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From the desk of editor

MY JOURNEY TO PREAURICULAR "VIKAS SINHA FLAP"

For the second step one has to take the first step

Pre auricular flap is basically a flap which was designed by me for the basal cell carcinoma at pre-auricular region. Basal cell carcinoma is a skin malignant tumour. It is very slow growing tumour and metastasis is very rare though it does invade deeper structure in long run.

The cases of basal cell carcinoma are not all that uncommon especially in Saurashtra region of Gujarat rather incidences are quite a few especially at costal region of Saurashtra Gujarat. My journey for the flap surgery of Head and Neck region for the basal cell carcinoma was not my choice rather a compulsion. I was working at one of the very big Govt. medical college of Saurashtra and one fine day one old patient came with one big lesion at the nose region which turned out to be basal cell carcinoma of face after the histopathology examination. The facility of plastic surgeon was not available there. The patient relatives stubbornly insisted to get it operated there only. After burning lot of mid night oil I found one flap which I found similar to my case lesion and suitable for my case. The post-operative result was very satisfactory. That gave my courage to do flap surgery . More and more cases started coming to me as post-surgery good results of the BCC started spreading by words of mouth. The lesions at different part of face required altogether different challenges as not everything covered in plastic surgery literature so I had to innovate many things. I started the flap design at my mind, and quite often rotating the flap design to 360° as per case requirement and used to practice the flap design and its rotation in the surgical gloves. I had one of the largest series of flap surgery of basal cell carcinoma among ENT surgeon.

This particular Pre-auricular VIKAS SINHA flap patient had histopathology proved basal cell carcinoma. I could not find and any appropriate or suitable flap for this BCC patient in available literature that ultimately resulting in creating a new flap which I named as PRE-AURICULAR VIKAS SINHA FLAP.

From the desk of editor

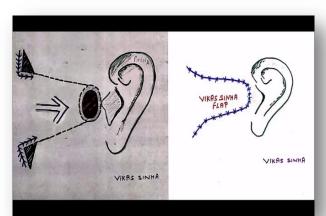
MY JOURNEY TO PREAURICULAR "VIKAS SINHA FLAP"



Basal cell carcinoma at Pre auricular region



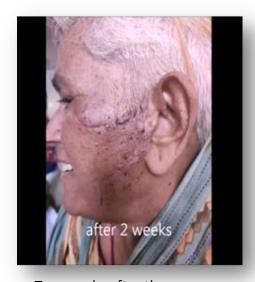
Flap design of Pre auricular Vikas Sinha flap



Concept of Pre auricular Vikas Sinha flap



Surgical wound closure of Pre auricular Vikas Sinha flap



Two weeks after the surgery



Four Months after the surgery

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Kumar Sanjeev, Associate Professor, Department of Microbiology, Shantabaa Medical College, Amreli.

Antibiogram is a summary of the cumulative susceptibility of bacterial isolates to formulary antibiotics during a specified period. It represents the proportion of each bacterium that is susceptible to a given formulary antibiotic.

Method of antibiogram preparation:

To determine whether a specific antibiotic may be effective versus a given bacterial isolate, susceptibility testing can be performed in a microbiology laboratory. If the antibiotic found not to work against the bacteria, then it is labeled as "R" for resistant. If the antibiotic found to work against the bacteria, then it is labeled as "S" for susceptible. In some instances sensitivity testing results fall between susceptible and resistant, in these cases the result may be called "I" for intermediate. Over the course of a year a hospital may report hundreds or thousands of susceptibility testing results. This data can be combined into a cumulative report, which more commonly known as hospital antibiogram or institutional antibiogram.

Antibiogram can vary significantly between hospitals. We cannot take the antibiogram from one hospital and apply it to another hospital. Even hospitals in the same city located directly across the street from each other can have antibiograms that look completely different. The reason is because each hospital serves specific patient populations and provides a unique set of clinical services. Antibiograms are an important tool in the fight against antibiotic-resistant organisms.

Types of Bacterial Resistance:

Multidrug resistant (MDR), extensively drug resistant (XDR), Pan drug resistant (PDR).

Definitions for MDR, XDR and PDR bacteria								
Bacterium	MDR	XDR	PDR					
Staph. aureus	The isolate is non-	The isolate is non-	Non-susceptibility to					
Enterococcus	susceptible to at	susceptible to at	all agents in all					
species	least 1 agent in ≥3	least 1 agent in all	antimicrobial					
Enterobacteriaceae	antimicrobial	but 2 or fewer	categories for each					
P. aeruginosa	categories	antimicrobial	bacterium					
Acinetobacter Spp.		categories						

Importance of antibiogram:

- 1. Antibiogram can be helpful for picking empiric antibiotic therapy.
- 2. Antibiograms help track local antibiotic resistance trends.

Our Hospital Antibiogram:

Overall, 95(24%) samples were culture positive during the period of July, 2020 to September, 2021. Off the 95 culture positive isolates, Staphylococcus aureus 29 (31%), Pseudomonas aeruginosa 20 (21%), Klebsiellae 17 (18%), Escherichia coli (E.coli) 16(17%) and other bacteria 13 (13.6%). Among 29 Staphylococcus aureus, 75% isolates were resistant to fluroquinolones, penicillin and 37% isolates were resistant to tetracycline. Overall 48% of Staphylococcus aureus were cefoxitin resistant and they were reported as Methicillin resistant staphylococcus aureus (MRSA). Out of 20 Pseudomonas aeruginosa, 40% isolates were resistant to aminoglycosides, fluroquinolones, ceftazidime and piperacillin tazobactum. E.coli and Klebsiellae isolates showed 95% resistant against the first and second generation cephalosporin's, whereas fluroquinolones, Aztreonam, ceftazidime, cotrimoxizole showed 58% resistant and aminoglycosides, piperacillin tazobactum 31% resistant. Acinetobacter exhibited 100% resistant against showed fluoroguinolones, ceftriaxone and ceftazidime.

			The	follov	ving	antil	oiotio	cs sh	owin	ıg Re	sista	nce	(R) a	gain	st th	e nu	mbe	r of i	solat	es		
Organism (No.of isolates = n)	GENTAMICIN	TOBRAMYCIN	AMIKACIN	AMPICILLIN/SULBA	PIPERACILLIN/TAZO	CEFUROXIME	CEFIPIME	CEFOXITIN	CEFTRIOXONE	CIPROFLOXACIN	LEVOFLOXACIN	IMIPENEM	COTRIMOXIZOLE	AZTREONAM	CEFTAZADIME	CHLORAMPJENICOL	TETRACYCLINE	CEFAZOLIN	FOSFOMYCIN	NITROFURONTOIN	AMPICILLIN	MINOCYCLIN
Pseudomona s aeruginosa (n=20)	7	7	6	-	7	-	7	1	1	9	7	1	-	5	8	-	1	1	1	1	1	-
Escherichia coli (n=16)	7	7	5	11	5	16	11	10	15	11	11	0	8	11	14	5	16	6	1	-	16	-
Klebsiellae spp. (n=17)	7	6	4	9	5	16	10	11	15	10	9	3	10	10	14	7	16	7	1	-	1	-
Citrobacter (n=4)	1	1	1	-	-	1	2	1	3	1	1	-	3	3	3	-	2	1	-	-	2	-
Acinetobacte r (n=4)	. 1	1	0	2	. 1	1	1	1	4	3	3	1	2	1	4	-	1	1	1	1	1	1
Serratia (n=1)	0	0	0	0	1	0	1	1	1	1	0	0	0	0	0	1	1	1	1	-	1	-

Table 1: Antibiogram of Gram negative bacteria

	Tł	The following antibiotics showing Resistance (R) against the number of isolates														
Organism (No.of isolates = n)	GENTAMICIN	AMPICILLIN/SULBACTUM	CLINDAMYCIN	CEFOXITIN	CIPROFLOXACIN	LEVOFLOXACIN	COTRIMOXIZOLE	LINEZOLID	PENICILLIN	CHLORAMPJENICOL	TETRACYCLINE	CEFAZOLIN	FOSFOMYCIN	NITROFURONTOIN	AMPICILLIN	MINOCYCLIN
Staphylococcus aureus (n=29)	10	-	6	14	22	23	11	-	23	3	10	-	-	-	23	-
Enterococci (n=4)	0	0	-	0	1	1	0	0	0	0	1	0	0	1	2	0

Table 2: Antibiogram of Gram Positive bacteria

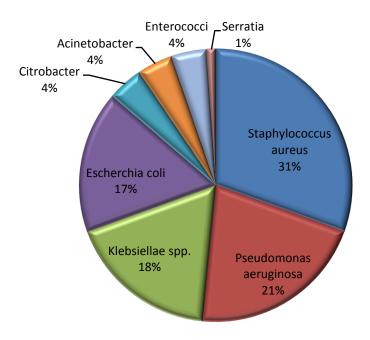


Chart 1: Gram negative and Gram positive bacteria isolated from various clinical specimens

Conclusion:

Staphylococcus aureus, Pseudomonas aeruginosa, Klebsiella spp. and E.coli were the predominant isolates from different clinical specimens. Most of the isolates were resistant to ampicillin, amoxyclav, tetracycline, fluroquinoles and cotrimoxazole. These notorious organisms always change their sensitivity pattern by their different drug resistant mechanisms and overuse/misuse of antibiotics. Therefore systematic collection and analysis of routine clinical laboratory data is important in assessing the antimicrobial resistance burden.

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Human Anatomy: a subject or a language?

Javia Mayank Kumar, Professor, Department of Anatomy, Shantabaa Medical College, Amreli.

The language of anatomy is derived from Latin and Greek, which were the languages of learning of the ancients of Western Civilization. Thus, many of the terms we see in modern medicine have mixed Greek and Latin origins. Because these languages are no longer used in everyday conversation, the meaning of their words does not change. An understanding of anatomy is key to the practice of medicine and other areas of health. By using precise anatomical terminology, we can eliminate ambiguity.

The term "Anatomy" is derived from a Greek word "Anatome", which means to cutting up or dissection. Anatomy is a field in the biological sciences concerned with the identification and description of the body structures of living things. Further, the Anatomy is an art of separating the parts of an organism in order to ascertain their position, relations, structure and function.

Several branches of human anatomy includes Gross anatomy, Microscopic anatomy or histology, Surface anatomy, Radiological anatomy, Developmental anatomy or embryology, Living anatomy, Comparative anatomy, Physical anthropology, Genetics. In Human Anatomy subject, dissection of cadaver has been the main source of learning macro-anatomy or gross anatomy. Gross anatomy can be studied either according to the regions or according to the systems. According to the region; gross anatomy can be divided into upper extremity, lower extremity, thorax, abdomen, head & neck and neuro anatomy. According to the systems, gross anatomy can be studied under following systems: gastrointestinal system, cardiovascular system, respiratory system, reproductive system, urinary system, nervous system etc.

Anatomical language is the mainstay for the understanding of various complex concepts of the anatomical terminology. Let me give an example: "Levator labii superioris alaeque nasi" is a muscle near the nose and lip in head and neck region. According to the anatomical language, we will try to understand the meaning of all the anatomical terms used for naming this muscle. Levator means to elevate; labii is the term related to the lip; superioris means upper; alaeque means to dilate or broaden up; nasi is the term related to the nose.

Human Anatomy: a subject or a language?

After compiling the meaning of all the terms, the meaning of "Levator labii superioris alaeque nasi" is the muscle which will elevate the upper lip and dilate the nose. Let me give another interesting example: "Coccyx" is the tailbone attached inferior to the sacrum. The term "Coccyx" is derived from the Latin 'Cuckoo', which is referring the shape of coccyx similar to the curved shape of a cuckoo's beak when viewed from the side. If a facilitator would teach the complex terminologies of anatomy by making students understand their meaning by teaching anatomical language, than it is really easy for them to understand the anatomy.

In all the medical colleges of India, Human Anatomy is being taught as a basic preclinical subject during the Phase I of MBBS. Further, the human anatomy is also taught to the students pursuing the paramedical courses i.e. ayurved, dentistry, homeopathy, physiotherapy, naturopathy, optometry etc. Ultimate aim of the medical education is to produce knowledgeable, skillful and professional health care provider. Training in the preclinical basic sciences form a strong foundation over which the piles of the knowledge of Para-clinical and clinical subjects can be made easily.

Teaching anatomy in modern era can be made easy and interesting by taking the students to the joyful ride of diversified anatomical language.

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NCD Field Survey & Camp Report

- 1. Chauhan Meet (Associate Professor) 2. Lodha Nitin (Associate Professor)
- 3. Kansagara Trusha (Associate Professor) 4. Savani Nikita (Assistant Professor)
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Background:

India is a diverse country, and many states in India are passing through an epidemiological health transition with high rates of urbanization. One of the effects of economic transition is a shifting the disease spectrum from communicable ton on-communicable diseases (NCDs)¹.Non-communicable diseases (NCDs) encompass a vast group of diseases such as cardiovascular diseases, cancer, diabetes and chronic respiratory diseases. NCDs contribute to around 38 million (68%) of all the deaths globally and to about 5.87 million (60%) of all deaths in India ². The World Health Organization (WHO) has identified India as one of the nations that is going to have most of the lifestyle related disorders in the near future. But, the important fact is that not only are the lifestyle disorders becoming more common, but they are showing a drastic shift towards the younger population. Thus, the populations at risk of their forties are shifting to their thirties and maybe even younger³.

The morbidity and mortality inmost productive phase of life is posing serious challenges to Indian society and economy⁴. Behavioral and biological risk factors, with a predisposition to the development of NCDs, are use of tobacco and alcohol, physical inactivity, overweight and obesity, increased fat and sodium intake, low fruit and vegetable intake, raised blood pressure (BP), blood glucose and cholesterol levels ².Death from NCDS is on the rise, with developing world being hit hardest. Majority of these diseases are preventable illnesses. So interventions targeting the main risk factors (e.g. smoking, alcohol intake, physical inactivity etc.) could have a significant impact on reducing the burden of non-communicable diseases⁵.

Survey report:

Community Medicine Department Staff (MSWs) did a family survey in field practice areas of UHTC and RHTC. Total family covered 541 (total population-2256). Staffs identified various health related problems like communicable skin diseases, respiratory diseases problems, higher use addictions (tobacco products and alcohol) and unhealthy life style practices.

NCD Field Survey & Camp Report

The findings are as per below:

Sr. No.	Variables	Urban (%)	Rural (%)
1	Diabetes	19 (1.3)	43 (1.8)
2	Hypertension	10 (0.06)	61 (7.6)
3	Addictions(all type)	602 (41.5)	261 (32.4)

Camp report:

After survey, there were 6 camp organized in UHTC-1 and RHTC areas (3 camp at UHTC-1 and 3 camp at RHTC areas). Total 376 patients (199 in UHTC-1 & 177 in RHTC) came in camp for screening and health checkup. Blood samples were taken for checking of RBS and Total cholesterol among population. In primary screening, 62,47,30 and 68 patients were having above normal RBS, Blood pressure, total cholesterol level and Overweight/obese respectively. For further screening, they were referred to nearby health center. During camp, the staff educates them to increase awareness about basic information of diet and healthy life style practices, adverse impact of using tobacco and alcohol, hygiene practices and adherence of drugs.

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Corona virus infection in India is continuously rising. The states are in a battle mode to control the spread of the virus. There has been a lockdown across the country and all the events postponed. In times of Covid-19 pandemic, which has halted not just commercial transactions but also lifestyles, the Indian Government took relevant steps to avoid mass spread of the virus, read out the preamble of the Epidemic Diseases Act and got to work.

History:

This first official case was recorded on 23/09/1896 from a house of Nowroji Hill Slums near Masjid Bridge in Mandvi. The credit for this discovery goes to an Indian physician named Acacio Gabriel Viegas, who was a general practitioner in Mandvi. The plague bacillus was probably carried from Hong Kong by the rats aboard merchant ships. At about 4 months into the epidemic, on January 19, 1897 *Queen Victoria* gave a speech in the British parliament in which she asked the government to take all measures necessary to curb this pestilence.

She said: "Plague has also made its appearance in the seaport towns of Bombay and Karachi, and, notwithstanding the precautions adopted by the local authorities, shows no signs of decrease. I have directed my government to take the most stringent measures at their disposal for the eradication of the pestilence."

And about ten days after this speech, the Epidemic Act bill was introduced on 28th January 1987 in the Council of the Governor- General of India in the then Indian capital of Calcutta. The bill was placed to give special powers to the local government bodies to deal with the disease. In that bill they blamed filthy Indian behaviour and habits like: "overcrowded houses, neglected latrines and huts, accumulations of filth, insanitary cowsheds and stables, and the disposal of house refuse" Thus, right from its inception, this Act would be used to destroy that filth and halt the disease spread.

The very next Thursday, 4/2/1897, the bill was passed and turned into law with immediate effect. Thus, the British Parliament was not involved in making of this Law.

To show how the authorities in India are dealing with the pest the following dispatch, read at conference February 19 by British delegate, from Governor of Bombay to Secretary of State for India, is here reproduced:

"Under Epidemic Diseases Act Government has empowered municipal commissioner, of his own authority and without reference to the magistrate, (1) to prohibit use of dwellings unfit for habitation; (2) to require vacation of buildings and premises for cleansing and disinfecting; (3) to require abatement of overcrowding; (4) to forcibly enter deserted buildings and cleanse and disinfect them; (5) to remove earth floors; (6) to cut off water connections; (7) to demolish whole or part of buildings unfit for habitation or dangerous to health; (8) to destroy infected bedding and clothing. Arrangements have been made for emptying all out-going trains at stations outside of Bombay and for strict medical inspection of all passengers."

Figure: February 19, the British delegate declared various measures which had been taken in India

COVID 19:

The colonial era act, all of 123 years old, has once again come to our rescue. Albeit the British colonial Government was said to have cleverly used the Act to imprison freedom fighters, the Indian Government is using the Act as a weapon to fight the novel virus and rightly so.

While the Central Government's powers are limited under the Act, it is the unity of various states in the country that has brought the Act in the forefront. Among other states, Karnataka, Maharashtra, Delhi and Kerala have issued advisories on management and brought into place 'Covid-19 Regulations, 2020' ("Regulations"). Vide these Regulations, states have exercised their powers under the Act to force employees of private establishments/ industries/factories/shops etc. to stay at home in the present times, to treat them as 'on duty'; to stop all construction work immediately; to shut night clubs and weekly bazaars etc.

- All states and Union Territories have been directed to invoke provisions of Section 2 of the Epidemic Diseases Act, 1897, so that Health Ministry advisories are enforceable.
- The Epidemic Diseases Act consists of four sections and aims to provide for better prevention of the spread of Dangerous Epidemic Diseases.
- It is routinely enforced across the country for dealing with the outbreak of diseases such as swine flu, dengue, and cholera.
- The colonial-era Act empowers the state governments to take special measures and prescribe regulations in an epidemic.
- It is a state act and not a central act.

Epidemic Diseases Act, 1897 - A Brief Overview

The Act which was enacted for preventing spread of epidemic diseases empowers both the Central and State Government(s) to take certain actions to prevent spread of such diseases. The Act, comprising merely four sections, is among the shortest in India.

- The Epidemic Diseases Act aims to provide for the better prevention of the spread of dangerous epidemic diseases.
- Under the Act, temporary provisions or regulations can be made to be observed by the public to tackle or prevent the outbreak of a disease.
- The Act contains four sections.

Section 1: Describes the title and extent of the Act

It extends to the whole of India.

Section 2: Powers to take special measures

- It states that if the State Government thinks that if other Acts are insufficient for the said purpose, it may take such measures by way of a public notice to prescribe temporary regulations for the public/class of persons to observe. The Regulations mentioned above have been enacted under Sections 2,3 and 4 of the Act.
- It empowers the state governments to tackle special measures and formulate regulations to contain the outbreakof an epidemic disease.
- the State may prescribe regulations for the inspection of persons traveling by railway or otherwise, and the segregation, in hospital, temporary accommodation of persons suspected by the inspecting officers to be infected.

Section 2A: Empowers the central government to take steps to prevent the spread of an epidemic.

- Health is a State subject, but by invoking Section 2 of the Epidemic Diseases
 Act, advisories and directions of the Ministry of Health & Family Welfare will be
 enforceable.
- It allows the government to inspect any ship arriving or leaving any post and the power to detain any person intending to sail or arriving in the country.

Section 3: Penalty for Disobedience

- The penalties for disobeying any regulation or order made under the Act are according to section 188 of the Indian Penal Code (disobedience to order duly promulgated by a public servant).
- Section 188, IPC imposes punishment for disobeying an order promulgated by a public servant. Violation of the regulations passed under the Act due to the outbreak Covid-19 would attract the punishment (imprisonment extending up to six months and/or fine up to Rs. 1,000) as it would tend to harm human life, health and safety. Offence under Section 188, IPC is cognisable and bailable.

Section 4: Legal Protection to Implementing Officers **Provisions of the IPC attracted in such scenarios**

In addition to **Section 188**, certain other provisions of the IPC relating to public health and safety may also be attracted during the outbreak of an epidemic disease.

- **Section 269 of the IPC** prescribes punishment for negligent actions which may spread infection of any disease, thereby threatening human life, punishable with imprisonment which may extend to six months and/or fine.
- However, pertinently, Section 270 is a more serious offence than the one listed under Section 269. It imposes punishment for malignant actions which may spread any disease dangerous to life. The punishment under this section may extend to two years imprisonment and/or fine.
- **Section 271 of the IPC** prescribes punishment for disobeying quarantine rule. Such punishment may extend to six months imprisonment and/or fine.

Presently, FIR has been lodged against a singer for negligence and disobedience of an order passed by a public servant under Section 188 as well as Sections 269, 270 and 271 of the IPC based on a complaint filed by the chief medical officer.

Amendment to the Act:

- Recently, the Cabinet amended the Act through an ordinance stating that commission or abetment of acts of violence against healthcare service personnel shall be punished with imprisonment for a term of three months to five years, and with fine of Rs 50,000 to Rs 2 lakh.
- In case of causing grievous hurt, imprisonment shall be for a term of six months to seven years and a fine of Rs1 lakh to Rs 5 lakh.

Enforcement of the Act in the Recent Past:

It is not the first time that this Act has been invoked in India.

- In 2009, to tackle the **swine flu outbreak** in Pune, Section 2 powers were used to open screening centres in civic hospitals across the city, and swine flu was declared a notifiable disease.
- In 2015 to deal with Malaria and Dengue in Chandigarh the Act was implemented and collecting officers were instructed to issue challans of Rs 500 to offenders.
- In 2018 the District Collector of Vadodara issued a notification under the Act, declaring Khedkarmsiya village as Cholera affected after 31 persons complained of the disease.

The Present Times:

- In the present times, the Act also loses the race in covering an effective framework to respond to an outbreak of such a disease, more so that the four sections in the Act don't envisage the very definition of an 'epidemic disease'. However, the Indian Government did take notice of the fact and had introduced a bill in 2017 called the 'Public Health (Prevention, Control, and Management of Epidemics, Bio-terrorism and Disasters) Bill' ("Bill"). The said Bill was to repeal the Act; however, even after three years, it is yet to see the daylight.
- The Bill empowers state government and other authorities to take such measures to prevent, control and manage public health emergency, inter alia quarantine persons exposed to such a disease; ban or regulate purchase/transport/distribution of any material containing toxic substance; and disseminate such information as deemed appropriate and take relevant actions including closure of markets, various institutions and social distancing. The Bill also lists down more than 30 diseases as epidemic prone diseases such as bird flu, dengue, chikungunya, malaria, kala-azar etc.

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Kagathara Pooja, Assistant Professor, Department of Pathology, Shantabaa Medical College, Amreli.



Introduction:

- Thalassemias are a group of autosomal recessive disorders caused by reduction or absent production of one or more of the globin chains making up the hemoglobin (Hb).
- Two main types i.e., the α and β -Thalassemias are identified based on the type of globin chain involved. Both the types may occur in the major (homozygous), intermediate, and minor (heterozygous) genetic forms.
- Clinically significant forms of α -Thalassemias are Hb Bart hydrops fetalis (Hb Bart) syndrome and HbH disease with former being the more severe resulting in fetal onset of generalized edema, pleural and pericardial effusions, and severe hypo chromic anemia.
- **β-Thalassemia** can be distinguished into three main forms namely; β -Thalassemia major, referred to as "Cooley's anemia", β -Thalassemia intermedia and β -Thalassemia minor also known as " β -Thalassemia carrier" or " β -Thalassemia trait".
- β-Thalassemia major is presented between 6 and 24 months with affected infants failing to thrive and becoming progressively pale along with feeding problem, recurrent bouts of fever, and progressive enlargement of the abdomen caused by spleen and liver enlargement.
- Carriers of β -Thalassemia minor are usually clinically asymptomatic but sometimes have a mild anemia.
- When both parents are carriers there is a 25% risk at each pregnancy of having children with β -Thalassemia major.

Epidemiology:

- Thalassemia disorder affects 15 million people worldwide, and 240 million people have Thalassemic carrier status. Globally about 100,000 children are born with Thalassemia major, with 10,000 of them from India.
- The carrier rate for β -Thalassemia gene varies from 3 to 5% South Asia and 1–3% in South India.
- India carries a substantial public health problem of Thalassemia. As per the National Health Mission (2016) report, there are approximately 1–1.5 lakh children with Thalassemia Major and nearly 42 million carriers of the ß Thalassemia trait. However, in India the reported average prevalence of Thalassemia carriers is 3–4%, implies that there are 30–40 million carriers in this multicultural and multilingual population of 1.3 billion people.
- Globally, 56,000 conceptions would have Thalassemia Major disorder. Among them, approximately 30,000 would have β -Thalassemia Major, with many babies being born in the middle- and low-income countries.
- β-Thalassemia is the most frequent inherited hemoglobin condition in the Indian subcontinent, with a contrasting distribution among the various endogenous groups.
- Being a multicultural country, India with a diversified population, an estimated 10.4% of the population chooses consanguineous marriage, increasing the manifestations of autosomal recessive illnesses.

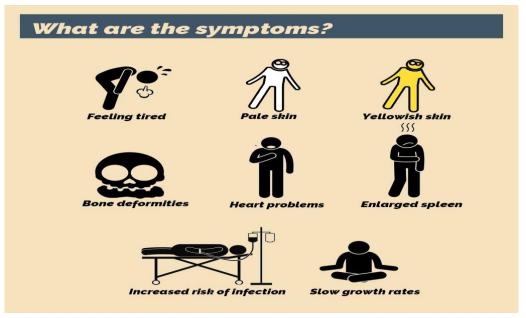
Diagnosis:

Hemoglobin electrophoresis and **HPLC** (High Performance Liquid Chromatography) are confirmatory tests for diagnosis of Thalassemia and further subtypes. CBC findings and Peripheral blood smear examination shows microcytic hypo chromic anemia. There may be significant anisopoikilocytosis (variation of size and shape) in cases of beta-Thalassemia major.

In pregnant woman following tests are being used to detect Thalassemia.

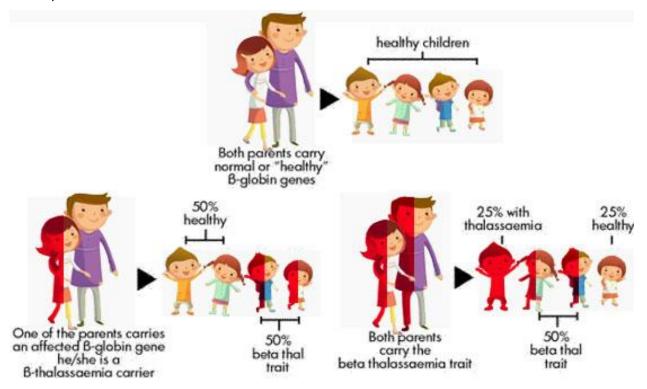
- **Genetic testing** can show if husband or wife carries any of the genes that cause Thalassemia.
- Chorionic villus sampling tests a tiny piece of the placenta to see if a baby has the genes that cause Thalassemia. Doctors usually do this test around the 11th week of pregnancy.
- **Amniocentesis** tests the fluid around an unborn baby. Doctors usually do this test around the 16th week of pregnancy.

Clinical Presentation:



Screening:

Premarital screening has been advocated by many investigators and hematologists in India as a preventive strategy. Premarital screening has been available for decades, but hasn't been successful in India. The program of prevention through carrier screening and prenatal diagnosis should receive the highest priority in the future, in order to reduce the birth of affected children.



Treatment:

Mild forms of Thalassemia trait don't need treatment. For moderate to severe Thalassemia, treatments might include:

Frequent blood transfusions - More severe forms of Thalassemia often require frequent blood transfusions, possibly every few weeks. Over time, blood transfusions cause a buildup of iron in your blood, which can damage your heart, liver and other organs.

Chelation therapy - This is treatment to remove excess iron from your blood. Iron can build up as a result of regular transfusions. Some people with Thalassemia who don't have regular transfusions can also develop excess iron. Removing the excess iron is vital for your health.

To help rid your body of the extra iron, you might need to take an oral medication, such as deferasirox or deferiprone. Another drug, deferoxamine (Desferal), is given by needle.

Stem cell transplant - Also called a bone marrow transplant, a stem cell transplant might be an option in some cases. For children with severe thalassemia, it can eliminate the need for lifelong blood transfusions and drugs to control iron overload.

This procedure involves receiving infusions of stem cells from a compatible donor, usually a sibling.

Take Home Message:

LET'S STOP THALASSEMIA *Together we can...*

SAVE A CHILD FROM LIFE LONG BLOOD TRANSFUSIONS







8th MAY – WORLD THALASSEMIA DAY

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"A step towards reaching the unreached rural areas of India"

The current criticism against health care services is that they are predominantly urban-oriented, mostly curative in nature and accessible mainly to a small part of the population. The present concern in both developed and developing countries is not only to reach the whole population with adequate health care services, but also to secure an acceptable level of Health for All.1 Though adequate health care supplies exist in the community, it is the access to healthcare to a rural citizen that is of major concern. Recent data shows India's doctor-population ratio is 1:834, assuming 80 per cent availability of registered allopathic doctors and 565,000 Ayurvedic, Unani, Siddha and homeopathic doctors. In India, around 65.5% (898,024,053 people) of population resides in rural settings (as per 2020 statistics) whereas availability of health care facilities and services are skewed towards urban set ups. More and more health facilities and services became accessible and available in urban areas only. Ignorance towards their health needs is an additional challenge in health improvement of rural population. Hence there is a need to take measure to make healthcare more accessible to the rural and needy population and impart community based and community-oriented training to budding healthcare professionals.2

With this aim of the family adoption programme is to provide an experiential learning as well as opportunity for Indian Medical graduates towards community-based health care and thereby enhance accessibility and availability of health services to unreached population.

Objectives of the program:

During this family adoption programme, the learner should be able to:

- 1. Orient towards primary health care
- 2. Create health related awareness within the community
- 3. Function as a first point of contact for any health issues within the community
- 4. Act as a conduit between the population and relevant health care facility
- 5. Generate and analyse related data for improving health outcomes and evidence based clinical practices.

Specifics of the program:

NMC recommended family adoption programme as a part of curriculum of Community Medicine and should be started from 1st professional year with competencies being spread in ascending manner for entire MBBS training program. The orientation towards the same may be a part of Foundation course under the theme of 'Field visit to community health centre' which is already allocated to foundation course as per GMER 2019.

The family adoption shall preferably include villages not covered under PHCs adopted by Medical College. If transit time from college to site is more than 2 hours, then bastis/ jhuggis/ towns on outskirts of cities may be considered for family adoption. Medical students will be divided into teams and each team may be allocated visits, with maximum 5 families per student. Each student will be introduced to each family on their very first visit; subsequently in every visit student will take history and conduct clinical examination of all family members, organize health check-up and coordinate treatment of adopted family under overall guidance of mentor, maintain communication & follow up of remedial measures, Take part in environment protection and sustenance activities. There Competencies can be taught by Family survey, Community clinics, Multispecialty camps, reporting of follow up visits, Participatory rural appraisal (PRA) techniques like Group discussion, Transect Walk, Seasonal Calendar (info on problems that repeats in a certain period of time, Daily Routine Charts Community clinics, Participation in and process documentation of activities (NSS activities) along with reporting of photographic evidences can also be used to teach such competencies. Above mentioned competencies are spreads over first three year of M.B.B.S. and assessment will also be done at the end of each professional year by Community case presentation, OSPE, logbook-based certification of competency, certification of journal of visit. However, the model may be flexible depending upon the number of students and available families for adoption. The entire team should work under a mentor teacher for entire part of the training program.

Other consideration:

College needs to arrange one diagnostic medical camp in the village wherein identification of general illnesses and other population health issues may be addressed

After allotment of families, if any person in family admitted in the hospital for any kind of under care of allotted student, charges may be waived off or provide concession.

Periodic Camps may be arranged by Dean and Community Medicine/P.S.M. department with active involvement of Associate/Asst. Professors, social worker and supporting staff. Local population may be involved with village leaders.

As a step towards environment consciousness, students may be encouraged for tree plantation/medicinal plants around beginning of monsoons, in the environs of the families adopted. This could be also included in the environs of the hostels/residence of students wherever possible. At the end of the programme, students may be envisioned to become leaders for the community.

Final visit should be made in the last month in advance to examination schedule, to have last round of active interaction with families. Student need to prepare a report addressing following points and to be submitted to the department:

- 1. Improvement in general health
- 2. Immunization
- 3. Sanitation
- 4. De-addiction
- 5. Improvement in anaemia, tuberculosis control
- 6. Sanitation awareness
- 7. Any other issues
- 8. Role of the student in supporting family during illness/medical emergency
- 9. Social responsibility in the form of environment protection programme in form of plantation drive (medicinal plants/trees), cleanliness and sanitation drive with the initiative of the medical student.

Examples of successful drives:³

Kasturba Hospital in Sevagram, India, has been conducting village outreach health program for nearby villages since last 4 decades where there is free participation of villagers. More than 75% villages in the neighbourhood have been covered under this scheme. The outcomes are absence of vaccination-preventable diseases, reduced maternal and infant mortality and improvement in health awareness. The health care workers are their primary consultants.

Pramukh swami medical college, Karamsad, conducting village stay activity for four to five days. During village stay students actively involved in awareness activities by sheri natak, rally, cleaning activities and talk with population regarding health issue. During this stay they are guided by and accompanied by faculties and other health worker staff. This stay improves health seeking behaviour and also serve as first contact bridge between primary health care and general population.

Conclusion:

The family adoption programme during MBBS training will help ensure primary health and wellbeing of people in rural areas, where people are not adequately aware about regular health check-ups and other good practices. Consequently, the families shall be self-sufficient for basic healthcare. With the inclusion of FAP, MBBS students would also obtain hands-on experience in the initial stages of Medicine. Moreover, it would also increase the availability and accessibility of doctors in remote areas, especially in regions with inadequate health infrastructure. This will help in grooming MBBS students as 'complete doctors' with empathy and confidence to be leaders in socio-health fronts. The neglected rural population will be enriched and in the long run have positive impact for the country.

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Sub-National Certification of Efforts towards TB Elimination By Community Medicine Department

Government of India has set an ambitious goal to achieve Ending Tuberculosis (TB), by reducing the incidence of new TB cases by 80% by 2025, five years ahead of global SDG timelines. To achieve these targets of elimination of communicable diseases like TB at a large scale, it is essential to take disease control initiatives to the grass root level.

So Ministry of Health and Family Welfare (MoHFW) has startedinitiative titled as "sub-national efforts for 'TB Free' claims, verifications, certification and awards". In this, a District or a State is recognized for achieving "TB Free" status though monetary and nonmonetary awards upon verification of successful achievement of targets outlined.

As per the approvals by Mission Steering Group (MSG) of National Health Mission (NHM) in 2018, for Tuberculosis, a District or a State\UT is recognized for "Progress towards TB Free Status" based on the criteria outlined below

Achievement of reduction in TB incidence as compared to 2015 incidence rate (in terms of number of incident TB cases per lakh population)	Award / Status
20%	Bronze
40%	Silver
60%	Gold
>80%	TB Free District / State

Verification of claims raised by Districts or states for "Progress towards TB Free Status" is done by the ICMR- National Institute for Research in Tuberculosis (ICMR-NIRT). ICMR-NIRT conducts verification process by collaboration with Indian Association of Preventive and Social Medicine (IAPSM) and WHO India office.

Sub-National Certification of Efforts towards TB Elimination

In this regards, Faculties from Community Medicine Department, Shantabaa Medical College, Amreli was selected to verify claim raised by Amreli district for "Progress towards TB Free Status" for year 2021-2022.

Faculties of Community Medicine Department conducted various activities in part of verification process which includes review of secondary data regarding NTEP (National TB Elimination Programme) of Amreli district, drug sale in private sector, key informant interviews and focus group discussions with private practitioners and chemists and district level survey for estimating prevalence of pulmonary TB in district and under- reporting.

After completion of verification process and report submission to NIRT and ICMR, Amreli district was awarded with bronze medal for achieving 20% reduction in TB incidence as compared to 2015 incidence rate on 24th march 2022.

Glimpse of various activities



NGT & KII with private practitioner and Chemist

Sub-National Certification of Efforts towards TB Elimination

Glimpse of various activities





Field activity supportive supervision and monitoring

Rejuvenation & Rejoice Celebrations by Community Medicine Department

World Tuberculosis Day Celebration..!!!

World **Tuberculosis** Day celebrated each year on March 24 to increase efforts to end the global tuberculosis epidemic and to raise public awareness about the health, social and economic consequences of tuberculosis (TB). The villagers residing in Jaliya of Amreli observed the World Tuberculosis Day on 24th March, Thursday with the theme 'Invest to end TB. Save lives,' stressing on the need to ramp up efforts to regain lost ground.

In a bid to create awareness tuberculosis about on the of World occasion TB Day, Community Medicine Department, Shantabaa Medical Amreli College, held an awareness rally at Jaliya Village of Amreli from 10:30am onwards in presence of sarpanch of the village. All the staff of the PSM Department and around medical students of the third professional year participated in the march and took a pledge to end TB. Students distributed pamphlets and health education among villagers to material create awareness about burden

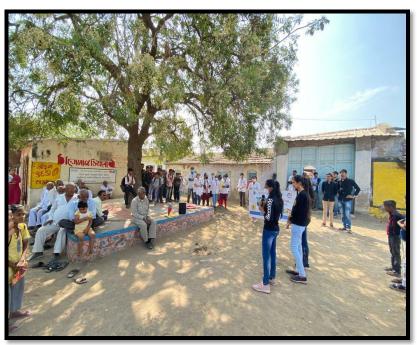
of TB and its prevention





Rejuvenation & Rejoice Celebrations by Community Medicine Department

World Tuberculosis Day Celebration..!!!



Street Play by Students

Natak" played by the some students in the village and at secondary high school named "Janata Vidhyalay" of the Jaliya Village. The street paly was played with the theme of symptoms, timely and complete treatment, behavior of the TB patient, prevention of TB and brief about the "National TB Elimination program" running by the government. The audience was also addressed by the faculty of Community Medicine Department.



Med Rush-2022 (Sport & Cultural Event)

Sport & Cultural event was organized at Shantabaa Medical College, Amreli. This events is named by students as **MED RUSH - 2022**. In sport Events students Participated in different sports like, cricket, volleyball, kabaddi, Kho-Kho, chess and carrom while girls are also participated in cricket, Throwball, Kho-Kho, chess, carrom, lemon spoon and musical chair like events with great sportsmanship spirit and enthusiasm.

In cultural events students was managed appreciable all stage program, in which students participated in solo and group dance, drama, Standup comedian act, singing act, and organized funny stage games. we also encouraged the winner teams and students with trophy and medals.







Med Rush-2022 (Sport & Cultural Event)

Glimpse of event











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