

Original Article**Morbidity Pattern In Rural Area Of Jaipur District (Rajasthan)**

Mathur Surendra Mohan *, Mandarwal Dharmendra *, Chahar Brajesh kumar**, Swatantra singh***

*Asstt. Prof., **Asstt Prof Statistics, *** Resident. Dept. of Community Medicine, NIMS Medical College, Jaipur, Rajasthan

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ABSTRACT

Background: Old experience of “Morbidity pattern of community” is being not given due consideration by the health planners when planning for health problems strategy of India.

Aims and Objectives: The aim of present study is to find out the existing pattern of diseases for which patients do attend a general OPD in a rural area, and to give measures to cut down the health problems burden.

Results: Patients attending OPD of Achrol RHTC attached to Community Medicine Department of NIMS Medical College, Jaipur, constituted children up to 5 years of age 21.6%, between 5-15 years of age-24.52%. Diseases of GIT, of which diarrhea and abdominal pain were the commonest contributed 30.06%, Respiratory system diseases were 28.83% among the patients, Diseases of Skin-15.26% were reported, Nutritional deficiency diseases including Anemia of pregnancy were 9.41%. Malaria cases were reported in 6.16%, Eye diseases were in 5.6%, SOM cases were 2.65% and UTI was diagnosed in 1.96% of total OPD cases.

Conclusion: Faulty nutrition, poor personal, poor home hygiene and poor environmental sanitation are the underlying causes of First Ten Morbidities for which patient do come to OPD of a dispensary or PHC, so our focus of tackling these problems should be the priority of our health planning in terms of preventive and promotive services.

Key Words: Morbidity pattern, Preventive, Promotive

INTRODUCTION

There are only a handful of diseases (mostly preventable) for which patients generally attend the OPD of dispensaries and P.H.C's. At RHTC Chiragoan block, BHU –Varanasi (2006) reported in OPD of rural community – Respiratory diseases (18%), Fever (15.4%), GIT Diseases (11.4%), Bones and joint problems (11.4%), Skin diseases (6.95%), Eye diseases (4.3%), and nutritional deficiency diseases (6.8%) [1]. Similarly in an epidemiological study of morbidity pattern among the elderly population in Ahmedabad, maximum problem of locomotor system (48.6%), followed by Respiratory (20.2%), Diabetes (10.6%), Hearing problems (17.9%), Skin problems (3.7%), Vision problems (42.7%), Hypertension (34.4%), and 3.7 % had psychosocial problems, were reported [2]. These diseases should be the ones on which the staff posted at these places should have full mastery not only for curative purpose but also preventive aspect of it, including its control. Since most of these diseases are communicable diseases, it would be worthwhile if

besides treatment Health education about causation and prevention of diseases, which is much more important to the patients, is given. This would in long range reduce the bulk of work on the institution there by allowing the staff to devote more time to other preventive and promotive work which has been so far neglected due to heavy work load of curative services.

OBJECTIVE

The aim of the present study is to find out the existing pattern of diseases for which patients attend a General O.P.D in rural areas and to suggest remedy.

MATERIAL AND METHODS

To study this pattern the outdoor data of Rural health training centre,(RHTC),Achrol attached to the Community Medicine department of NIMS Medical college, Jaipur for the year 2013 have been analyzed. All the patients reporting at RHTC, Achrol, which also functions as PHC were taken as study sample. As our

RHTC, Achrol is situated on NH-11C patients reporting from outside of functional area of RHTC were not taken as study subject. We also excluded very seriously ill patients (e.g. MI, serious injuries), those who were not given any treatment in RHTC and were immediately referred to some higher centers.

Period of Study

OPD data from 1st January, 2013 to 31st December, 2013 were analyzed for the present study.

Achrol village is a village situated on Jaipur Delhi highway in the Jaipur district, Rajasthan. This area is quite thickly populated having a population of 26630. It is inhabited by middle or lower class people being mainly of Hindu or Muslim community. Mostly RHTC is catering its services to this area but there are cases from other nearby helmets as well. Besides RHTC there are private practioners like M.B.B.S, R.M.P, L.M.P and state government PHC working there. Other forms of Indian system of Medicine are also being practiced in the area.

RESULTS AND DISCUSSION

Table number one shows that 13847 males and 12783 females were residing in the area. Male female ratio was 1000: 923. Average size of family was observed 4.5.

Table 2 shows that majority of morbidity is confined to first four causes (66.38 %) i.e, URI and tonsillitis, Pain abdomen, Skin infections and Diarrhea.

Total No of cases of all morbidities were 39321 and Total no. of cases of first ten morbidities were 29105 Percentage was 74.01%

It was observed from table 3 that among 0 -5 years group Diarrhea, Nutritional Deficiency and SOM was commonest, 6-15 years group mainly suffered from skin diseases, pain abdomen, diarrhea and SOM. Amongst 16-45years group had Malaria, Eye diseases, URI, Tonsillitis and Bronchitis, were commonest illness reported. Persons 45years plus suffered mainly from UTI and Bronchitis.

In case of URI & Tonsillitis, Bronchitis, Eye disease & Urinary Tract Infection p value for Chi square test is found statistically significant .(table 4).

Table 5 shows that in case of Bronchitis and Urinary Tract Infection "p" value for Chi square test was found statistically significant.

Table 1: Demography of Population Mainly Seeking Treatment

Age Groups In Years	Male	Female	Total
0-1	867 (51.76%)	808 (48.23%)	1675 (6.28%)
1-5	1956 (51.28%)	1858 (48.71%)	3814 (14.32%)
5-15	3515 (53.82%)	3016 (46.17%)	6531 (24.52%)
15-45	6162 (51.20%)	5873 (48.79%)	12035 (45.19%)
45-Above	1347 (52.31%)	1228 (47.68%)	2575 (9.66%)
TOTAL	13847 (51.99%)	12783 (48.00%)	26630 (100%)

Table 2: First Ten Morbidities For Which Patient Attended O.P.D In Rhtc Achrol During 2013

Name of disease	ICD 10 ¹²	Total no of cases	%
URI and tonsillitis	X (J00-J90)	6131	21.06
Pain abdomen	XI (K00-K93)	5058	17.37
Skin infections (Infective and fungal)	XII (L00-L99)	4443	15.26
Diarrhea	XI (K00-K93)	3694	12.69
Nutritional deficiency diseases including Anemia	IV (E00-E90)	2740	9.41
Bronchitis	X (J00-J90)	2262	7.77
Malaria	I (A00-B99)	1795	6.16
Eye diseases	VII (H00-H59)	1638	5.62
Suppurative otitis media	VIII (H60-H95)	773	2.65
Urinary tract infection	XIV (N00-N99)	571	1.96
Total		29105	100

Table 6 shows that URI, tonsillitis, bronchitis and malaria are common illnesses in winter months while pain abdomen, diarrhea, skin diseases and eye problems are frequently encountered morbidities of summer months.

Table 3: Age Wise Distribution Of First Ten Morbidities

Sr. No	Name Of Disease	Total No. Of Cases	0-5 Years	6-15 Years	16-45 Years	45 Years Plus
1	URI and Tonsillitis	6131	1829 (29.83)	1256 (20.48)	2657 (43.33)	389 (6.34)
2	Pain in Abdomen	5058	906 (17.91)	1925 (38.05)	1498 (29.61)	729 (14.41)
3	Skin disease	4443	825 (18.56)	2138 (48.12)	951 (21.40)	529 (11.90)
4	Diarrhoea	3694	1689 (45.66)	904 (24.47)	725 (19.62)	378 (10.23)
5	Nutritional deficiency including Anemia	2740	1098 (40.07)	899 (32.81)	575 (20.98)	168 (6.13)
6	Bronchitis	2262	149 (6.58)	268 (11.84)	959 (42.39)	886 (39.16)
7	Malaria	1795	228 (12.70)	523 (29.13)	898 (50.02)	146 (8.13)
8	Eye disease	1638	182 (11.11)	5546 (33.33)	818 (49.93)	92 (5.61)
9	S.O.M	773	264 (34.15)	324 (41.91)	107 (13.84)	78 (10.09)
10	Urinary Tract infection	571	61 (10.68)	80 (14.01)	176 (30.82)	254 (44.48)

Table 4: Sex wise relation of First Ten Morbidities

S.N	NAME OF DISEASE	TOTAL CASES	MALE	FEMALE	P- VALUE
1	URI and Tonsillitis	6131	4186 (68.27%)	1945 (31.72%)	0.000256
2	Pain abdomen	5058	2834 (56.03%)	2224 (43.96%)	0.227432
3	Skin disease	4443	2467 (55.53%)	1976 (44.47%)	0.268727
4	Diarrhea	3694	1999 (54.11%)	1695 (45.88%)	0.410508
5	Nutritional deficiency including Anemia	2740	1345 (49.08%)	1395 (50.91%)	0.881742
6	Bronchitis	2262	1572 (69.49%)	688 (30.41%)	<0.001
7	Malaria	1795	1071 (59.66%)	724 (40.33%)	0.053236
8	Eye disease	1638	1010 (61.66%)	628 (38.33%)	0.019648
9	S.O.M	773	431 (55.75%)	342 (44.24%)	0.250144
10	Urinary tract infection	571	199 (34.85%)	372 (65.14%)	0.002454
		29105	17116	11989	

Illnesses in winter months while pain abdomen, diarrhea, skin diseases and eye problems are frequently encountered morbidities of summer months.

The demography of the area is depicts that children up to 5 years of age contributed 21.61% of the

population and that between 5-15 years 24.52%, on the whole the pattern is near about representation of total Indian demography i.e. more of young generation, dependent and vulnerable group. Thus the pattern of diseases of this area should be a sort of true Indian picture.

Table 5: Sex Wise Relation of First Ten Morbidities among Children

Name Of Disease	Total Cases	Male	Female	P- Value
URI and Tonsillitis	3004	1536(51.13%)	1468(48.86%)	0.820422
Pain abdomen	2463	1368(55.54%)	1095(44.45%)	0.26743
Skin disease	3038	1568(51.61%)	1470(48.38%)	0.741359
Diarrhoea	2547	1349(52.96%)	1198(47.03%)	0.553181
Nutritional deficiency including Anemia	1902	1058(55.62%)	844(44.37%)	0.260166
Bronchitis	488	298(61.06%)	190(38.93%)	0.026967
Malaria	674	375(55.63%)	299(44.63%)	0.271198
Eye disease	659	335(50.83%)	324(49.16%)	0.867368
S.O.M	613	325(53.01%)	288(46.98%)	0.546508
Urinary tract infection	151	56(37.08%)	95(62.92%)	0.009766
	15539	8277	7262	

Table 6: Seasonal variation of first ten morbidities

Name of disease	Total cases	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC
URI AND TONSILLITIS	6131	704 (11.48)	668 (10.89)	568 (9.26)	488 (7.93)	429 (6.99)	352 (5.74)	306 (4.99)	405 (6.60)	461 (7.51)	529 (8.62)	727 (11.85)	864 (14.09)
PAIN ABDOMEN	5058	408 (8.06)	420 (8.30)	435 (8.60)	440 (8.69)	437 (8.63)	448 (8.85)	432 (8.54)	428 (8.46)	404 (7.98)	418 (8.26)	389 (7.69)	399 (7.88)
SKIN DISEASE	4443	340 (7.05)	358 (8.05)	388 (8.73)	398 (8.95)	396 (8.91)	392 (8.82)	383 (8.62)	369 (8.30)	359 (8.08)	351 (7.90)	348 (7.83)	361 (8.12)
DIARRHOEA	3694	258 (7.06)	298 (8.06)	310 (8.39)	318 (8.60)	326 (8.22)	368 (9.96)	358 (9.69)	340 (9.20)	309 (8.36)	301 (8.14)	248 (6.71)	260 (7.03)
NUTRITIONAL DEFICIENCY WITH ANEMIA	2740	232 (8.46)	204 (7.44)	209 (7.62)	189 (6.89)	205 (7.48)	202 (7.37)	278 (10.14)	271 (9.89)	282 (10.29)	225 (8.21)	211 (7.70)	234 (8.54)
BRONCHITIS	2262	196 (8.66)	190 (8.39)	142 (6.27)	184 (8.13)	214 (9.46)	231 (10.21)	238 (10.21)	198 (8.75)	174 (7.69)	127 (6.61)	113 (4.99)	255 (11.27)
MALARIA	1795	168 (9.35)	178 (9.91)	151 (8.41)	138 (7.68)	136 (7.57)	141 (7.58)	119 (6.62)	129 (7.18)	135 (7.52)	150 (8.35)	164 (9.13)	186 (10.36)
EYE DISEASE	1638	123 (7.50)	133 (8.11)	135 (8.24)	149 (9.09)	151 (9.21)	152 (9.27)	138 (8.42)	135 (8.24)	136 (8.30)	130 (9.93)	125 (7.63)	131 (7.99)
S.O.M	773	101 (13.06)	105 (13.58)	71 (9.18)	48 (6.20)	25 (3.23)	40 (5.17)	30 (3.88)	37 (4.78)	38 (4.91)	43 (5.56)	81 (10.47)	154 (19.92)
U.T.I	571	32 (5.60)	50 (8.75)	61 (10.68)	54 (9.45)	50 (8.75)	53 (9.28)	55 (9.63)	45 (7.88)	47 (8.23)	42 (7.35)	40 (7.00)	44 (7.70)

Present study shows that the most common first ten diseases for which the patient attended the O.P.D of RHTC Achrol. The diseases of GIT of which diarrhea and pain abdomen were the commonest, contributed the largest number of 30.06% of all diseases. Similarly diseases of Respiratory system of which URI and Bronchitis including Tonsillitis contributed to 28.83% of the total morbidity. It was followed by

diseases of the skin (15.26%) mainly in the form of scabies, pyoderma or eczema. Nutritional deficiency diseases including anemia, mainly of nutritional anemia or due to pregnancy contributed to 9.41% of total cases. 6.16% of cases were due to malaria. Eye disease in the form of mainly conjunctivitis- acute or chronic (Trachoma) contributed to 5.62% out of total illness. 2.65% of cases were diagnosed as

suppurative otitis media and 1.96% cases were labeled as Urinary tract infection.

A study on morbidity pattern in rural community of Eastern U.P at RHTC Chiragoan block, BHU-Varanasi (2006) reported in OPD- Respiratory diseases (18%), Fever(15.4%), GIT diseases (11.4%), Bones and joints problems (11.4%) , Skin diseases (6.95%), Eye (4.3%), and Nutritional deficiency diseases (6.8%) was found among different reported morbidities In study, "Rapid assessment procedure". The role in assessing morbidity pattern in Rural community (Garhwal region of Uttaranchal) in India revealed Asthma was commonest in Males, Leucorrhoea followed by Anemia was commonest complain in Females and A.R.I was commonest morbidity amongst Children [1].

In an epidemiological study of the morbidity pattern among the elderly population in Ahmedabad, Morbidity profile of urban surveyed elderly had maximum problem of Locomotor system (48.6%) followed by Respiratory (20.2%), Diabetes (10.6%), Hearing (17.9%), Skin problems (3.7%), Vision problems(42.7%), Hypertension(34.4.%) and 3.7% had Psychosocial problems [2].

In a study, "The magnitude of Global problem of Diarrheal diseases revealed that the incidence of Diarrhea obtained (2.6 episode/child per year) [4] was virtually the same as that estimated]in 1982. While the global mortality estimate was lower (3.3.million deaths/year) [3,4].

All studies reported the highest incidence of Diarrhea in children under- 2 years of age. On the basis of 15 studies for which the incidence of Diarrhea was reported for age group with interval of 12 months or less, median rates were highest for children 6-12 months of age. For the under 5 years, the median incidence of Diarrhea per year was reported to be 2.2 episodes/child.

This study shows that the combined first ten diseases constitute 74.01% of total cases of O.P.D and this situation alarms immediate attention and demands its individual management [5].

Present study clarify the fact that morbidity and mortality is more in childhood period. This is especially true for communicable diseases and deficiency diseases. 70.13% of diarrhea cases were of 0-15 years age group. Similarly about 56% cases

of pain abdomen, about 50% of URI and tonsillitis, 66.68% of skin diseases, 72.88% of Nutritional deficiency and 76.08% of SOM cases occurred in children up to 15 years. Bronchitis 81.36% were mainly problem of adult population [6,7].

Diseases considering GIT show an upward trend from May and this pattern lasts till August. Peak for respiratory illness is seen from Nov to Feb. Malaria has prevalence in Nov to Feb and same is true for S.O.M. This incidence of eye diseases also rises in the summer months i.e. May to August. Nutritional diseases are more prevalent during May to September and then in December and January, Skin diseases and Urinary tract infections does not show much variation except that scabies which constitute major problem of skin diseases has a higher incidence during summer months [8].

The common diseases that are encountered in a routine outdoor are generally few. They are responsible for bulk of sickness in the community leading to heavy economic loss besides health loss. All of these diseases fall into two groups' namely- Infections and nutritional deficiency disease. Children (0-15 years) are more vulnerable segments of the society. Most of the vulnerable diseases like Diarrhea, Dysentery, Tonsillitis, SOM, Nutritional deficiency and Skin diseases can be correlated with these groups and are quite prevalent among children. More morbidity has been recorded amongst males. It may be because male child has been considered as more precious child in our culture and hence even on simplest problem medical advice was sought. Similarly in the adult life a female generally lives in her in-laws house, where again her care would be less as compared to others.Diarrhea and GIT problems are more common in months when consumption of water is more and there are more chances of food to decay. Seasonal change trends, cooler months make the population more susceptible to respiratorydiseases.URI and other fevers also lead to SOM and Respiratory infection. All these can be precipitated by nutritional deficiencies. Especially Diarrhea is notorious for setting up of a vicious cycle and making one as a leaking bucket [9].

In 2011 reported highest sickness 71.8% in persons between 45 to 59 years, lowest 29.9% in children between 5 & 14 years second highest rate of sickness 66.0% was in preschool children. Infants and persons between 16-45 years had sickness rate of 37.9% and 34.8% in Jaipur (Rajasthan) Morbidity for all the

diseases except urinary tract infection was more frequent among males. Urinary tract infection was more common in females in comparison to males. Likewise Nutritional deficiency and Anemia was a significant problem in adult female than adult male. Difference was markedly affected by anemia which is a usual problem of child bearing age (see table no.5) In all total morbidity reported in male was 17116 (58.80%) as compared to 11989 (41.19%) in females, may be because male being taken more cared in our society. While sickness rate was highest among females (53.17%) than males (45.87%) was reported in General Health Survey in Sindhi colony, Jaipur city [10].

CONCLUSION

Most of the commonly occurring diseases are preventable. The cause of all these diseases lie mainly in the following:-

- Faulty nutrition
- Poor personal hygiene
- Poor home hygiene
- Poor environmental sanitation
- Failure to provide adequate primary health care.
- Lack of political commitment

As planners, we should fight against these factors rather than providing only curative services and that too mechanically. A health education program which is person and time oriented is the need of the hour. It would be worthwhile for all planners to keep the seasonal variation of diseases at all levels to keep in mind so that they can timely launch the concerned health education drive. Since health education is a subject least welcomed it should be made attractive by wide spread use of various Social medias(Facebook, Twitter etc), Film shows, Street plays, Magazines, Video shows, T.V , Radio programs, organization of health talks, dramas, posters, advertisements etc. Safe water would go a long way in reducing the morbidity of G.I.T. Efforts should be made to provide safe water supply and a proper disposal of excreta is equally important.

Most of the nutritional disorders had their roots in social and cultural practices and it should be overcome or analyzed by a proper nutritional education plan.

Since majority of sickness occurs in children, it would be very logical if preventive pediatric services, starting from genetic counseling (premarital), antenatal care, safe delivery, infant care and care of the toddler are given top most priority and importance, and rendered to community through various established clinics.

To improve personal hygiene and environmental sanitation (both inside and outside home), a good entry point of education can be a good school health program supported by health education. With the help of both formal and informal leaders, one can aim to achieve community health.

Lastly it is a hard fact to accept that so far our medical doctor is himself not sufficiently educated and motivated to launch preventive services. To him preventive services are of secondary importance. An integrated teaching during the medical curriculum with more emphasis on preventive aspect not only by Community Medicine people, but by each department of institution would go a long way in tackling this problem.

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Corresponding Author:

Dr Mathur Surendra Mohan
Assistant Professor
Dept of Community Medicine,
NIMS Medical College,
Jaipur, Rajasthan.
Email: drsmmathur@gmail.com

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