Original Research Paper

Community Medicine

ASSESSMENT OF MORBIDITY PATTERN OF PATIENTS ATTENDING OPD AT URBAN HEALTH TRAINING CENTRE IN LUCKNOW

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ABSTRACT A constant watch on the changing pattern of the diseases provides us an opportunity for timely intervention as well as to monitor the progress of the ongoing disease control programs and helps in optimizing the allocation of the limited re-sources.
This study was conducted to determine the morbidity pattern of patients attending OPD at Urban health Training Centre and to determine seasonal trend of the diseases.
RESULT:- Among 12130 patients, 49.2% were males and 50.8% were females. The communicable diseases constituted about 38% of the diseases with Respiratory tract infections being most common. The Non-communicable diseases accounted for 39.4% of the diseases. Most of the diseases were observed to have a seasonal variation, with the communicable infectious diseases peaking in the monsoon months. Significant gender differences were evident in the prevalence of certain diseases such as worm infestation, acute respiratory tract infection, urinary tract infection, reproductive tract infection, chronic obstructive pulmonary disease, gastritis, falls/injuries/fractures, anemia, pyrexia of unknown origin.

KEYWORDS : Communicable diseases, non-communicable diseases, seasonal variation

INTRODUCTION
A health care delivery system is composed of various levels, the first being the first point of contact between system and people where primary health care is rendered. The secondary and tertiary health care system provides graded specialized services. Availability of such a system of referral is of paramount importance, ensuring access of the needy population to more highly trained staff capable of dealing with progressively wider range of specialized health interventions that require more sophisticated technology than can be provided at community level.

A constant watch on the changing pattern of the diseases provides us an opportunity for timely intervention as well as to monitor the progress of the ongoing disease control programs and helps in optimizing the allocation of the limited resources. Delineation of these patterns needs meticulous research design and careful interpretation so that suitable preventive strategies could be implemented.

Hippocrates mentioned the effects of seasons on health as early as 460-377 BC in his writings. [1] The influence of environment on various diseases has been proved and this descriptive study will help us to formulate etiological hypothesis of the various diseases, especially with respect to the environmental factors. The best source of such data is the hospital records as they are easily available and require fewer resources. In this study, the morbidity profile and seasonal variation of OPD patients attending Urban health training center under Department of Community Medicine, IIMS&R, Lucknow were studied.

MATERIAL & METHODS:
Study design-
The study was a record-based study done among the patients attending the outpatient health facility of urban health training center, IIMS&R Lucknow, with the aim of achieving the above-stated objectives.

Sample size and period of study-
All the self-reported new patients who attended OPD during the period of 1 year from July 2018 to June 2019 were taken in the study.

Tools used and methods of data collection-The data was collected from the well maintained OPD registers of the medical officer, and the diagnosis was classified into communicable diseases, non-communicable, nutritional and other diseases. In order to find the seasonal variation and significance of individual disease we have organized and reviewed the whole data on the monthly basis.

Statistical analysis
The data was entered and analyzed using the Microsoft Excel 2016, Epi Info7 and SPSS v22. The total number of the patients suffering from the different diseases was calculated according to the gender and their percentages in the different months were evaluated. Pearson's Chi-square test was applied to see the significance of the observed differences between the males and females for different diseases. P values <0.05 were considered significant. To show the seasonal variation of different diseases line graphs were drawn to depict a comparative account, which included most frequently diagnosed communicable diseases, most common infectious diseases, and non-communicable and other diseases.

RESULTS:
A total of 12130 new patients attended OPD during the study period. Among them, 49.2% were males and 50.8% were females. Acute respiratory tract infections (ARI) was the most commonly diagnosed diseases. The age of the patients attending the OPD ranged from 1 month to 82 years. The mean age of the study sample was 32 ±19 years. Majority of the patients attending the OPD were of middle age.

The communicable diseases constituted 38.1% of the diseases with ARI (32.2%) being the most common communicable disease followed by skin infections (23.8%). Diarrhoeal disease(p=0.03), Worm infestation (p=0.01) and UTI (<0.01) were significantly more common in females [Table 1]

Table 1: Showing distribution of Communicable diseases:

Category of morbidity	Diseases	Female		Male		P value	Total	
		(N)	(%)	(N)	(%)		(N)	(%)
Communicable vector borne	Malaria	08	38.1	16	48.5	0.5	24	0.5
	Dengue	13	61.9	17	51.5		30	0.6
Communicable water borne	Diarrheal diseases	268	40.1	170	30.5	**0.03**	438	9.5
	Worms	156	23.4	72	12.9	**0.01**	228	4.9
	Typhoid	160	23.9	254	45.5	0.07	414	8.9
	Jaundice and Hepatitis	84	12.6	62	11.1	0.7	146	3.2
Communicable vaccine preventable	T B	58	90.6	69	94.5	0.38	127	2.7
	Measles	6	9.4	4	5.5		10	0.2
Other Communicable infections	Skin infections	553	36.9	549	34.9	0.8	1102	23.8
	ARI	677	41.1	809	48.5	0.2	1486	32.2
	Ear infections	96	6.03	84	5.2	0.8	180	3.9
	Eye infections	120	7.5	152	9.4	0.1	272	5.9
	UTI	134	8.4	32	1.9	**0.01**	166	3.6
Total (4623) (38.1%)		2343	50.7	2280	49.3		4623	

The Non-communicable diseases accounted for 39.4% of the diseases and they were slightly more common than Communicable diseases (38.1%). Diabetes mellitus (28.4%) was most common Non-Communicable disease followed by Falls/Fractures and Injuries (25.4%).

Gastritis (p=<0.01) was significantly more common in females while COPD (p=<0.01) was significantly more common in males. Anaemia (60.8%) was found to be commonest in nutritional disorders while Pyrexia of Unknown Origin (30.9%) was commonest in other disorders. [Table2]

Pyrexia of Unknown Origin (p=0.04) and headache (p=0.03) was significantly more common in females.

Table 2: Showing distribution of Non-Communicable diseases and Nutritional disorders

Category of morbidity	Diseases	Female (N)	Female (%)	Male (N)	Male (%)	P	Total (N)	Total (%)
Non-Communicable diseases	Hypertension	569	26.3	641	24.5	0.13	1210	25.3
	Gastritis	170	7.9	116	4.4	<0.01	286	6
	Falls/Injuries / Fractures	526	22	688	24.4	0.91	1214	25.4
	Arthritis /Gout	176	8.1	148	5.7	0.02	324	6.8
	COPD	88	4.1	274	10.5	<0.01	362	7.6
	Epilepsy	8	0.4	18	0.7	0.57	26	0.5
	Diabetes	624	31.2	731	29.9	0.89	1355	28.4
Total (4777) (39.4%)		2161	45.2%	2616	54.8%	-	4777	-
Nutritional disorders	Anaemia	234	65.7	60	46.9	0.01	294	60.8
	Avitaminosis	122	34.3	68	53.1	-	190	39.3
Total (484) (3.9%)		356	73.6	128	26.4	-	484	-
Other Diseases	PUO	364	27.9	331	35.1	0.04	695	30.9
	Abdominal Pain	261	20.1	225	23.8	0.4	486	21.6
	Burns	40	3.1	56	5.9	0.07	96	4.3
	Toothache	24	1.9	34	3.6	0.2	58	2.6
	Gynaecological	192	14.7	0	0	-	192	8.5
	Epistaxis	58	4.5	60	6.4	0.4	118	5.3
	Headache	194	14.9	108	11.4	0.03	302	13.5
	Others	169	13	130	13.8	0.8	299	13.3
Total (2730) (18.6%)		1302	57.9	944	42.1	-	2246	-

Seasonal distribution of the various communicable diseases was also shown by a line graph. Among infectious diseases almost all the diseases had a seasonal variation. Maximum number of cases of ARI was found in July, November and December. Skin infections showed peaks occurring in the months of July and August. It was clearly observed that the cases of diarrhea, typhoid and worm infestation were more in the months of June to August. Cases of jaundice and infection showed no seasonal variation. Fig 1.
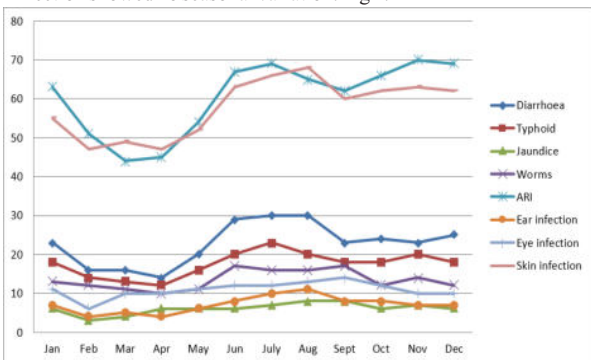

Fig 1: Seasonal Distribution of Communicable Diseases

DISCUSSION:

The number of females among OPD patients in the present study was slightly more than males. This could be explained partly from the so called "male-female health survival paradox" (i.e., males report better health than females, but encounter higher mortality at all ages) [3,4]. However, this could be also due to a gender difference in health-seeking behavior as shown in previous studies. [5–7]

In our study among the younger age groups respiratory problems were most common. Also in this study, it was revealed that diseases namely hypertension, diabetes, COPD, eye, ear, and dermatologic problems were the main problems encountered among the adult subjects.

The results of this study are consistent with other studies conducted in different parts of the world regarding the pattern of morbidity encountered at the primary level of care. [8-9]

Our results differed from the study conducted at the PHC in Kanpur which showed that skin infections were the most commonly diagnosed diseases followed by the acute respiratory tract infections (ARI) [2] and Bajracharya et al., who in their study conducted at the PHC in Duwakot near Katmandu found that viral fever, cut/injuries, hypertension, worm infestation, and acid peptic diseases (APD) were the more common diseases [10].

The relatively higher number of non-communicable diseases is an indication of the epidemiological transition and serves as an eye opener for the health planners to equip themselves against the diseases of the developed world. Studies from developed nations reveal a prominence of non-communicable diseases such as hypertension, non-articular rheumatism, accidents, and mental disorders in their people [11-13]. Our result differ from study conducted in South Andaman by Gaur et al [12] who showed less occurrence of communicable diseases in their study.

Seasonal variation of the diseases, a subject of much epidemiological interest, has been studied for centuries. The maximum burden of all the diseases as well as communicable diseases in the present study was found in the monsoon months of July and August, followed by May and June. This is different from the observation made at Government Medical College, Chandigarh, which revealed that the overall reporting of communicable diseases was significantly more during winter and summer compared to the monsoon season [14]. The reason for the observed upsurge of the diseases could be probably the transition phase of the season from summer to rainy which makes the adjustment of the host to the changed weather difficult, thus increasing his/her susceptibility. It also makes the conditions favorable for the breeding of the vectors and the survival of the agents of the diseases. Similarly, other diseases such as skin infections, urinary tract infection (UTI), and ARI were also reported to have a seasonal variation among the outpatients in this part of the world.

CONCLUSION:

These observations from a single health care center could not be generalized to a whole country. However, our study provides early evidence for probability of changing morbidity patterns with demographic transitions that should be taken into public health program planning. They would also assist in tracking of chronic diseases, promotion of life style modification and proper utilization of health services.

Recommendation:

The burden of these diseases could be reduced if we devise measures to detect the changes in their trend through the strengthening of the surveillance activities. The knowledge of the burden of the diseases would also assist the health administrators in judicious allocation of the resources.

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