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A Study of Machineryavailable for Controlling Tuberculosis In Sawantwadi Taluka of Sindhudurg District (MS)

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Abstract: -

Tuberculosis (TB) is an infectious disease caused by the bacillus Mycobacterium tuberculosis and spreads through air by a person suffering from TB. The 1990 World Health Organization (WHO) report on the Global Burden of disease ranked TB as the seventh most morbidity-causing disease in the world, and expected it to continue in the same position up to 2020. It mainly afflicts people who are in the economically productive years of their life (15–54 years), thereby causing large social and economic burden on a country, hampering the development of that nation., TB accelerates the progression of HIV into AIDS (Acquired Immune Deficiency Syndrome), thus shortening the survival of patients with HIV infection. Fortunately, TB is a curable disease even among the HIV-infected people. India bears the burden of 20% of the total TB affected population of the World. If, of this 20% affected patients 17% remain uncured for any reason whatsoever, and in turn spread it to 15-20 people per patient we cannot dare to imagine the geometrical proportionate growth in the number of patients every year. This calls for our focused and accelerated efforts to stage war against the disease viz. TB.

Key Words: Tuberculosis, bacillus Mycobacterium tuberculosis, morbidity, afflicts, hampering, HIV, AIDS

Introduction:-

Tuberculosis (TB) is an infectious disease caused by the bacillus Mycobacterium tuberculosis and spreads through air by a person suffering from TB.

In 1990 WHO published their report on the global of diseases. The report stated TB as a seventh most morbidity- causing disease in the world. The report accepted that this disease will maintain the same rank up to 2020.

In 2001 WHO reported that 32% of the world population i.e. 1.86 billion people were infected with TB. Every year 8.74 million people become victims and nearly 2 million die. Thus we calculate that on an average somewhere in the world every 4 second one person contracts TB and of that one person dies every 10 seconds. The person suffering from infectious Pulmonary TB (i.e. TB of lungs) can infect 10-15 people in a year. The records state TB kills more number of adults especially those who are in their economically productive years (i.e. 15-54 years) than any other infectious disease known to mankind.

HIV (Human Immune-deficiency Virus) and TB are closely linked. Tb being a opportunistic disease contracts very easily the HIV affected patients and such persons can become patients of AIDS (Acquired Immune Deficiency Syndrome) who has minimal chances of survival.

WHO report in 2004 mentioned that India has recorded as much as 20% of the total patients in the world that means 42.26 million people or 44% of the total population of this country suffer from TB. In India more than 1000 people per day i.e. one person per minute die of TB and nearly 300000 children become school drop outs due to this disease. It is found that this disease is also

responsible for the spread of HIV and Multi Drug Resistance Tuberculosis (MRT). This disease has thus given an open challenge to the health and wealth of the people of India.

The researcher on understanding the severity of this disease found it apt to undertake Sindhudurg region for his study. South Konkan region located between $150^{0}36'$ N. to $180^{0}50'$ N. latitudes and 740° 36' E. to 750^{0} 50' E. longitudes comprising Ratnagiri and Sindhudurg district. According to data published by Agricultural Research Station, Mulde, Kudal, Sindhudurg, states that this region has very high humidity during June to September ranging from Minimum 73% to Maximum 94.3%, the most favorable climate for the growth of bacillus Mycobacterium tuberculosis, the bacteria responsible for spreading tuberculosis.

Impact of TB:

As this disease requires very long and consistent treatment, there is manifold impact on the life of the aggrieved patient. The impacts are

Economic Impact:

- 1) Loss of pay, due to loss of work. (erdisc)
- 2) Heavy expenditure on travelling, medicines, additional nutritious diet.

Social Impact:

- 1) The patient is kept aloof and looked upon as a threat to health by his family members, friends, relatives and neighbours.
- 2) Social avoidance may disturb the patient mentally and may go into depression.
- 3) To avoid such social discrimination, the patient develops the tendency to hide his illness from others, avoids going to take medical treatment to doctors, this results in further deterioration in his health and there in is increase in number of defaulters and failures.
- 4) The disease gets widespread in other healthy members of the society; as a result the efforts taken by the government gets dampened and may also demoralise the staff involved in this project.

Limitations:

- 1. The survey is restricted only the geographical boundaries of Sawantwadi taluka of Sindhudurg district.
- 2. The research is restricted to the period of 10 years i.e. from 2001 to 2011.
- 3. Only government hospitals data is collected and analysed. Private sector medical hospitals and their role in eradication of T.B. are not taken into consideration.

Objectives:-

The main objectives of the present study are:

- 1. To study the spread of TB disease in Sawantwadi taluka.
- 2. To study the government machinery available for controlling and eradication of TB disease.
- 3. To understand the causes of dead, defaulted and failure patients.
- 4. To suggest the measures for the controlling of TB disease.

Data Collection And Methodology:-

The researcher has carried out this research with the help of primary and secondary data.

Primary data related to the Tuberculosis disease in study region will be collected by Interview method. Interviews held will be of the District TB Officer (DTO) of District Health Department,

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Sindhudurg district, Senior TB Supervisors (STS) of Sawantwadi taluka TB unit (TU) and Medical Officers of various Primary Health Centres (PHCs), Sawantwadi taluka.

The secondary data will be collected by means of data pertaining to and relevant with Tuberculosis disease from the available records of District TB office, Sub District Hospital and Primary Health Centres.

The results of analysis are to be represented with the help of maps, graphs and pie chart.

The Study Region:-

Sawantwadi is a taluka in the Sindhudurg district (M.S.), India. The taluka is situated along the west coast and forms the part of Konkan region. The study region which lies between 15^0 90' North latitude and 73° 82' East longitude covers an area about 5207sq.km.and having total population 47921 according to2011 census.(Fig.No.1)



Fig.No.1 Available Machinery For Controlling For Tuberculosis In Sawantwadi



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Findings:-

The researcher, from the interview conducted and data gathered could understand that this disease is normally found in people who hail from economical backward class, suffer from malnutrition and have weak immunity system. They are responsible for spreading this disease to other healthy people, as this disease is highly contagious in nature.

The researcher has developed a flow chart diagram that in itself explains the procedure and the machinery adopted by the government to control and eradicate this dangerous disease that can at times prove to be fatal.

The whole system begins when the affected patients approaches the government PHC in rural area or SDH in urban area. The patient completes the formality of getting himself registered. The patient is then referred to concerned doctor, who checks the patients and ask him to bring the sample of sputum that is to be collected in early morning. The Patient next day arrives with sample to concerned health center. There he is again asked to give spot sputum sample these samples are then send for testing to Designative Microscopy Centre(DMC)of SDH. The same routine is carried out on the second day. The report of these two days is analyzed and the status of the patient is determined. The patient if lucky finds report showing nil TB. The doctor would suggest some other test to find if he suffering from any other disease. If, unfortunately the report is positive then the intensity and magnitude is to be determined. The patient may belong to any one of the following three categories.

1. Primary Stage: If the patient is in primary stage then three- fold treatment strategies is recommended

a) Medication: The patient , depending on the severity, would be put on i.e. Cat1treatment that comprises of a course of tablets for duration of six months or Cat 2 treatment that comprises of course of injections for duration of six months

b) Diet: It forms the major component of treatment strategy. A simple but healthy diet is recommended.

c) Lifestyle Management: In the modern age science is successful in curing this disease hundred percent however, it requires regular and disciplined treatment .The patient and their family members need to be educated about the nature and severity of this disease. They should be made aware of the consequences, if proper treatment and care is not taken by them. It calls for proper life style management that could require a holistic approach which would include proper diet, exercise maintaining hygiene and cleanliness, using face mask avoiding vices of all sorts and all other precautions suggested by the doctor. It should be taken as a war against the disease.

2. Secondary Stage: In some cases it is observed that the patient is careless in taking the treatment, or some patients are biologically resistant to this basic Cat-1 or Cat-2 treatment. After two months of taking treatment their sputum reports are TB positive and they do not give response to basic treatment. The Doctor concludes that the patient is drug resistant and puts him on higher derivatives of Multi Drug Resistance Treatment (MDRT).

3. **Third Stage**: the case is on the verge of becoming hopeless. It is last stage were attempt is made by the doctor to save the patient. When the patient is defaulter or biologically resistant to MDRT, then the doctors put him on Extensively Drug Resistance Tuberculosis Treatment (XDR). If the patient does not respond to this treatment then the case becomes so severe that 'Duva Bhi Kam Nahi Kar Sakti.' The patient becomes the victim.

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Total 1D Latentsiii Sawalitwatii Taluka					
Years	Affected	Cured	Dead Patients	Defaulted	Failure
	Patients	Patients			
2001	232	193	22	9	8
2002	225	188	21	10	6
2003	240	206	20	7	7
2004	227	188	21	9	9
2005	241	187	23	22	9
2006	226	186	13	22	5
2007	192	154	12	18	8
2008	158	132	14	10	2
2009	174	142	18	11	3
2010	157	137	10	9	1
2011	151	132	12	7	0
TOTAL	2223	1845	186 0//	134	58

Total TB Patientsin Sawantwadi Taluka



Total Tb Patients in Sawantwadi Taluka

N 2319-6301			
Years	2001 -2011		
Cured Patients	1845		
Dead Patients	186		
Defaulted	134		
Failure	58		
Total Affected Patients	2223		

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Analysis:

The figures gathered from SDH and PHCs from Sawantwadi taluka show that out of 2223 patients who enrolled themselves in various centers 1845 or 83% of the patients were fully cured i.e. an impressive rate of success. 186 i.e. 8% patients unfortunately died during the course of treatment. 134 i.e. 6% patients defaulted and 58 cases i.e. 3% reported as failures. The total number of patients who were not fully cured cumulatively comes to 378 i.e. 17%.

Causes Of Non- Cure Of TB Patients:

A) DEATH:

- 1. Late approach.
- 2. Delayed diagnosis.
- 3. Lack of proper treatment.
- 4. Lack of healthy diet.
- 5. Negligence by patient and/or family members.
- 6. Consumption of tobacco, alcohol or drugs.

B) DEFAULTED:

- 1. Lack of consistent follow up.
- 2. Lack of completing the course.
- 3. Not following the instructions seriously. 49-638
- 4. Lack of response to medication.
- 5. Migrating patients do not contact the PHC at their new place of work.

C) FAILURE:

- 1. Not responding to medicines.
- 2. Lack of healthy diet.
- 3. Negligence by patient and/or family members.
- 4. Consumption of tobacco, alcohol or drugs.

Conclusions:

As this disease is highly contagious in nature the cases of non-cured patients must be carefully studied because reports reveal that TB kills most number of adults than any other disease in the world. One patient can be responsible for spreading it to 15-20 people per year. More over India bears the burden of 20% of the total TB affected population of the world. If of this 20% affected patients 17% remain uncured for any reason whatsoever, and they in turn spread it to 15-20 people per patient. We cannot dare to imagine the geometrically proportionate growth in the number of patients every year. This calls for our focused and accelerated efforts to stage war against this disease viz. TB.

Suggestions:

The researcher after doing the in-depth study of this disease feels that this issue needs proper handling on three different fronts i.e. medication, diet management and life style management, following are some of the suggestions:

- 1) It would be ideal to appoint one professional counselor for every center. This counselor can also offer his services to other patients who are suffering from other ailments. Thus the post can become financially viable.
- 2) Extensive awareness drives and advertising campaigns must be carried out among the various groups of society, to make people aware about the severity and disastrous effects of this disease. They should also be made aware of the precaution to be taken by the patient, as well as his kin and kith around him.
- 3) Pamphlet , brochures booklets , leaflets must be prepared in vernacular languages , informative boards must be displayed at strategic locations, short films must be shown in waiting lounge of the center, all these efforts will help to develop a favorable mindset of the patient and the people accompanying him.
- 4) Commendable efforts taken by the government to provide free treatment and medicines to the patients, but this is not sufficient. The researcher strongly suggests that insurance scheme should be designed to give cover to the economically deprived class. This policy should also cover other expenses as well as compensate loss of pay due to loss of work.
- 5) There must be a patient tracking system devised for migrating patients and proper follow up must be ensured to check that the patient completes the medication treatment. This will help to reduce the number of failure and defaulted cases.

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