower arrow pointing to an arc. The upper arrow represents the maxilla and the lower arrow

represents the mandible.

The tip of the upper arrow represents ANS; the tip of the lower arrow represents P. The arc in front of the arrows represents the anterior arc. Skeletal I will show that the tips of both arrows touch the anterior arc. This means that the maxilla and the mandible are both in ideal AP position.

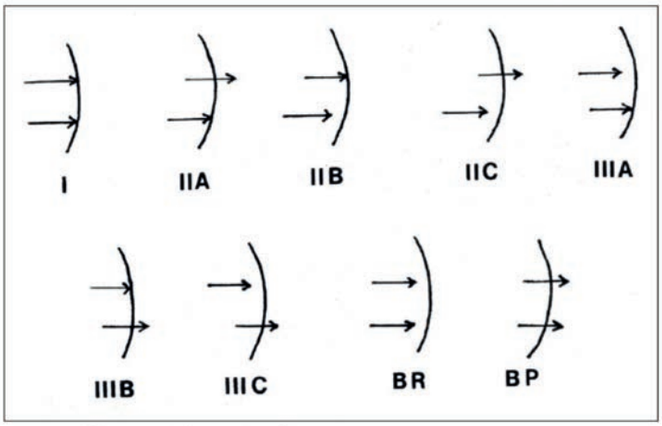


Fig. 2.

Here, I would like to concentrate on one aspect of early identification and prevention of malocclusion.

The most common question as dentists we face daily is "Doctor, my child's new teeth are coming inside. Should we do something?" The good old framed response from a dentist's perspective is, "Wait till 13 years of age".

Crowding, malposition or tooth size arch discrepancy is the most challenging clinical scenario we face in our day to day practice. Today's world of internet and knowledge at our finger tips requires a general dental practitioner to be educated and aware of the current trends in early management of a developing malocclusion.

Lower anterior crowding

Characteristics

Mandibular anterior crowding is identified as a discrepancy between the mesiodistal tooth widths of the four permanent incisors and the space available between the mesial surfaces of the primary canines.

The first step is to determine the amount of permanent incisor crowding during an early stage of the mixed dentition through model analysis.

The second step for proper treatment planning is to search for dentofacial factors (such as direction of mandibular growth, early loss of primary molars, the oral and perioral musculature and incisor and molar inclinations) that might be associated with mandibular crowding, using all necessary diagnostic tools during the early mixed dentition.

After careful assessment of the aforementioned variables, incisor crowding can be arbitrarily classified into three types of crowding:

1. Minor crowding up to 3 mm of space deficiency

2. Moderate crowding within 3 to 5 mm of space deficiency

3. Severe crowding with more than 6 mm of space deficiency

The approach for each condition is different and needs thorough clinical and diagnostic tools to determine the proper treatment need.

Clinical conditions indicating severe space problem

1) Premature exfoliation of the primary canines.

2) Crescent moon–shaped

canine root resorption (Fig. 3).

3) Displacement of the mandibular midline and blocking out of one lateral incisor.

4) Gingival recession of prominent mandibular incisors (Fig. 4).

5) Prominent bulging of unerupted canines (Fig. 5).

6) Splaying of lateral incisors (Fig. 6).

7) Ectopic eruption of the maxillary permanent first molars and premature exfoliation of E (Fig. 7).

8) Vertical palisading of the maxillary molars in the tuberosity area (Fig. 8).

All the above conditions are indicative of a severe tooth size arch length discrepancy. They require long term monitoring and treatment.

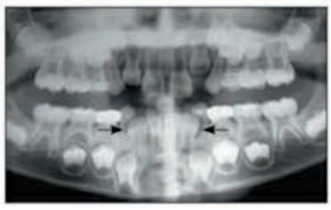
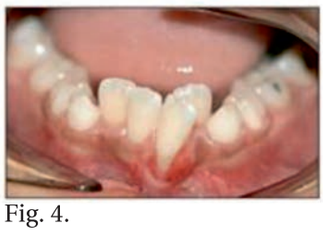


Fig. 3.



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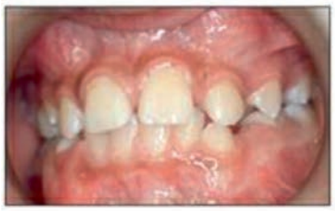

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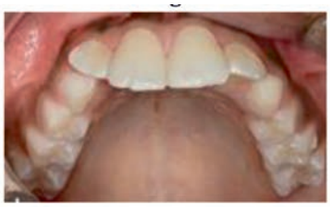

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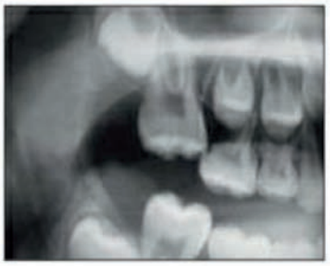

Fig. 7.

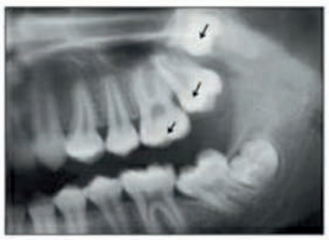

Fig. 8.

Early–age orthodontics is not about the time it takes to orthodontically treat a problem; it is a story of growth, of variation in anatomy and of muscle function and influences – a realization that it is the jaws that

Each patient who enters our practice represents a new chapter and a new lesson that we can learn from

contain the teeth and that where the jaws go, the teeth will have to go and that both undergo varying influences as well as grow in varying directions.

Early–age orthodontics necessitates recognition of this process and aims to alter and redirect it whenever feasible and possible.

Each patient who enters our practice represents a new chapter and a new lesson that we can learn from. A thorough knowledge of the basis for early–age orthodontic treatment, an understanding of the proper treatment techniques and a willingness to consider their appropriateness for each individual patient will allow us to intervene in ways that will provide the maximum benefit for a young and growing child.

The Relationship Killer !!!

Another Saturday night party starts out innocently enough with someone in the corner saying, "Did you hear about Sam?" Clueless, you say, "What happened to Sam?" "Don't you know about his business?" comes the answer. When you reply in the negative, your friend seizes the moment to fill you in on all the gory details of Sam's business and how bad it is doing.

Does the situation sound familiar? Yes, you have got it right – it is Gossip!

We live in a gossip oriented society, so naturally almost everyone loves to gossip. Many of us do it and do not even realize its implications.

When gossip is being spread through the grapevine, reputations, careers and lives of

Mr. Shamim Rafeek
International Trainer, Business Coach,
Motivational Speaker and Author
Kochi, Kerala, India

people can get destroyed very rapidly.

Recently, I was reading an article on the Internet about Gossip and its impact in organizations. Interestingly, most of the time people say, Women Gossip. However, a study conducted in the Indian Corporate world found that men gossip more than women!

Whether its men or women, Gossip is truly a relationship killer!

I am reminded of a fantastic story I have come across about Chanakya, the famous Indian Politician, Strategist and Writer who lived between 350BC to 75BC during the period of Chandragupta Maurya.

The story goes like this:

One day a person known to Chanakya approached him and enthusiastically started saying, "Do you know, just a while ago, I heard a few things about you from your friend?"

Chanakya was famous for his wisdom, knowledge and good behaviour. He said to this person, "Before I listen to what you have to say, I would like to put it through my three step test."

"What is this three step test?" the person asked.

Chanakya made him understand, "Before you tell me about what my friend has said, let us test it. I call this a three step test. The first test is of truthfulness. Are you sure that whatever you are going to say is the truth?"

"No", the person said, "I have heard it from somewhere else."

"Okay", Chanakya analyzed. "If you do not know whether this is truth or not, we will do another test. The second test is for goodness. Are you going to tell me some good thing about my friend?"

"No, it is opposite to it….."

"Then", Chanakya asked further, "Whatever you are going to say, is not the truth, is not positive about my friend, then let us do the third test. The third test is of usefulness. Whatever you are going to tell me, is that useful to me?"

"No, it is not like that."

Chanakya then said the last thing.

"Whatever you are supposed to tell me, is not true, not positive and not useful also, then why do you want to tell it to me?"

What a fabulous way to stop gossip.

Even though both men

When gossip is being spread through the grapevine, reputations, careers and lives of people can get destroyed very rapidly

and women gossip, women tend to get the brunt of the blame. I think contrary to this opinion; women have no exclusive franchise on gossip! Every day men, too, live in a partially – poisoned environment.

Conversation is a big part of our psychological environment. Some conversation is healthy. It encourages you. It makes you feel like you are taking a walk in the warm sunshine on a spring day. Some conversations make you feel like a winner.

But there are other conversations, which feel more like walking through a poisonous cloud. It chokes you. It makes you feel ill. It turns you into a loser.

Gossip is just negative conversation about people and the victim of this thought – poison begins to think he enjoys it. He seems to get a form of false joy from talking negatively about others, not knowing that to successful people he is becoming increasingly unlikable and unreliable.

Let us make one point clear: all conversation is not gossip. You can test its purpose for being constructive.

Your proneness for being a gossiper can be ascertained by taking this test:

1. Do I spread rumours about other people?
2. Do I always have good things to say about others?
3. Do I judge others only on the basis of facts?
4. Do I encourage others to bring their rumours to me?
5. Do I begin my conversations with “Don't tell anybody?”
6. Do I keep confidential information, confidential?
7. Do I feel guilty about what I say concerning other people?

The right answers are obvious. Meditate on this thought for just a moment.

Taking an axe and chopping our neighbour's furniture into pieces will not make our furniture look one bit better. Similarly, using verbal axes and grenades on another person will not ensure you become a better you or I become a better me!

Does it really benefit anyone? It is rather likely to cause more harm somewhere along the line – a friendship may end, someone may get their feelings hurt or it may just add up to more drama?

I am sure you will agree with me that if we stop gossiping and tighten our lips, we will find that our life will run a lot more smoothly.

The question is, can we get rid of gossiping – the relationship grenade?

The answer is simple – YES, provided, like Chanakya, we check our conversations with the three test parameters – **TRUTHFULNESS, GOODNESS AND USEFULNESS!**

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LIP FILLERS ???

Dr. Chytra Anand
Cosmetic Dermatologist
Bengaluru, Karnataka, India

Have you ever wished that you had beautiful lips?

Is it possible to change the shape and volume of your lips?

Yes, it is!

You too can have 'beautiful lips'!!!

The lips and the eyes enhance facial beauty. Lips are extremely important when it comes to facial aesthetic enhancement. Also, the teeth and the overall structure of the mouth can play a major role in determining the shape of the lips.

One important factor that needs to go into every lip augmentation procedure is to look at the teeth in relation to the lips. The lip should be subtle and natural.

Lips can get thinner with age as they lose fat and collagen. Sun damage, hereditary factors and smoking also contribute to loss of lip volume. Genetically thin lips and cosmetic asymmetries of the lips are also issues.

If your genetics has not blessed you with stunning lips, it is easy to achieve this with lip filler injections. These days, injectable dermal filler is the most commonly used methods of lip augmentation.

Lip augmentation can be tailored to fit your desires when using injectable fillers. If you are concerned that your lips are starting to look deflated or wrinkled, you can enjoy a, fuller and youthful new look in just a single session.

Lip enhancement is one of the most difficult procedures in aesthetic medicine, but when performed by a skilled professional, these are safe, effective, can be done in the office and involve no downtime.

The outcomes are not a simple matter of just injecting filler to make lips look bigger. The right results are not only contingent on quantitative factors like dosage, but also on the different injection zones on the lips.

The practitioner needs to be mindful of balance and symmetry. Each person has different needs and only an expert can help you truly fulfill those needs.

Fillers can be used to add fullness to lips to enhance a smile and the results are fast, effective, painless and long lasting.

BENEFITS

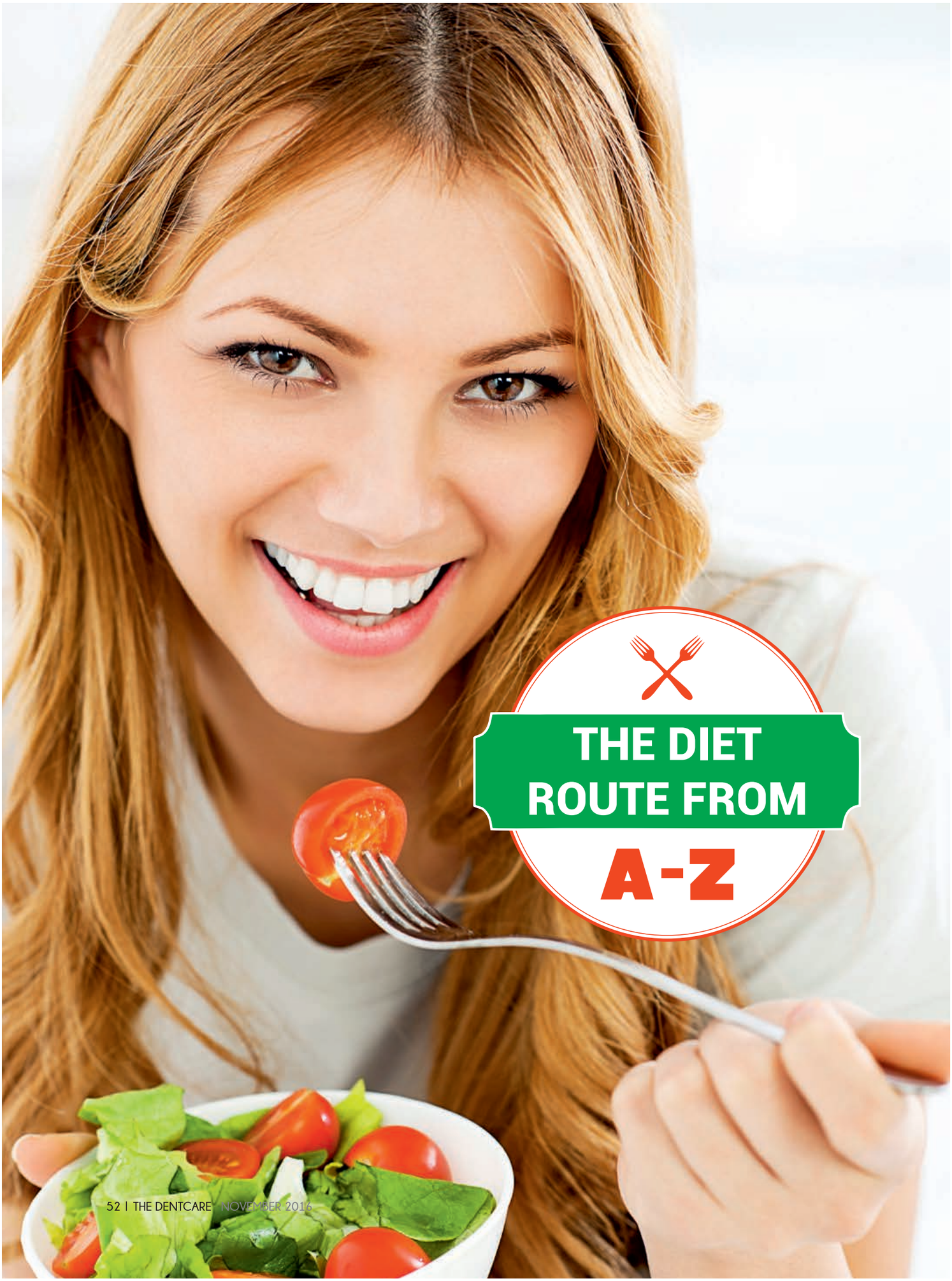
- A non–invasive treatment with little downtime, so you can return to day to day activities straight away.
- Replenishes lost volume for a softer, younger look.
- Hydrated lips which give a more youthful looking appearance.
- Patients typically have results that last 9–12 months.

When it comes to correcting uneven lips with fillers, you should consult with a plastic surgeon to see your alternatives. It is true that lip fillers are not permanent, but one might want to try it to see how the lips look first as it might give you an idea of how your lips will look with permanent correction.

There are many types of dermal fillers that can be injected in your lips and around your mouth. But the most common fillers today are products that contain substances similar to hyaluronic acid. It can improve the appearance of your lips by adding shape, structure and volume.

Allergic reactions are unlikely as hyaluronic acid fillers are made from substances similar to those found in the body. But if you are allergic to lidocaine, inform your doctor before the treatment.

Injecting the lips is a tricky technique, so do make sure your doctor has been trained appropriately for this and that they are using temporary fillers that are US FDA (United States Food and Drug Administration) approved for safety.


THE DIET
ROUTE FROM
A-Z

Eating the Alphabet

Any child starts learning words starting with the corresponding alphabet with the clichéd rhyme – "A for Apple", "B for Ball", "C for Cat" (or other variants) and so on. To instill in them knowledge about healthy foods, this recital can be modified using commonly available foods.

The following is a compilation of healthy foods in alphabetical order along with their nutritional and health benefits.

Ms. Hannah Sheila Mathison
Nutritionist
Kochi, Kerala, India

A for Apple

- Improves bone health
- Helps in treating asthma
- Prevents lung, breast, colon and liver cancer
- Good for diabetic patients

B for Blue Berries

- Sharpens memory
- Improves the digestive system
- Regulates blood sugars
- Controls cholesterol levels

C for Carrot

- Maintains a healthy heart
- Helps improve vision
- Prevents cancer
- Improves skin

D for Drumstick

- Loaded with minerals and proteins
- Purifies blood
- Cures respiratory problems
- Good source of calcium

Prevents lung, breast, colon and liver cancer

Rich source of minerals like Selenium, Zinc, Iron and Copper

Prevents cancer

Boosts memory

E for Eggs

- Rich source of minerals like Selenium, Zinc, Iron and Copper
- Rich in Vitamins D, B6 and B12
- Good source of good fat
- Contains the highest quality food protein known

F for Figs

- Contains many vital minerals and vitamins (Vitamin A, B1, B2)
- Has a variety of antioxidants
- Reduces fatigue
- Improves memory
- Prevents anaemia

G for Grapes

- Rich in Flavonoids
- Lowers blood pressure
- Prevents cancer
- Boosts immunity
- Purifies blood

H for Honey

- Boosts memory
- Gives good sleep
- Treats wounds and burns
- Reduces allergies
- Good source of energy

I for Iceberg Lettuce

- Excellent source of Vitamin A, K and C
- Contains good amounts of water and dietary fiber
- Very low in saturated fat and cholesterol
- Heart protective
- Improves immunity

J for Jackfruit

- Rich source of B complex group vitamins
- Lowers blood pressure
- Fights cancer
- Helps against asthma and anaemia

K for Kiwi Fruit

- Excellent source of Vitamin C and K
- Promotes heart health and sleep
- Regulates blood pressure
- Good source of copper and dietary fiber

L for Lemon

- Rich source of Vitamin C
- Improves immune system
- Helps cure common cold
- Promotes weight loss

M for Mango

- Improves vision
- Helps in digestion
- Lowers cholesterol
- Improves memory and concentration

N for Nutmeg

- Helps lower blood pressure
- Good for bone health
- Helps in digestion
- Reduces pain caused by wounds and injuries

O for Oranges

- Promotes heart health
- Increases immunity
- Lowers cholesterol
- Prevents cancer

P for Papaya

- Rich source of antioxidants
- Contains Vitamin C, B and Folate
- Helps maintain skin health
- Rich in enzymes

Q for Quince

- Has good anti–inflammatory properties
- Promotes weight loss
- Treats ulcers
- Helps relieve nausea and vomiting

R for Raspberries

- Promotes brain power
- Improves heart health
- Prevents cancer
- Improves digestion
- Controls diabetes

S for Strawberries

- Excellent source of antioxidants
- Lowers inflammation
- Promotes bone health
- Has anti–aging properties

T for Tomatoes

- Prevents cancer
- Reduces blood pressure
- Controls diabetes
- Improves eye health
- Helps in skin and hair growth

U for Ugli Fruit

(a.k.a Unique Fruit / Uniq Fruit)

- Boosts immunity
- Provides excellent skin care
- Lowers blood pressure
- Promotes gum health

V for Victoria Plum

- Speeds up metabolism
- Boosts digestive health
- Stops premature aging
- Increases immunity

W for Walnut

- Help develop brain functions
- Boosts heart health
- Reduces risk of cancer
- Helps deal with stress

X for Xigua

(a.k.a Water Melon)

- Prevents asthma
- Protects against cancer
- Regulate blood pressure
- Hydrates the body
- Improves skin health and digestion

Y for Yam

- Heals skin diseases
- Cures respiratory problems
- Rich source of antioxidants
- Helps healthy immune function

Z for Zucchini

(a.k.a Courgettes)

- Best source of Vitamin A
- Helps promote eye health
- Good source of dietary fiber
- Heart protective
- Prevents cancer

One can always change the above mentioned options and include a wider variety of foods, thereby improving the learning experience. It is a well known fact that kids are like sponges. The amazing capacity they display in learning and absorbing facts can be put to good use. Employing innovative methods which pique their interest and curiosity go a long way in laying a good foundation for their development.

EXPERIENCE DENTCARE

Dr. Thomas C. Kappen
Consultant Orthodontist,
Periodontist and Implantologist
Palai, Kerala, India

First of all, I would like to appreciate Mr. John Kuriakose and all those who have supported him in creating such a unique and world class institution through Dentcare. Overcoming every difficulty, such an institution was created in Kerala and more importantly, continues to be well maintained.

I have visited DentCare lab twice and I have felt proud as a Malayalee and as an Indian.

The staff including technicians displayed good behavior and were very professional. Clean and well kept amenities created an enduring impression in my mind.

I was truly amazed by the unity and dedication of the employees. They work together as a family.

The products and services at DentCare are at par with international standards. Equipments at the lab are world class (from milling machines to the 3D printer). I felt a sincere desire to deliver high quality services after this visit.

I appreciate the fact that the lab is constantly upgrading and expanding and stands above all other labs that I have visited both nationally and internationally.

- Gingivitis
- Etiology
- Clinical Manifestation

PERIODONTIUM IN PREGNANCY

Oral health during pregnancy has long been a focus of interest. The nine month period of pregnancy in a woman's life is defined not only by the development of her unborn child but also by the adaptive changes that her body undergoes to support the pregnancy.

Pregnancy constitutes a special dynamic physiological state evidenced by several transient changes as a result of increased production of reproductive hormones which include estrogen, progesterone, gonadotropins and relaxin.

The oral cavity is also affected by such endocrine actions and may present both transient and irreversible changes as well as modifications that are considered pathological.

Common oral health conditions during Pregnancy

Specific oral complications affect pregnant women to a greater degree than their non–pregnant counterparts.

Dr. Michelle Debbie Jackson Boijol
House Surgeon

Guided By

Dr. Anirudh B. Acharya
Professor
Department Of Periodontics

SDM College of Dental Sciences and Hospital
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Gingivitis

Gingival hyperplasia in pregnancy was discussed by Pitcarin in 1817. For many years, however, there have been questions about the reported prevalence of periodontal disease in pregnancy, the role that local and hormonal factors may have in the pathogenesis and the implication of certain microorganisms in the etiology of this disease.

Based on clinical observations, the reported frequency of this so–called pregnancy gingivitis ranges from 30% to 100%.

According to studies using well–defined indices, gingival inflammation is a heightened or exacerbated response to dental plaque during a period of progesterone and estrogen imbalance. In addition, the effect of pregnancy on pre–existing gingival inflammation is first noticeable in the 2nd month of gestation and peaks in the 8th month.

During the last month of gestation, a definite decrease in gingivitis generally occurs and the gingival status immediately postpartum is found to be similar to that at the 2nd month of pregnancy.

The greatest relative increase in gingivitis during pregnancy is observed around the anterior teeth, although the molars demonstrate the highest gingivitis scores throughout pregnancy. The papillae (interproximal areas) are the most frequent sites of gingival inflammation both during pregnancy and after parturition.

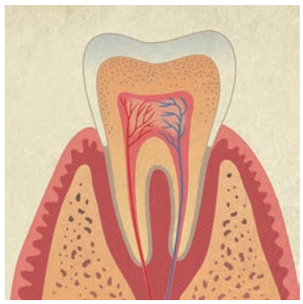
Etiology

The causes of gingivitis in pregnancy can be separated into two general headings: host factors and microbial changes.

Relative to host factors, the onset of increased gingival inflammation observed in the 2nd month of gestation coincides with an increase in the circulating levels of estrogen and progesterone. The continuous rise in these two hormone levels up to the 8th month is reflected in the greatest amount of gingival inflammation noted during pregnancy.

A marked reduction in gingivitis after the 8th month correlates with an abrupt decrease of the circulating levels of these hormones. Estrogen and progesterone receptors have been demonstrated in human gingiva indicating that it is a target tissue for hormones.

Additionally, it has been demonstrated that progesterone is metabolized faster by



inflamed human gingiva than by normal gingiva. The kinetics of progesterone in the gingiva, coupled with the clinical observations that the abnormal changes in gingiva during pregnancy parallel the circulatory levels of progesterone and estrogen, provide convincing evidence that these two hormones play a role in exacerbating gingivitis.

The mechanisms of action of progesterone and estrogen–induced gingival changes during pregnancy have become much better understood. Increased circulating levels of progesterone in pregnancy cause dilatation of gingival capillaries. There is resultant increased capillary permeability and gingival exudate.

Vittek and colleagues described the effect of progesterone on the gingival vasculature and the resultant increased exudation. The effects included a direct action of progesterone on the endothelial cells, possible effects on the synthesis of prostaglandins and suppression of the cellular immune response.

Clinical appearance is similar to that of gingivitis and may vary depending on the severity of the manifestation. Included signs may be edematous changes such as erythema, hypertrophy and hyperplasia. Additionally, an increase in bleeding on provocation may be seen.

Progesterone causes dramatic morphologic changes in the gingival microvasculature. The morphologic basis of the induced vascular permeability is the formation of gaps in the normally intact endothelial lining, together with channels resulting from coalescence of adjacent vesicles.

The changes in both, capillaries and venules, as well as the long duration of leakage from these vessels, are unlike the short action of histamine.

The keratinization of the gingiva is known to be decreased during pregnancy and this, together with an increase in epithelial glycogen, results in a diminution in the effectiveness of the epithelial barrier.

Estrogen also causes changes in the keratinization of the gingival epithelium and alters the degree of polymerization of ground substance. Because of the vascular changes caused by these hormones, there is a more florid response to the irritant effects of dental plaque.

Increased serum levels of progesterone have been correlated with increased gingival crevicular fluid flow rate, which in periodontal diagnosis has been shown to reflect gingival inflammatory conditions.

Physiologic levels of estrogen and progesterone in pregnancy have been shown to be stimulatory to prostaglandin synthesis. Prostaglandins, especially PGE1 and PGE2, act as long term mediators of inflammation.

Prostaglandins are synthesized by activated macrophages and, to a lesser degree, by polymorphonuclear neutrophils in response to inflammatory stimuli, both of which increase in number as the gingiva becomes inflamed.

Prostaglandin concentration within the gingiva and gingival fluid also increases dramatically, with the occurrence of gingival inflammation. Along with initiation of vascular changes, stimulation of prostaglandin synthesis illustrates another mechanism that raises progesterone levels in pregnancy, magnifying the clinical features of dental plaque–induced gingivitis.

Immune mechanisms have also been suggested to have an important role in the initiation and development of gingivitis and periodontitis. Little is known about the effects of pregnancy on immune response in the oral cavity.

Nevertheless, it has been demonstrated that the cell–mediated response is depressed during pregnancy,

possibly contributing to the altered responsiveness of the gingival tissue to dental plaque.

Dental plaque is the principal etiologic factor in gingivitis. In periodontitis, it is well established that the sub–gingival plaque is characterized by a shift toward a more anaerobic flora. Strong evidence supports the observation that gingival inflammation during pregnancy results from an alteration of the sub–gingival flora to a more anaerobic state.

The anaerobe–to–aerobe ratio increases significantly during the 13th through 16th week of pregnancy and remains high during the third trimester. It has been shown that increased proportions of Prevotella intermedia are concomitant with an increase in gingivitis and elevated serum levels of estrogen and progesterone in pregnancy. This is most pronounced in the second trimester and correlates with increased gingivitis scores.

When the proportion of bacteroides species was monitored in the dental plaque of pregnant women, non–pregnant women and non–pregnant women taking contraceptives, a 55–fold increase over the control group was noted in the populations of the bacteroides species in pregnant women and a 16–fold increase in women taking oral contraceptives.

Subsequent pure culture studies have shown that the marked increase in the proportion of bacteroides species during pregnancy seems to be associated with increased serum levels of circulating progesterone and estrogens.

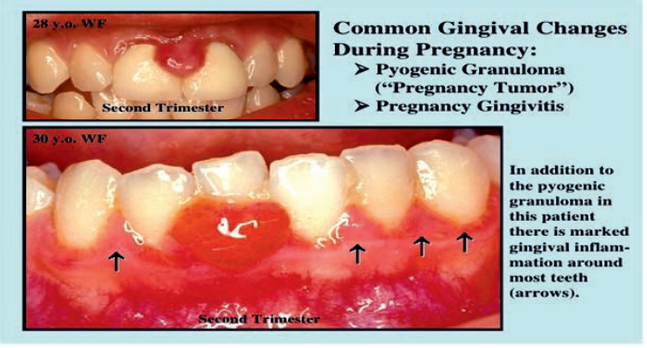
Both hormones can substitute for naphthoquinone, which is an essential growth factor for P. intermedia. The studies reported to date indicate that female sex hormones may be capable of altering the gingival vascular system, the immune response and the normal sub–gingival flora.

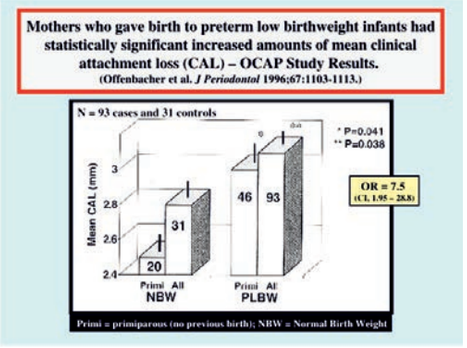
Clinical manifestations

As previously noted, the marginal gingiva and interdental papillae are fiery red and the gingiva is enlarged, mostly affecting the interdental papillae. The gingiva shows an increased tendency to bleed and in advanced cases, patients sometimes even experience slight pain.

During the second and third trimester, the inflammation often becomes more severe. It should be noted that not all women respond in this fashion; in fact, many do not have a clinically altered gingival condition.

When there is no dental plaque–associated gingivitis before pregnancy and attentive oral hygiene is monitored, gingivitis usually does not develop. Preventive measures, such as more frequent dental visits for prophylaxis and meticulous plaque control, are therefore indicated for pregnant women. Recommendations include twice daily brushing along with flossing on a daily basis.





To be continued.....

ADVANCED DIGITAL DENTAL SOLUTIONS AT DENTCARE

DentCare Dental Lab is one of the leading manufacturers of dental prostheses in the world. DentCare strives to seek excellence by maintaining international standards and quality in all its products with its state–of–the art manufacturing facilities and its expert team of professionals.

The company strongly believes that technology, hand in hand with art, fused with the latest know–how, results in dental restorations with greater precision, aesthetics and functionality.

DentCare has an array of over 150 products to offer for the benefit of the dental fraternity. It would be noteworthy that DentCare has quickly and effectively adapted itself to the ever transforming arena of digital dentistry.

We take you through DentCare's prosthetic solutions in digital dentistry.

▪ DentCare Zirconia – Ample Alternatives

The paradigm shift in dentistry for life–like restorations that mimic natural tooth structure based on perceived and actual aesthetic and functional patient demands has led DentCare Dental Lab to offer **DentCare Zirconia – a Revolution in Metal Free Prosthesis**.

DentCare Zirconia is biomedical grade Zirconia made in Germany. Available in ten diverse options, the Dentcare Zirconia range of products assure natural feel and functionality, unmatched aesthetics and unlimited characterization made available through more than 40 natural and lifelike shades.

It is manufactured using an innovative Computer Aided Design / Computer Aided Manufacturing (CAD / CAM) technology offering perfect fit and marginal adaptation to the final product.

This unique material provides full scope for cement retained crowns and bridges on natural teeth (up to 16 units as a single restoration) as well as cement and screw retained solutions for implants (single and multiple–unit).

▪ DMLS (Direct Metal Laser Sintering)

Direct Metal Laser Sintering (DMLS) is a certified system for the additive manufacturing of new generation Porcelain Fused to Metal (PFMs) using imported Laser Sintering Machines from EOS, Germany.

In this system, Computer Aided Designing / Computer Aided Manufacturing (CAD / CAM) is being used to produce metal frames by sintering highly biocompatible Cobalt–Chromium (Co–Cr) powder layer by layer.

DentCare uses only CE certified alloy powder directly imported from the manufacturer.

Direct Metal Laser Sintering fulfils stringent requirements of strength and stiffness, corrosion resistance and process accuracy for dental prostheses, particularly those requiring high precision as in the case of Dental Implants.

▪ DentCare Clear Aligners

Dental braces are now entering a brave new world of comfort and ease with DentCare Clear Aligners – a series of transparent aligners to realign teeth. Each DentCare Clear Aligner is unique as it is customized for the patient's teeth. They can be easily changed every two weeks, sparing users the tedious task of heavy maintenance.

There is absolutely no need to spend long hours at the clinic negotiating conventional brackets and wire adjustments. Patients and dental clinicians stand to gain numerous valuable hours. Consequently, the dental clinician also gets to spent quality, value–added time with each patient.

With DentCare Clear Aligners, the final outcome of the treatment may be visualized with the aid of 3D virtual simulation and a treatment plan can be formulated accordingly.

How does it work?

The treatment consists of a revolutionary system which integrates the latest software and 3D CAD / CAM technology.

To proceed with the CAD / CAM procedure for processing an order of a custom made DentCare Clear Aligner, both upper and lower models of the patient's dental arches along with bite registration are required.

In order to proceed with the designing, it is mandatory to send us digital records of the patient. Ideally, a Cone Beam Computed Tomography (CBCT or CT) is preferred. However, an Orthopantomogram (OPG) along with Lateral Cephalograph would suffice.

The patient models are scanned with a high–tech 3D digital scanner. The software assists in analyzing the treatment requirements and thus supports in planning and mapping out all intermediate stages necessary to reach the predetermined goal.

▪ Dental Implant Prosthetics

Dental Implants are popular and effective to replace missing teeth and are designed to blend in with other existing teeth. They are an excellent long–term option for restoring smiles with uncompromised functionality.

Different variants of Implant Prostheses are offered by DentCare and may be made available as Screw Retained or Cement Retained crowns / bridges.

• *Screw–retained Hybrid Denture*

Hybrid denture' is referred to as hybrid because it combines the advantages of a fixed replacement with those of a removable denture. Patients regain self–esteem, confidence and can enjoy wider variety of food.

The variants available are:

- Titanium (Milled) with acrylisation – manufactured using CAD / CAM technology
- Titanium (Cast) with acrylisation
- Direct Metal Laser Sintered (DMLS) in Cobalt–Chromium with acrylisation – manufactured using CAD / CAM technology
- Cobalt–Chromium (Cast) with acrylisation
- Polyether Ether Ketone [PEEK] (Milled) with light cure composite – manufactured using CAD / CAM technology

• Implant–supported Overdentures

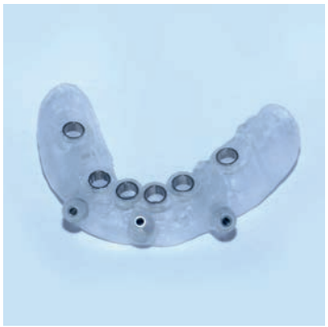
They are available as Bar Attachment / Ball Attachment Overdentures.

Implant–supported Overdentures are offered in various material options namely

- Titanium (Milled) – manufactured using CAD / CAM technology
- Titanium (Cast)
- Direct Metal Laser Sintered (DMLS) in Cobalt–Chromium – manufactured using CAD / CAM technology
- Cobalt–Chromium (Cast)
- PEEK (Milled) with light cure composite – manufactured using CAD / CAM technology

Before selecting any Implant system make sure that the complete range of prosthetic components are available with the supplier.

▪ Implant Surgical Templates



At DentCare, we have the training, skill and experience to assist a dentist right from case design, case plan and case estimate up to the final delivery of the prosthesis. We believe that prosthetic driven implant placement is the key to a successful implant treatment.

DentCare provides CAD / CAM surgical guides that can be fabricated after clinical examination and radiographic evaluation with CBCT.

Implant surgical template enables a predictable and a safe surgery by directing the implant drilling system to provide an accurate placement of the implant according to the surgical treatment plan.

Our Implant Planning Software opens up a door to a complete digital and flexible workflow. We are able to produce precisely designed surgical guides in our lab that are customized to the dentists' needs.

Prosthetic driven implant planning starts with planning the final prosthesis with virtual crown followed by implant planning and a guided implant placement. This is certainly adding to highest quality implant treatment and also ensures that the patient gets the safest implant placement possible.

Advantages

- Reduced chair time and fewer patient visits for increased profitability and patient comfort
- Easy and straight forward procedure with enhanced predictability
- Improved clinical and aesthetic results
- Temporary or final prosthesis placed during the same surgery (possible in selected cases)
- Minimally invasive and reduced healing time
- Reduced pain and complications equals increased patient comfort

Conclusion

DentCare Dental Lab, with decades of experience and passion to create healthy and beautiful smiles is your trusted partner in choosing the right prosthetic solution.

DentCare has been effective in providing unlimited applications in dentistry for the benefit of the dental fraternity and the patient community as a whole.

DentCare offers a wide range of dental prosthetic solutions at affordable rates, making it the most preferred dental laboratory for dentists. Moreover, it has an extensive network of clients across the country.

In brief, our aim is to understand and to meet the needs of our clients by giving them a “winning smile” that will help them accomplish their goals with confidence.

To,

The Managing Director / Editor in Chief,
The DentCare,
DentCare Dental Lab Pvt. Ltd.,
Muvattupuzha, Kerala, India.

Respected Sir,

Today I am very proud that my face is totally changed with a big smile. I have gone through a dental treatment in Ahmedabad by Dr. Ansuman Maheshwari who treated my teeth with "Zirconia" teeth which is 100% natural. I am feeling very proud for that and want to give special thanks to your whole team.

With gratitude and thanks, I have written a poem, "MUSKURAHAT KAHAN KAHAN HAI".

Wishing the very best to you all.

Thanking you,

Regards,

Mr. Ramesh Singaania
Ahmedabad, Gujarat, India

"MUSKURAHAT KAHAN KAHAN HAI"

Muskurahat muskaan mein hai,
Muskurahat sampurna jahaan mein hai,
Muskrahat socho to hum mein bhi hai.

Muskrahat khushi mein bhi hai,
Logo ki soch bhin bhin ho sakti hai,
Lekin satya ki jeet hamesha hoti hai.

Khushi se aankho ki chamak ko dekho,
Ayene mein apne khubsoorat dato ko dekho,
Dono mein farak kuch bhi nahi.

Ek jivan mein roshni, Dusri dato mein chamak deti hai,
Jindagi jine ke liye sab kehte hai,
Lekin matlab alag alag hote hai.

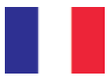
Hum to bas yehi kahenge,
Jindagi jine ke liye hi hai,
Lekin satya to yahi hai mere yaro jano.

Wo har pal, har shan,
Muskrahat jine ke liye hoti hai…

(Har roz niya niyam Muskrahaye jawab khud wa khud mil jayega)

DENTAL CALENDAR

THIS NOVEMBER – DECEMBER

	51ST INDIAN ORTHODONTIC CONFERENCE AND 8TH WORLD IMPLANT ORTHODONTIC CONFERENCE	03 - 05 November Goa, India	Grand Hyatt +077 679 20851 www.51stioc8thwioc.com
	8TH DENTAL FACIAL COSMETIC INTERNATIONAL CONFERENCE	04 - 05 November Dubai, UAE	Jumeirah Beach Hotel +971 502 793711 +971 436 86883 www.cappmea.com
	DENTAL TRADE ALLIANCE - ANNUAL MEETING	08 - 11 November Marana, USA	The Ritz-Carlton Dove Mountain +703 379 7755 +703 931 9429 www.dentaltradealliance.org
	17TH WORLD CONGRESS ON ORAL CARE AND DENTAL HYGIENE	14 - 16 November Orlando, USA	Double Tree by Hilton Hotel +1 407 856 0100 +1 407 855 7991 www.oralcare.conferenceseries.com
	18TH ASIA-PACIFIC DENTAL AND ORAL CARE CONGRESS	21 - 23 November Melbourne, Australia	Best Western Premier Hotel 115 Kew +1 888 843 8169 +1 650 618 1417 www.dentalcare.conferenceseries.com
	ASSOCIATION DENTAIRE FRANCAISE ANNUAL MEETING	22 - 26 November Paris, France	Palais des Congrès +331 582 21710 +331 582 21740 www.adf.asso.fr
	92ND GREATER NEW YORK DENTAL MEETING DentCare Dental Lab Exhibiting @ Booth # 1529	25 - 30 November New York City, USA	Jacob K. Javits Convention Center + 1 212 398 6922 +1 212 398 6934 www.gnydm.com
	44TH INDIAN PROSTHODONTIC SOCIETY CONFERENCE	01 - 04 December Mumbai, India	CIDCO Exhibition Centre +91 982 003 8875 +91 741 617 3737 www.ipsconference2016.com
	19TH AMERICAN DENTAL CONGRESS	08 - 10 December Phoenix, USA	Phoenix Airport Marriott +1 404 767 9000 +1 404 768 0185 www.dentalcongress.com
	29TH CONFERENCE OF THE INDIAN SOCIETY FOR DENTAL RESEARCH	09 - 11 December Lucknow, India	Scientific Convention Centre +91 941 502 9863 www.29thisdr.com
	EXPODENT INTERNATIONAL INDIA	23 - 25 December New Delhi, India	Pragati Maidan +91 112 464 35014 +91 995 821 9356 www.expodent-india.com

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fluoride release

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	KROMOGLASS 2	KROMOGLASS 3
Mixing time*	40 sec.	30-40 sec.
Working time including mixing time*	3 min.	3,5 min.
Setting time in mouth	2 min.	5 min.
Resistance to compressive strength	150-170 MPa	90-130 MPa
Water solubility	0,2-0,4%	0,3-0,9%
Film thickness	-	20-25 µm

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Muvattupuzha, Kerala, India

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