

A brief outlook of rheumatoid arthritis RA patients in health facilities of Karachi, Pakistan

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Publication History

Received: 12 November 2014

Accepted: 16 December 2014

Published: 24 December 2014

Citation

Madiha Athar, Salma Ali Khokhar, Arfa Shakeel, Atta Abbas. A brief outlook of rheumatoid arthritis RA patients in health facilities of Karachi, Pakistan. *Medical Science*, 2014, 15(61), 34-38

ABSTRACT

Introduction: Rheumatoid arthritis RA is an autoimmune disease characterized by the inflammation of the synovial joints in the body. There is no strategy to target non communicable diseases as the health care system of Pakistan specifically targets communicable diseases. The patients are therefore left on their own to seek medical help in this regard. This study gives a brief look at the patients of RA in health care facilities of Karachi, Pakistan.

Methods: A cross sectional quantitative study was conducted in health care facilities of Karachi, Pakistan for 3 months i.e. from July to September 2014 which targeted patients suffering from Rheumatoid arthritis RA.

Results: A total of 40 patients were available for their data to be recorded. The majority of the patients (57.5%) belonged to the age group of 19 to 45 years and the rest (42.5%) were geriatrics above the age of 45 years, majority were the females (77.5%) and less than a quarter of the patients were the males (22.5%). The gender was associated with the family history (*P value <0.05*).

Conclusion: RA is more common in the females with weight burden and 1 in every 2 persons with a positive family history of RA is more prone to contact the disease.

Keywords: Rheumatoid Arthritis; RA; health care facilities; Karachi; Pakistan

1. INTRODUCTION

Rheumatoid arthritis RA is an autoimmune disease characterized by the inflammation of the synovial joints in the body. (Rheumatoid Arthritis 2014) The disease is the most common type of arthritis which is due to faulty immune system and is the most disabling one among the class. It

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is chronic i.e. lifelong and compromise the patient's quality of life especially in terms of locomotion and body movements as it produces joint pain and stiffness. Studies report majority of the rheumatoid arthritis patients are women and the appearance of RA is usually in old age however it can occur in young or middle age as well. (Tambar 2012) Although the exact cause of the disease is yet to be known, genetic predisposition is widely believed to be one the foremost cause of the disease along with some of the genes investigation upon which is still in progress. (Shiel 2014) The disease is diagnosed with physical examination of the joints by a rheumatologist coupled with laboratory diagnosis such as X-rays however presence of any other form of arthritis might mask the diagnosis. A serum rheumatoid factor RF is considered as the biomarker for the disease. (MedicineNet.com 2014) Body weight adds to the disease worsening as increase in the body weight prevents the remission of the disease. (Denise Mann 2007) The disease can be managed by adequate pharmacotherapy along with proper patient counseling which can be sought by patient from health care professionals HCPs. (Iliades 2010)

However, the story of Pakistan is different as the health care system of the country is struggling to aid the patient burden and is regarded as a type urban based curative care model. (Gera N.D) There is no strategy to target non communicable diseases as the health care system of the country specifically targets communicable diseases. The patients are therefore left on their own to seek medical help in this regard. This study gives a brief look at the patients of RA in health care facilities of Karachi, Pakistan.

2. METHODS

A cross sectional quantitative study was conducted in health care facilities of Karachi, Pakistan for 3 months i.e. from July to September 2014 which targeted patients suffering from Rheumatoid arthritis RA. The target population consisted of patients diagnosed with rheumatoid arthritis only. All other patients were excluded from the study. The research instrument consisted of a survey questionnaire which contained 6 closed ended and 3 open ended questions. These questions were formulated as research variables. Prior to data collection the questionnaire was piloted for its suitability by team of experts and an informed consent was obtained from the patient. The results of the pilot study were not included in the main data. The data thus collected was entered in SPSS v20 (*Statistical Package for Social Sciences version 20*). Frequencies were employed in the interpretation of data and it was presented as percentage (%) and sample number (N). Chi square and cross tabulation was also employed to find any association between variables. The study was approved by Department of Pharmacy Practice, Faculty of Pharmacy, Ziauddin University.

3. RESULTS

A total of 40 patients were available for their data to be recorded. The survey incorporated all health care facilities majority of which were the tertiary health care centers (N = 28, 70%) followed by the secondary (N = 12, 30%).

The majority of the patients (N = 23, 57.5%) belonged to the age group of 19 to 45 years and the rest (N = 17, 42.5%) were found to be geriatrics i.e. above the age of 45 years. In terms of gender, an overwhelming majority were the females (N = 31, 77.5%) and less than a quarter of the patients were the males (N =9, 22.5%).

It was also observed that the majority of the patients who presented with the ailment had body weight between 40 to 70 kilograms (N = 26, 65%) followed by some who weighed above 70 kilograms (N = 12, 30%) and very few with less than 40 kilograms (N = 2, 5%). A half segment of target group (N = 21, 52.5%) had a positive family history i.e. were genetically predisposed to RA. However, slightly less than half (N = 19, 47.5%) presented negatively with regards to family history of RA.

Majority of the cases documented (N = 18, 45%) were recently reported i.e. RA diagnosed less than 1 year however, some reported between 1-3 years (N = 9, 22.5%) and 3-5 years (N = 8, 20%). Few old cases of RA diagnosed more than 5 years were also observed (N = 5, 12.5%).

Bulk of target group (N = 29, 72.5%) presented with co morbidity and almost a quarter of the group (N = 11, 27.5%) did not present any co morbidity with RA. The results are tabulated in table 1.

Table 1 Summary of the findings

S. No	Variable	Sample (N)	Percentage (%)	Cumulative (%)
1	Health care facility			
1.1	Primary	0	0%	0%
1.2	Secondary	12	30%	30%
1.3	Tertiary	28	70%	100%
1.4	Total	40	40%	100%

2	Age			
2.1	Between 19 years to 45 years	23	57.5%	57.5%
2.2	Above 45 years	17	42.5%	100%
2.3	Total	40	100%	100%
3	Gender			
3.1	Male	9	22.5%	22.5%
3.2	Female	31	77.5%	100%
3.3	Total	40	100%	100%
4	Body weight			
4.1	Below 40 kg	2	5%	5%
4.2	Between 40 kg to 70 kg	26	65%	70%
4.3	Above 70 kg	12	30%	100%
4.4	Total	40	100%	100%
5	Family history			
5.1	Yes	21	52.5%	52.5%
5.2	No	19	47.5%	100%
5.3	Total	40	100%	100%
6	Co morbidity			
6.1	Yes	29	72.5%	72.5%
6.2	No	11	27.5%	100%
6.3	Total	40	100%	100%
7	Time of diagnosis			
7.1	Less than 1 year	18	45%	45%
7.2	Between 1 year to 3 years	9	22.5%	67.5%
7.3	Between 3 years to 5 years	8	20%	87%
7.4	More than 5 years	5	12.5%	100%
7.5	Total	40	100%	100%

It was also observed by chi square (χ^2) test that some of the variables were associated with each other. The gender was associated with the family history (P value <0.05) as females with positive family history were observed to be more than the expected (N = 19 Observed, N = 16.3 Expected) and males with positive family history were observed to be less than the expected count. (N = 2 Observed, N = 4.7 Expected). No other variable showed any association. The results of the cross tabulation is presented in table 2.

Table 2 Cross tabulation of variable gender with variable family history

Variables			Family History		Total
			Yes	No	
Gender	Male	Observed (N)	2	7	9
		Expected (N)	4.7	4.3	9
	Female	Observed (N)	19	12	31
		Expected (N)	16.3	14.7	31
	Total	Observed (N)	21	19	40
		Expected (N)	21	19	40

4. DISCUSSION

Rheumatoid arthritis (RA) is a disease which progressively alters the quality of life of the patient. A study was conducted in health care facility of Karachi, Pakistan to find out the situation of RA. Majority of the cases reported were from the tertiary health care facilities (N = 28, 70%) and the chief affected age group of the patients was between 19 years to 45 years (N = 23, 57.5%). This endorses the findings of Victoria Ruffing and Clifton O. Bingham that the patients contact RA in their 30s to 60s. (Victoria Ruffing 2014)

In addition to this, it was also observed that the majority of the cases presented were of the females (N = 31, 77%), this finding is also supported by some studies which establish that RA is more common in females. (Victoria Ruffing 2014 and Cornelia M. Weyand 1998) Moreover, it was observed that the patients with body weight between 40 kg to 70 kg were in majority followed by some above 70 kg; it presents likelihood that body weight is related to the progression of the disease. (Slemenda 1998) (Oliveria, et al. 1999) However there was no statistical relation i.e. (*p value* >0.05).

In the case of genetic predisposition, the study reported a half of the target group (N = 21, 52.5%) with positive family history. This is in accordance with the studies which established genetic predisposition as a risk factor for RA. (Koumantaki Y 1997) Bulk of patients presented with co morbidities (N = 29, 72%) such as dyslipidemia, HTN, DM, etc. The majority of cases were recently reported (N = 18, 45%). The survey was limited to the city of Karachi, Pakistan and time was a major limitation. More in depth studies in this regard is recommended.

5. CONCLUSION

RA is more common in the females with weight burden and 1 in every 2 persons with a positive family history of RA is more prone to contact the disease. Patients in their later stages between 20 to 40 years are likely to be diagnosed with the disease. Adequate health measures and patient education can help counter the ailment and its progression.

CONFLICT OF INTERESTS

The authors declare no conflict of interests exists. No funding was obtained for this study.

SUPPORTING INFORMATION

This article is based on the research project undertaken as a Bachelor's thesis as a partial fulfillment of Doctor of Pharmacy (Pharm.D) degree at Faculty of Pharmacy, Ziauddin University, Karachi, Pakistan.

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