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TO OBSERVE TOP THREE MOST COMMON DISEASES AND THEIR TREATMENTS PREVAILING IN THE ADMITTED CASES AT ALL MEDICAL UNITS OF CIVIL HOSPITAL KARACHI.

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ABSTRACT:

OBJECTIVE: To observe top three most common diseases and their treatment prevailing in the admitted cases at all medical units of civil hospital Karachi.

METHODOLOGY:

- Place (Setting) & Duration of Study:It's a one-Month studyconducted on the patients admitted at different Medical Wards of Civil Hospital, Karachi.
- Sample Size: The survey was performed on 200 patients of Medicine ward.
- Purpose of The Survey: To evaluate the pattern of the diseases and their common treatment (effective medications) given to the patients admitted in all the medical wards of civil hospital Karachi.
- Study Design: It's a hospital based Cross Sectional non-randomized study. Variables taken were Name, Father's Name, Age, Sex, Residence, Occupation, Addiction, Presenting complains, family health history, history of addiction, Diagnosis & Treatment (As mentioned in the Questionnaire developed according to the objective of the study.)

RESULTS: The top most common disease diagnosed in medical wards, CHK were CLD affecting 21.1% of the admitted patients, followed by MALARIA with a distressing effect on about 14.6% of the admitted cases, and DM appearing third most common disease affecting 11.9% of subjects. Among the patients of CLD, 20% of the admitted cases were being given Omeperazole, 14% Ceftriaxone and 11% Duphelac. The most commonly used drugs among malarial patients appeared Arceva, used in roughly 15% of the cases, 14% patients were given Panadol and 13% Omeperazole. In case of Diabetes Mellitus, nearly one-fourth of the cases were dependent on Insulin for their conservative management

CONCLUSION: The top three diseases were determined in the local setup, and their risk factors and treatment strategy observed in order to reduce the burden of diseases by spreading awareness among doctors and society.

KEY WORDS:

CLD (Chronic Liver Disease); Malaria; DM (diabetes mellitus)

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INTRODUCTION

Diseases may vary with environment and socio economic conditions of the region. This study is based on observing the frequency of the diseases inthe current local population and tofind out the epidemiological features of these diseasesand to compare management of these diseases in futureto other studies carried out in Pakistanand with the global standards.

The actual risk of these diseases tends to differ in different regions of the world and in Pakistan there is no official data existing. There are insufficient articles or publications on this topic from different areas of country. It is therefore important to know the frequencies and nature of treatments regarding such leading diseases.

To accomplish this goal the study was conducted among the patients of five medical units at civil hospital Karachi situated in a thickly populated part of the city. Patients in the hospital vicinity belong to low socio economic areas of Karachi and a large number of cases come from the interior Sindh. So far no studies have been published regarding the statistics of common diseases in this hospital. This study was therefore conducted to document the burden of the top most diseases present in this area.

There are approximately 150 beds in all medical units, excluding the ICU beds. Patients who were admitted in the wards were included and those of OPDs were excluded in the study. This study was conducted for a month from mid-October 2012 to mid-November 2012. The three most common diseases were found as 1) Chronic Liver Disease (CLD) 2) Malaria 3) Diabetes Mellitus (DM). This is worthy to know about these diseases prevailing in the society. The most common treatment given to patients suffering from these diseases was also observed as part of the study. The study is highly effective in developing awareness among doctors and public in this area. This will serve both for more effective counseling of patients and to access better treatment modalities of these diseases.

Furthermore the results of such study can provide data for epidemiological interests and help compare the local data with data from other parts of the country and regional and international researches.

METHODOLOGY

Sample:

Data was collected giving priority to confidentiality. Survey was conducted on 200 patients (including both males and females).

Material:

Questionnaire wasdesigned according to the objective of the study. The demographic sheet includes Name, father's/husband's name, registration number,family health history, type of addiction, male to female ratio, residence, presenting complains, occupation and age. The study also recorded the common treatment given in these diseases.

Procedure:

Prior to the data collection, the purpose of the study was described to the patients and consent was taken from the participants. Participants were assured of anonymity and confidentiality. Demographics were recorded from patient's file in the hospital. The demographic details include patient's registration number, name and father's/husband's name. Other variables with their significance in the study are as follows.

Age was included to determine the particular age group most affected with the diseases. Male to female ratio was observed by using the gender norms. In order to observe the diseases prevailing in patients coming from different areas, residence was made criteria.To analyze some common occupational pathology, Occupation was made part of Performa;this also explains the socio economic status of the patient.Addiction was incorporated in the questionnairein order to relate

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certain common diseases to the habit of patient's addiction. Theparameter; Family health history was used to evaluate the familial and genetic predisposition to certain diseases. This really helped in strengthening the data as it widenedthe rational to patient`s family as well.

To determine the top three diseases in our population, with special concern to the diseases of community with poor socio economic status (lower class population), diagnosis was made the parameter of the questionnaire. Lastly, treatment strategy was assessed among the admitted cases of medical wards.

RESULTS:

On examination of different patients of the medical wards, CHK, the top most common disease diagnosed was CLD, affecting 21.1% of the admitted patients. The second most common disease appeared MALARIA with a distressing effect on about 14.6% of participants involved, followed by DM appearing third most common disease affecting 11.9% of subjects.These diseases were found to be most common leading causes of hospitalization among others being ANAEMIA (11.4%), ENCEPHALOPATHY (10.8%), T.B (10.8%), HEPATITIS (8.6%), PNEUMONIA (5.9%), CVA (5.9%), PLEUARL EFFUSION (4.9%), CANCER (4.9%), HTN (3.8%), CCF (3.8%), GASTRITIS (3.8%), UGI BLEED/ULCERS (3.8%), DENGUE (3.2%), IBD (2.7%), IHD (2.7%), COPD (2.2%), ENTERIC FEVER (1.6%) & a very low prevalence rate for DVT (1.1%), RHEUMATIC FEVER (1.1%), GBS(1.1%), MALABSORPTION SYNDROME (1.1%) & UTI (1.1%). (Graph 1)

When the top three diagnosed diseases were compared with the type of patient's addiction, all appeared associated with cigarette smoking with variable percentages but CLD appeared foremost than remaining two diseases. Cigarette smoking was found to be the most common type of addiction, being associated with CLD by 38%, DM by 35% and Malaria by 26% as shown in graph 2.

In graph 3, comparison between most common family health history and associated diseases is shown, publicizing that CLD is frequently associated with hepatitis in 62% of subjects while malaria and DM are coupled with DM with association of 60% and 66% respectively.

The study also shows the most common treatment pattern among patients affected by the top most diseases at CHK. Among the patients of CLD, 20% of the admitted cases were being given Omeperazole, 14% Ceftriaxone and 11%Duphelac. The most commonly used drugs among malarial patients appearedArceva, used in roughly 15% of the cases, 14% patients were given Panadol and 13% Omeperazole. In case of Diabetes Mellitus, nearly one-fourth of the cases were dependent on Insulin for their conservative management. (Graph 4)

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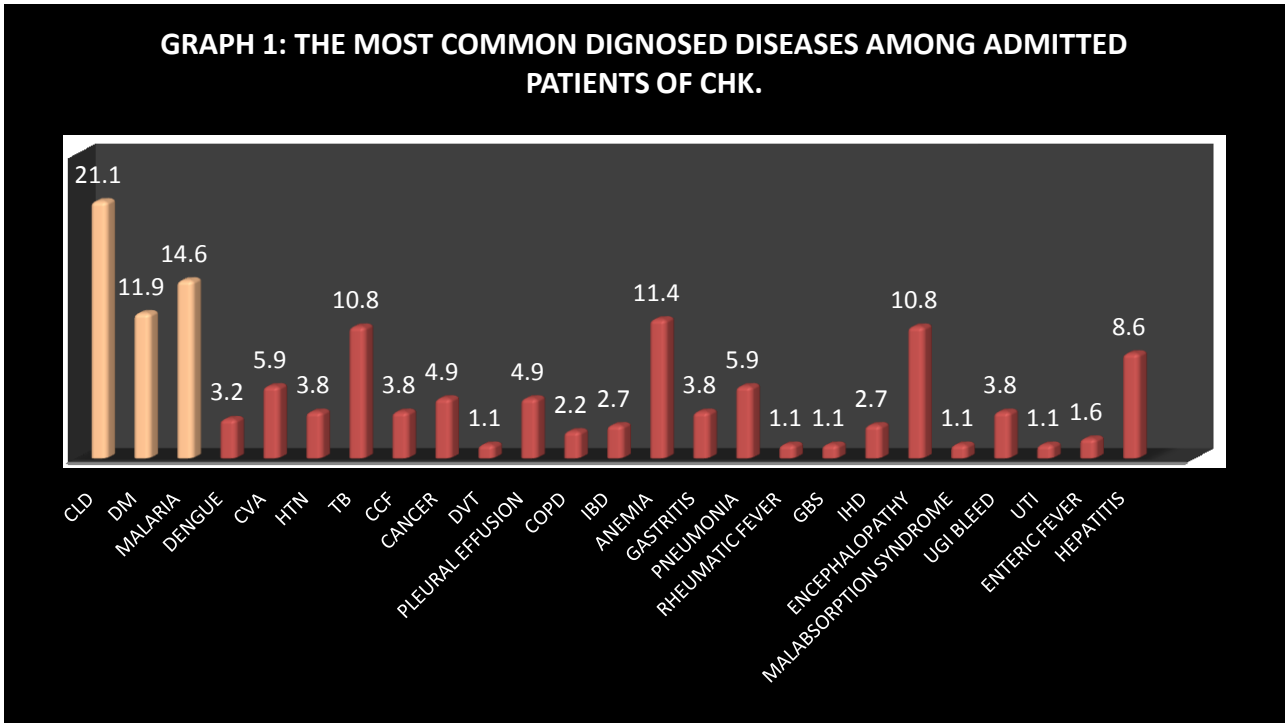

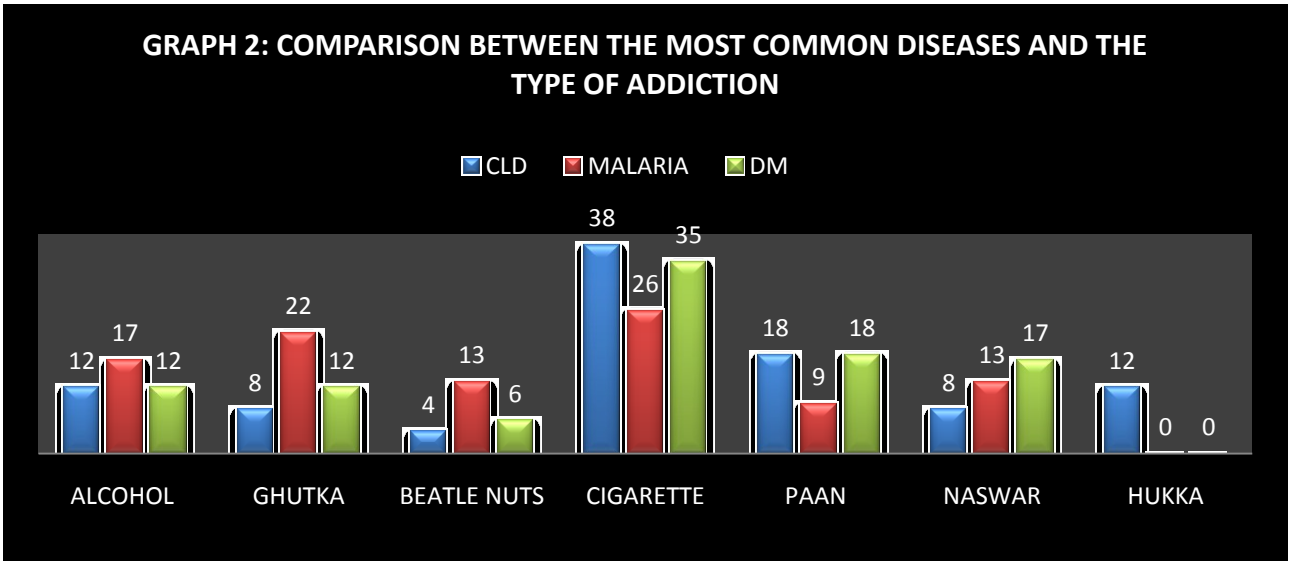

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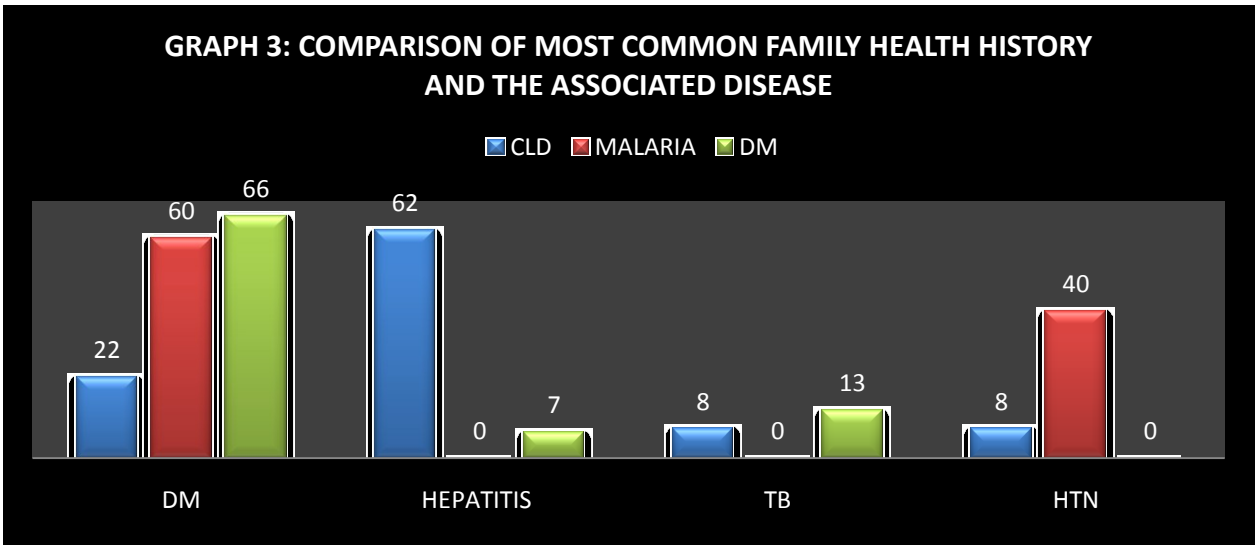

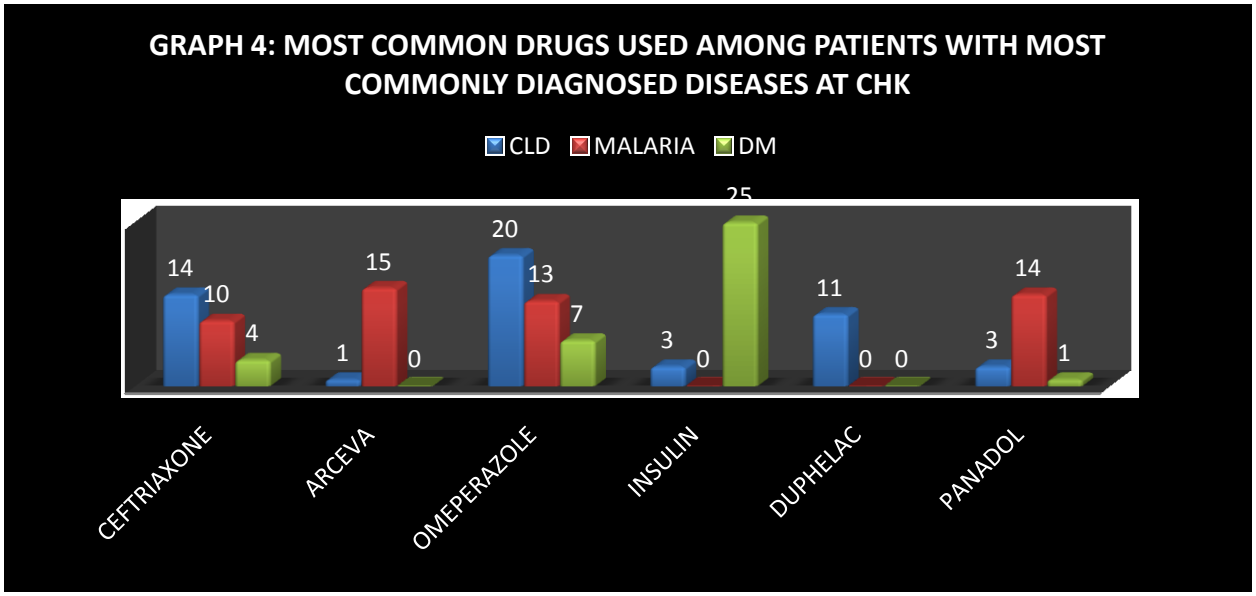

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Table I: Leading causes of hospitalization (the top most diseases) in relation with the variables of the survey.

FACTORS		CLD	MALARIA	DM
FAMILY HEALTH HISTORY (%)	A	22	60	66
	B	62	0	7
	C	8	0	13
	D	0	0	7
	E	0	0	7
	F	8	40	0
TPES OF ADDICTION (%)	1	12	17	12
	2	8	22	12
	3	4	13	6
	4	38	26	35
	5	18	9	18
	6	8	13	17
	7	12	0	0
MALE TO FEMALE RATIO OF DISEASE (%)		19.6:24.1 (1:1.3)	16.5:10.34 (1.6:1)	14.1:6.8 (2:1)
RESIDENCE		SMALL CITIES OF INTERIOR SINDH LIKE THATTA (50%) & LOW LOCALITIES OF KARACHI LIKE SITE, SURJANI, LANDHI, KORANGI ETC (36 %)	LYARI (26%), THATTA(18.5%), BALDIA (11%).	MAXIMUM PATIENTS FROM INTERIOR SINDH (AROUND 27%), LYARI, THATTA (13.6% EACH).
PRESENTING COMPLAINS		ABDOMINAL PAIN & SWELLING (23%), FEVER (16%), PALLOR & YELLOW DISCOLORATION (5%).	FEVER WITH RIGORS & CHILLS (32%), VOMITING (18 %)	THE LEADING CAUSE OF ATTENTION TO DM IS PEDAL PAIN & EDEMA (39%)
OCCUPATION OF PATIENTS		HOUSE WIVES (30.7 %), FARMERS (23%)	JOBLESS (29.6%), FACTORY WORKERS (14.8%)	LABOUR (22.7%), HOUSE WIVES (18%), FARMERS (18%).
MOST COMMON AGE GROUP OF PATIENTS PRESENTING WITH DISEASE		AROUND 60-65 YEARS (54.8%)	HIGH INCIDENCE IN YOUNG PATIENTS AGED BETWEEN 14-30 YEARS (67%)	VARIABLE, DEPENDING UPON THE TYPE.
TREATMENT		OMEPERAZOLE(20%), CEFTRIAXONE(14%), DUPHELAC (11%).	ARCEVA (15%) , PANADOL (14%), OMEPERAZOLE (13%), CEFTRIAXONE (10%)	INSULIN (25%)

A=DIABETIES MELLITUS, B=HEPATITIS, C=TUBERCULOSIS, D=ASTHMA, E=ISCHEMIC HEART DISEASE, F=HYPERTENSION, 1=ALCOHOL, 2=GHUTKA, 3=BEETLE NUTS, 4=CIGERRETE, 5=NASWAR, 6=PAN, 7=HUKKA.

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DISCUSSION:

This study was conducted to evaluate the pattern of the diseases, clinical course and the treatment style (effective medications) in patients admitted in CHK (particularly from Interior Sindh and low localities of Karachi). Results revealed CLD, MALARIA and DM as the most common diagnosed diseases in patients admitted in CHK. CLD was the top most and the commonest cause of medical admissions in medical units of CHK, leading other diseases by 21.1%. In a past survey at the same hospital, the same disease leaded others by 24.09% [1]. According to our survey, CLD was found to be more common among patients with family history of hepatitis leading by 62%, averaging between 40% patients (with background liver disease) determined in one survey[2] and 68.3% patients with this history in another past survey[3]. Hence patients with family history or past history of hepatitis (particularly hepatitis B and Hepatitis C) [4] are prone to end up with chronic liver disease. In terms of addiction CLD prevails more in patients addicted to cigarette smoking and alcoholism. Though the main cause of CLD is alcohol overuse [5], leading to cirrhosis, and alcoholic steatohepatitis, our study presents a predominance of cigarette smoking (38%) with CLD. This is particularly due to the devastatating effect of tobacco smoking on liver in patients with already damaged liver, terminating as CLD.[6] When CLD was compared in genders, it rampant more in females[3] which might possibly be due to environmental and life style risk factors like HBV and HCV as well as alcoholism and tobacco addiction. Overuse and more harmful effect of cigarettes/alcohol in this gender cause oxidative stress and leads to cirrhosis and hepatitis. Though the biological female sex factors (specifically estrogen) play antioxidative roles in maintaining the normal physiology of Liver, yet females suffer serious negative consequences (i.e. more rapid and more severe liver injury) of alcohol consumption earlier and to a greater extent than males. Therefore, the highest risk group is people (particularly females) who are prone to alcohol abuse[7/8/9]. Most patients with CLD presented clinically with signs and symptoms of abdominal pain & swelling (23%), fever (16%), pallor and yellow discoloration (5%), the symptoms often differing in patients because of the variability of the phase of disease at the time the patient is admitted[10]. CLD diagnosed patients in CHK were found to be mainly residents of Thatta, involved in occupation like farming (23%) or majority were housewives (30.7%) as is also revealed by the researches done in past on this topic[10]. As far as this survey is concerned, the most prevalent age group affected by this disease ranged in between 60-65 years. This is different to age group most prevalent of 31-40 showed by another research [3].The drugs used to treat CLD in the medical units of CHK were OMEPERAZOLE, CEFTRIAXONE and DUPHALAC, being used for their easy availability at the civil hospital and the improvement of the symptoms of the patient rather than specifically targeting the disease. Duphalac responded well in about 78% of CLD patients, to treat the constipation resulting from CLD and the end stage of CLD like hepatic encephalopathies[11/12], while Omeperazole is effective in certain cases of cholestatic liver diseases [13].

After CLD the next common disease is malaria (14.6%). Malarial patients presented clinically with complain of fever with rigors and chills[14]. Biochemical analysis reveals hematological abnormalities like anemia and thrombocytopenia in the patients suffering from malaria, thrombocytopenia being the most common clinical finding[15]. Malaria, again, was found to be more common amongst cigarette smokers, although its association with addiction is insignificant medically. It's also associated with alcohol and ghutka consumers[16]. Among the malarial patients admitted in CHK, It was found to be more common among males who are jobless and have a family history of diabetes[17], according to our survey male to female ratio is 1.6:1 another survey showed 16.5:10.34[18]there is difference in ratio but the purpose to refer is to

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prove that males suffer more as compared to females. Residents ofLayari(26%), thata(18.5%) and baldia(11%) suffered most because of poor sanitation in these areas[19].The ages were ranging between 14-30 years, however People of all ages can be affected by malaria[20], which is what makes it such a public health burden around the globe, particularly in places of poor health conditions and sanitation. Most commonly these patients are treated with arceva[21], panadol and omeprazole.

The third most common disease highlighted in our study is DM (11.9%). Diabetes show a strong hereditary transmission pattern, prevailing from generation to generation among families our survey shows 66% patients suffering of family running DM. No survey regarding inheritance has been conducted in Pakistan while a survey conducted in Western India proves 59% of families showing inherited DM[22].This difference is due to the time of conducting survey, referred survey was conducted back in 2006 and the disease is thinning out very rapidly. A vast number of cases comes into clinical attention with complains of pedal pain and edema (39%). Amongst all the diabetics admitted in CHK, laborer of interior sindh were commonly effected (27%) and is more common in males as compared to females i.e. 2:1 while a survey in past proves both of the facts[23]. Labors are more affected because diabetes is associated with stress and as these people have low earnings. DM appeared associated with smoking 35% of patients were victimized according to our survey while another survey proved it to be 50% [24]. Age of onset cannot be specified because it is variable depending on type of disease, type 1 being juvenile while type 2 being adult onset DM[25]. Causes include obesity, tension, excessive intake of sugar and genetics[26]. Diabetes is treated by initially giving preference to lifestyle modification including exercise and avoidance of causative agents, later oral hypoglycemic drugs and insulin is used[27/28]

CONCLUSION:

Top three diseases existing among low socio economic people are CLD, Malaria and DM.They can not only be treated but also be eradicated easily, only by avoiding their associated risk factors and use of proper and recommended treatment strategies. Electronic and print media should take an active part in promoting awareness, providing information about these diseases

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