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Original Research Article

Retrospective study of pattern of treatment in free health camps from 2005 to 2017 in East Singhbhum, Jharkhand, India

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ABSTRACT

Background: Free health camp is a common objective of non-governmental organization (NGO). Government health department alone or jointly with NGO use to organize free medical camp for some specific health program. This retrospective study of occurrence and proportion of diseases and their pattern of treatment was done for period from 2005 to 2017 with an NGO has been working in East Singhbhum district of Jharkhand.
Methods: The data of patients over the age of 05 years attended the free health camp from 2005 to 2017 and consent were provided by NGO concerned in this study. The year wise, block wise number of patient, male/female ratio and list of drugs used in different time were tabulated for analysis.
Results: The result of this study has been noted in four different tables which elaborates the total number of patients year wise, block wise, percentage wise, male/female ratio during thirteen years. Another table showed occurrence of diseases/ailments in different period with changing percentage of use the drugs in their treatment.
Conclusions: This retrospective study provides a conception about some changes in occurrence of diseases in free medical camp in the rural areas of Jharkhand in thirteen years. These health camps have tried to provide and follow the treatment according to need of the patients with safer, efficacious, economical drugs and with periodical inclusion of new generation drugs.

Keywords: East Singhbhum, Generic drugs, Health camp, Non-governmental Organization

INTRODUCTION

Free health camp, free health checkup camp or free medical camp are one of the strategies adopted by both government and non-governmental organization (NGO) in our country.[1] Primary health care system provides many medical facilities to a large population in rural and also in urban areas. Along with routine works government health department organizes free health check-up program, mega camp with specialist doctors.[2] These types of camp are proved useful in special campaign, in specific health program and also helpful to promote health awareness to the communities. There are a large number of voluntary health agencies and NGOs working in country including Jharkhand state. Free health camp is one of the important segments of activities of NGOs. They usually and frequently organize various type of health-related programs like free treatment with dispense of some common drugs for common problems, blood donation camp, free dental check-up, free detection camp of cataract (followed by surgery), diabetes, cancer etc. Multispecialty hospitals and private hospitals also do

same type free consultation camp to make the peoples aware about disease and related facilities of their hospitals.[3,4]

In rural areas (or in other areas also) medical camp organized by NGO is generally day long program in which treatment is based on clinical examination without much facility of other investigation, now malaria test and blood sugar test are done by rapid card test and glucometer respectively. Many times, some of the camp is organized jointly by NGO and Government health department provides blood test for malaria, detection of some other diseases and immunization.

This study of treatment pattern of patients was done with NGO who has been working for free medical camp for more than 13 years in different villages in East Singhbhum of Jharkhand. By census of 2011, East Singhbhum has population of 2293919 (rural population:1019328). In rural population number of male and female is 514498 and 504830 respectively, and percentage of SC and ST is 04.39 and 50.54 respectively.[5] This district has two subdivision and 11 blocks within, in which one blocks has largely populated urban area and district headquarter, Jamshedpur. The NGO concerned with our study has been conducting camp in three blocks area from 2005 to 2014, included one block in 2015 and again one block in 2018. Normally five to six camps were organized in a year with objective of health awareness among rural population and to provide some treatment for common illness. The common health problems like communicable diseases in these areas are diarrhea, malaria, dengue, tuberculosis, leprosy, respiratory tract infection, anaemia, skin diseases, and many other non-communicable diseases.[6] The organizer of the camp provides sufficient numbers of common drugs, mostly generic drugs, or essential drugs by the advice of doctors who generally attend the camps.[7-10] Drugs are distributed to patients by the help of compounder/person who has knowledge in pharmacy, and who can speak local language.

METHODS

Study population

This is a retrospective study of pattern of drug prescription in free health camp for last 13 years done by an NGO. The data and consent to use in publication were provided by NGO, Friends of Tribal Society, Jamshedpur, Jharkhand. The authors have participated in almost all camps and collected data related to this study. Ethical clearance is not required.

The patient attended in medical camp conducted in different villages in East Singhbhum from year 2005 to 2017. Patients above 05 years of age (approx. 05 to 70 year) were included in this study. The total number of patients attended or enrolled for medical help each year in each block were tabulated. The nature of complains told by patients and their provisional clinical diagnosis of diseases were noted and summarized in table for assessment of percentage of occurrence of diseases. The total number of drugs used in camps from 2005 to 2017 were listed in table with percentage of drugs used in different periods. The occurrence of ailments/diseases and pattern of use of drugs were tabulated in three divided slab of years like from 2005 to 2010, from 2011 to 2013 and from 2014 to 2017.

Data analysis

Data were analyzed by using Microsoft Excel 2007.In statistical analysis, percentage and averages were assessed.

RESULTS

The result related to free medical camps include tabulation of total number of patients attended each year, in different blocks, and their male female ratio for a period of 13 years. In another table common ailments with their percentage in different periods, pattern of prescribing drugs to patients with percentage of use of drugs from in different slabs of years for 13 years, were summarized.

Table 1: Data of patient (age: approx. 05 to 70 year) attended year wise in medical camp from 2005-2017.

Year	Male	Female	Total	% Male	% Female
2005	572	613	1185	48.27	51.73
2006	482	771	1253	38.47	61.53
2007	504	793	1297	38.86	61.14
2008	583	860	1443	40.40	59.60
2009	480	762	1242	38.65	61.35
2010	486	748	1234	39.38	60.62
2011	543	806	1349	40.25	59.75
2012	777	1131	1908	40.72	59.28
2013	807	1061	1868	43.20	56.80
2014	909	1232	2141	42.46	57.54
2015	831	1226	2057	40.39	59.60
2016	876	1436	2312	37.89	62.11
2017	907	1414	2321	39.08	60.92
Total	8757	12853	21610	40.52	59.48

Table 1 shows total number of patients attended the camp in 13 years were 21610 , in which male and female were 8757 and 12853 respectively. On an average 1662 patients turned up per year (male =674, female=988 per).

Table 1 shows the total number of patients with percentage of male and female every year, in which female percentage is always high during the period of 13 years. The maximum number of patients of age groups of 25 to 65 years in male and 20 to 60 years in female usually turned up in the camp.

Table 2 shows the numbers of patients with percentage attended camp in different blocks. Among the five blocks Potka had scored highest number of patients and Boram had lowest in 13 years, on average per year basis number of patients in Patamda, Dumaria and Potka ranges from 436.84 to 471.30, and Boram and Ghatsila has similar average number of patients. (Note: Before 2011 newly formed Boram block was the part of Patamda block).

Table 2: Data of block wise total number of patients attended in health camp from2005 to 2017 (Health camp in Ghatsila includes number of patients from 2015 to 2017).

Name of block	No. of male patients	No. of female patients	Total no. of patients	% Male	% Female
Patamda	2215	3464	5679	39.00	61.00
Boram	1295	2011	3306	39.17	60.83
Potka	2605	3527	6132	42.48	57.52
Dumaria	2431	3301	5732	42.41	57.59
Ghatsila	211	550	761	27.73	72.27
Total	8757	12853	21610	40.52	59.48

Table 3: Data of different ailments/diseases and their percentage in different periods of years.

Name of ailments	2005 -2010		2011-2013		2014-2017	
	% of single ailment	% of multiple ailments	% of single ailment	% of multiple ailments	% of single ailment	% of multiple ailments
Fever	14		12		11	
Malaria*	05		04		03	
Enteric fever	07		06		03	
Dengue fever*	00		00		00	
Diahrroea/Dysentry	08		07		08	
Helminthiasis	12	60	12	50	12	50
RTI/COPD	08		09		10	
UTI	02		03		03	
Tuberculosis*	02		03		02	
Leprosy*	03		02		01	
Anaemia	10	65	09	60	09	50
Vit. Def	10	60	09	50	06	40
Diabetes	01		02		05	
Hypertension	02		03		06	
Eye disease/ cataract*	03	15	04	20	05	20
Ear diseases	03	10	03	10	02	10
Thyroid disease	00		01		01	
Orthopaedic	08	40	08	50	10	45
Skin disease	01	45	02	40	02	30
Others	01		01		01	
Case Referred to PHC/CHC/Others			10		20	

*Cases of Malaria, Dengue, Leprosy, Tuberculosis (diagnosed or suspected) were advised to consult nearest Government Hospital (PHC/CHC) for further follow up treatment & needful purposes. Some the clinically & investigated cases of malaria were given medicine. Cataract patients were guided to concerned organization for free operation

Table 3 shows list of ailments/diseases of the patients who were given treatment or advise by doctors in camp from year 2005 to 2017. According to complains of the patients and on the basis of clinical diagnosis percentage of ailments were summarized, one column shows percentage of main single diagnosed condition and another column indicates overall percentage of diseases associated with other problems. Other drugs also used: (1) Skin ointment/cream: Antibacterial / Antifungal /Mixed antifungal (2) Eye / Ear Drop: Ciprofloxacin (3) Iron+ Folic Acid (4) Multivitamin (5) Calcium. Table 4 shows the numbers of drugs used in camp. Drugs are listed system wise according to pharmacological - therapeutic uses and percentage of use in different period from 2005 to 2017. This table also highlights the changes of pharmacotherapy pattern in the period of 13 years.

Table 4: List of drugs, percentage of use in different period of year in medical camp.

Name of Drugs	Percentage of use in year 2005-10	Percentage of use In year 2011-13	Percentage of use in year 2014-17
Antipyretics			
Aspirin	00	00	00
Paracetamol	100	100	100
NSAID			
Nimesulide	20	20	00
Diclofenac	80	40	50
Aceclofenac	00	40	50
Others	00	00	00
Antacid/H2Antagonist/PPI			
Antacid	70	50	00
Ranitidine	30	50	50
Omiprazole/Pantaprazole	00	00	25
PPI plus Domperidone	00	00	25
Antiemetics			
Domperidone	100	100	90
Ondensetron	00	00	10
Antispasmodics			
Dicyclomine	100	100	100
Drotaverine	00	00	00
Antimalarial			
Chloroquine	50	50	30
Quinine	00	00	00
Sulfadoxine +Pyrimethamine	50	50	50
Artesunate	00	00	20
Antifilarial			
Banocide	100	100	100
Antimicrobials			
Amoxycillin	80	50	50
Norfloxacin	20	25	00
Ciprofloxacin	00	25	30
Ofloxacin	00	00	00
Levofloxacin	00	00	10
Cefixime	00	00	10
Azithromycin	00	00	00
Anti amoebic /Anti dysentery			
Metronidazole	50	50	50
Ornidazole	00	00	00
Norflox+ Tinidazole	50	25	00
Oflox+ Ornidazole	00	25	50
ORS	100	100	100
Anthelminthics			
Albendazole	100	100	100
Antihistaminics			
Cetrizine	100	100	50
Levocertizine	00	00	50
Respiratory system			
Salbutamol	100	100	100
Deriphylline	00	00	00
Steroids/ Inhalers	00	00	00
Montelucast	00	00	00

Other drugs also used: (1) Skin ointment/cream: Antibacterial / Antifungal /Mixed antifungal (2) Eye / Ear Drop: Ciprofloxacin (3) Iron+ Folic Acid (4) Multivitamin (5) Calcium

DISCUSSION

This study of health camps has been organized mainly in rural areas of Jharkhand where half of the population belongs to tribes. This study has a large span of period of thirteen years when many changes are expected regarding the nature and frequency of diseases and their treatment. The number of patients turned up in the camp are increasing every year with higher ratio of female patients, indicates a good response to the health camp specially by female patients. The maximum numbers of patient of age group of 30 to 60 years came in camp, in which case of fever (viral, seasonal), enteric, respiratory tract infection were more and less same or slightly lower in current period as compared to year 2005-10. Many of the common problems like anaemia, helminthiasis, vitamin A and B. complex deficiency, joint pain, and dermatitis were found associated with another primary complain of the patient. Now occurrence of some non-communicable diseases like hypertension, diabetes mellitus and hypothyroidism are increasing during the study period of 13 years. As per WHO non-communicable diseases (NCD) accounts for total 53% of death in India. Most of the burden is attributed by CVD (24%), followed by respiratory diseases (11%), other NCDs (10%) and injuries (10%).[11-13] The suspected cases of malaria, leprosy and tuberculosis are referred to nearest community health center for further treatment and needful purposes. The patients of malaria were treated if camp had facility of blood test for malaria parasite. In another study done in clinic in some other part of Jharkhand it was mentioned that vector borne diseases like malaria, filarial kala-zar etc are found in endemic form along with typhoid, upper respiratory tract infection, dyspepsia, anaemia, nonspecific back pain and dermatological infections.[14,15]

There are approximately 37 drugs used in village camp. The percentage of use of paracetamol, albendazole, metronidazole, banocide, ORS, mixed antifungal antibacterial skin cream, vitamins A, multivitamin, iron+folic acid and calcium are same throughout thirteen years but there are many changes in pattern of use in drugs of non-steroidal anti-inflammatory (NSAID) like increasing use of aceclofenac, H2 receptor antagonist/proton pump inhibitor, drugs of dysentery and anti microbials.[16]

In period of 2005 to 2017, amoxycillin was commonly used anti-microbial agent, now cefixime and azithromycin are also included in this segment.

CONCLUSION

Generally, health camp conducted by any organization provides cost effective, medicine/drugs to the patient. This retrospective study provides a conception about some changes in occurrence of diseases in free medical camp in the rural areas of Jharkhand in thirteen years. These health camps has tried to provide the treatment according to need of the patients with safer, efficacious, economical drugs and with periodical inclusion of new generation drugs, also it is helpful to spread the health awareness among the community.

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