



A project study on the analysis of rheumatoid arthritis patients at Dhaka Medical College in Bangladesh

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ABSTRACT

The objective of this study is to observe patients profile of Rheumatoid arthritis (RA) at Dhaka Medical College Hospital, Bangladesh. When comes patients profile of any disease, it indicates various features like patient demographics, duration of disease, nature of complications, food habit, family history, past history of patients, and treatment options etc. This prospective study was carried out in Dhaka Medical College Hospital in Dhaka District from 1st August 2014 to 16th August 2014. In this hospital in Dhaka District, provided with questionnaire sheets as a representative of the survey, a total 17 questionnaire were processed for patient survey and total of 150 questionnaire sheets for the patient survey were considered. In Dhaka Medical College Hospital in Dhaka District, interviewed registered physician they are all specialized individual sectors and they are responsible for patient healthcare service. The feature of Rheumatoid Arthritis (RA) patients described as 87% and other diseased patients were 13%. RA diseased patients were treated by some medicines in which some of the medicines were similar and some were dissimilar. Used medicines were Steroid (31%), DMRD (25%), NSAID (13%), Immunosuppressant (12%), TNF – Alfa inhibitors (11%), others (8%), respectively. Among those RA patients, 20% needed surgery (joint replacement, tendon repair) and 80% was treated by only drugs. Rheumatoid arthritis (RA) is a chronic systemic disease affecting joints as well as extra-articular structures and is the most common type of inflammatory arthritis worldwide. The enquiry of Rheumatoid Arthritis patient was done by well-organized surveillance. All of these data were beneficial for practical knowledge of Rheumatoid arthritis.

Keywords: Rheumatoid Arthritis, Patient profile, Practical knowledge, Surveillance

INTRODUCTION

The Health care system in Bangladesh falls under the control of the Ministry of Health and Family Planning. The government is responsible for building health facilities in urban and rural areas. For example, in the late 1980's in Bangladesh, the rural health facilities that existed in the rural areas were mostly sub-district health centers, rural dispensaries and family welfare centers. Unfortunately, they were poorly administered. For example, a sub-district health center had only thirty hospital beds. Most of its services were useless because of staff problems like few medical professionals and because the hospitals had no support service. Urban health centers also had problems with inadequate medical supplies. In many urban centers today, health services are

provided by nongovernmental institutions. During dangerous months like monsoon season and other natural disasters, the Bangladesh health system isn't capable of managing the number of victims [1].

Arthritis and diseases of the joints have been plaguing mankind since ancient times. In around 1500 BC the Ebers Papyrus described a condition that is similar to rheumatoid arthritis. This is probably the first reference to this disease. Doctors don't know exactly what causes rheumatoid arthritis [2,3]. The condition is most likely triggered by a combination of factors including an abnormal autoimmune response, genetic susceptibility, and some environmental or biologic trigger such as a viral infection or hormonal changes. Rheumatoid arthritis is considered an

autoimmune disease. In autoimmune disorders, the body's immune system mistakenly attacks and destroys healthy cells and tissue [4,5].

Rheumatoid arthritis is a different disease than rheumatic fever. Aside from similar names, the two are completely separate issues that require different treatments. RA is a chronic disorder that can lead to joint destruction, deformity and loss of function [6]. There is no known cure for RA. Rheumatic fever is an inflammatory disease that can develop as a complication of inadequately treated strep throat or scarlet fever. Strep throat and scarlet fever are caused by an infection with group A streptococcus bacteria. It is believed to be caused by antibody cross-reactivity to heart, joints, skin and brain [7]. The illness typically develops 2-3 weeks after the bacterial infection. Acute rheumatic fever commonly affects children between 5 to 15 years of age, with only 20% occurring in adults. It is quite similar in clinical presentation to Rheumatism (Bai in layman's language), hence named rheumatic fever. But has nothing to do with Rheumatoid arthritis (RA). RA is an erosive and deforming disease for joints but rheumatic fever does not cause erosive joint disease [8].

The most common type of arthritis, osteoarthritis involves wear-and-tear damage to the cartilage that caps the bones in your joints. Rheumatoid arthritis occurs when your immune system mistakenly attacks the lining of your joints, causing a painful swelling that can eventually result in joint deformity [9,10].

Currently, there is no specific prevention of rheumatoid arthritis. But cigarette smoking, exposure to silica mineral, and chronic periodontal disease all increase the risk for rheumatoid arthritis, these conditions should be avoided. Rheumatoid arthritis and osteoarthritis are the two most common types of arthritis, a condition that damages joints and affects their function [11,12,13].

METHODOLOGY

Study design: The survey conducted at the DHAKA MEDICAL COLLEGE HOSPITAL in DHAKA district. At the DMCH our survey sample was drawn from the target population and the information obtained from the sample once by questioning them and collect the information provided by them.

Sample Selection: In DHAKA MEDICAL COLLEGE HOSPITAL questionnaire sheets were provided as a representative of the survey, a total 17 questionnaire were processed for patient survey

and total of 150 questionnaire sheets for the patient survey were considered. In DHAKA MEDICAL COLLEGE HOSPITAL, registered physician were interviewed. They are all specialized individual sectors and they are responsible for patient healthcare service.

Field work: The survey data were collected from the DHAKA MEDICAL COLLEGE HOSPITAL, from 1st August 2014 to 16th August 2014, which was use for the development of study tools, collection of data and analysis.

Data collection and Analysis: This paper and pencil field survey consisted of open, closed ended and multiple choice questions. An English language survey was developed based on information drawn from relevant literatures pertaining to use of Prescription drugs used during Rheumatoid arthritis in Bangladesh. Separate questionnaires were prepared for patient survey. Questionnaires for all the patients related to rheumatoid arthritis, age, height, pain condition, patient history and list of drugs included.

Methods of data collection: In this survey the statistical analysis were performed using MS Excel 2007.

Patient Category: Patients with Rheumatoid Arthritis

Place of investigation: DHAKA MEDICAL COLLEGE HOSPITAL, Medicine Department, unit -12 Outdoor and Indoor.

Questionnaires on Pattern and Treatment of Rheumatoid arthritis:

- Are you suffering from rheumatoid arthritis?
- What is your Age?
- What is your sex?
- What is your body Weight (kg)?
- What is your height?
- How long you are affected by rheumatoid arthritis?
- What about your food habit (majority)?
- How many joints are affected?
- Are you suffering from symmetric positional pain?
- Is morning stiffness common for you?
- What is your time of stiffness?
- What is your family history?
- Are you affected by rheumatic fever?
- Have you ever faced any infection or, injury in your joints?
- Are you smoker?
- What types of drug you use?
- Do you need surgery?

RESULTS AND DISCUSSION

It is a discern, descriptive and analytical research of rheumatoid arthritis patients profile. The implemented method is really adapted to this kind of research in the sense that the strategy is to conduct a questionnaire after consultation. During the research period, exhaustively screened all patients fulfilling our inclusion criteria. The feature of Rheumatoid Arthritis (RA) patient described as 87% and other diseased patient 13% [Figure: 1]. In case of age factor, 41-50 years patients were 34%, 31-40 years were 26%, 21-30 years were 20%, above 50 years were 16%, below 20 years were 4% of all RA patients respectively [Table:1]. Female patients were 58% and male patients were 42% [Table: 1]. Patients Weight & height can be explained as 61-70 kg were 40%, 51-60 kg were 27%, above 70 kg were 18%, below 50 kg were 15% and 5.4- 5.6 feet were 42%, 5.1-5.3 feet were 29%, below 5 feet were 17%, above 5.7 feet were 12%, respectively [Table:1]. Length of RA of patients was like 21-30 years were 34%, 0-10 years were 25%, and above 30 years were 23%, 11-20 years were 18% respectively [Figure:2]. Food habit (majority) of affected patients can be described as carbohydrates major patients were

54%, proteins major patients were 15%, all types of foods major patients were 14%, fats major patients were 12%, and fast foods major patients were 5% in that order [Table:2]. Number of affected joints was in that order such as: above 8 joints were 56%, 1-4 joints were 27%, 7-8 joints were 9%, 5-6 joints were 8% respectively [Table:1]. Patients complain symmetric positional pain and morning stiffness were 80% and 95% respectively. Time of stiffness can be explained as 0-2 hours were 58%, 2-3 hours were 32%, and above 3 hour were 10% respectively. From 130 patients, 48% had family history (20% were parents, others 19% were, 9% were grand-parents) and 52% were out of it [Figure: 3]. Patients having Rheumatic fever and faced infection, injury in joints were 32% and 14% respectively. Among RA patients 58% were smokers and 42% were nonsmokers. RA diseased patients were treated by some medicines in which some of the medicines were similar and some were dissimilar. Used medicines were Steroid (31%), DMRD (25%), NSAID (13%), Immunosuppressant (12%), TNF – Alfa inhibitors (11%), others (8%), respectively [Figure: 4]. Among those RA patients, 20% needed surgery (joint replacement, tendon repair) and 80% were treated by only drugs [Figure: 5].

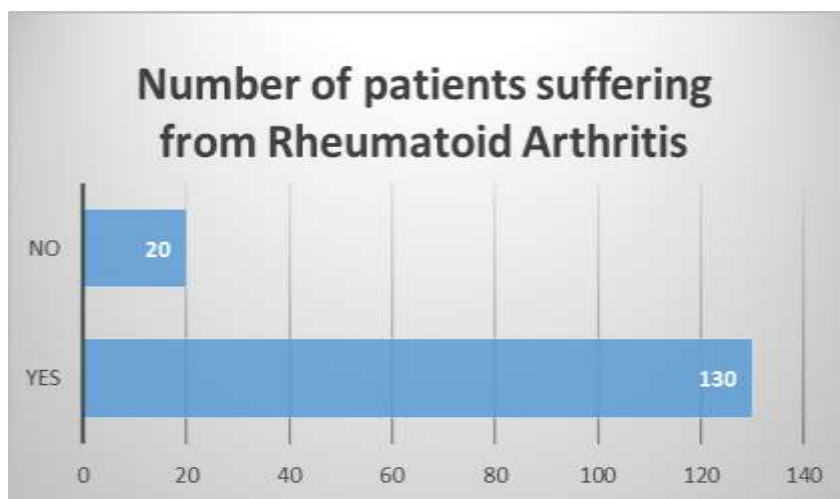


Figure 1: The number of patients suffering from Rheumatoid Arthritis

Table 1: Rheumatoid Arthritis Patient’s demographics

Age	Number of patients
Below 20	05
21-30	26
31-40	34
41-50	44
Above 50	21
Sex	Number of Patient’s
Male	54
Female	76
Weight	Number of patients
Below 50 kg	20
51-60 kg	35
61-70 kg	52
Above 70kg	23
Height	Number of patients
Below 5 feet	22
5.1-5.3 feet	38
5.4-5.6 feet	55
Above 5.7 feet	15

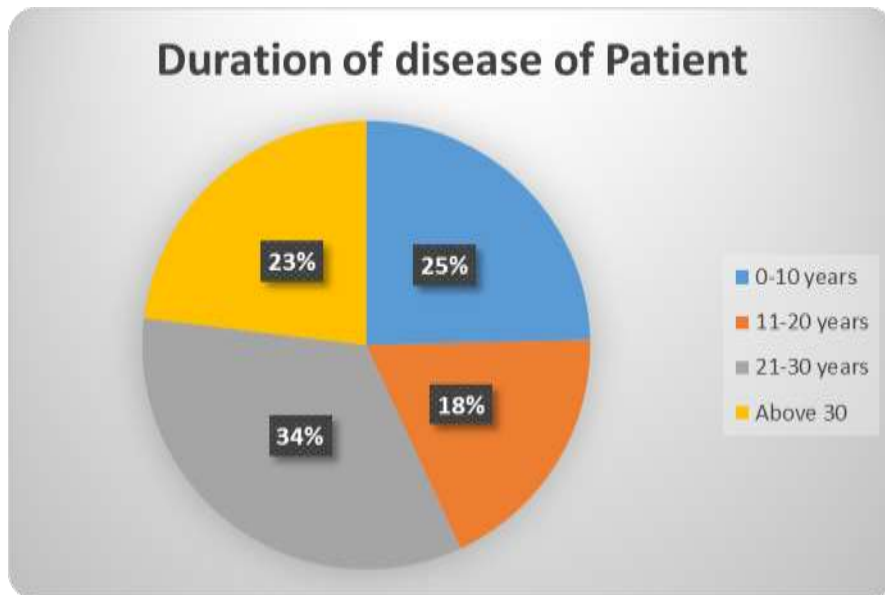


Figure 2: The graph of duration of disease of patients

Table 2: Patient’s food habit and Joints are affected by Rheumatoid Arthritis

Food habits	Number of patients	%	Number of joints	Number of patients	%
Carbohydrates	70	54	1-4	35	27
Fat	16	12	5-6	10	08
Protein	20	15	7-8	12	09
Fast Food & other	06	05	Above 8	73	56
All of above	18	14			

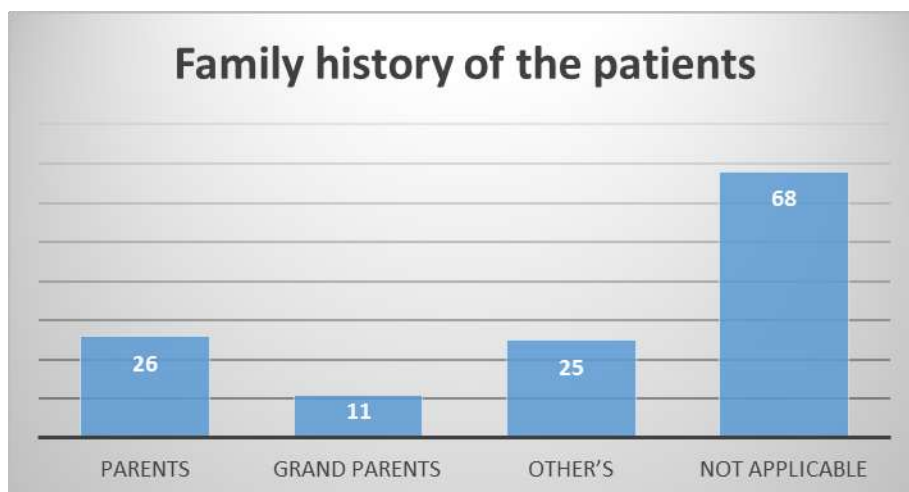


Figure 3: The graph of RA patient having family history

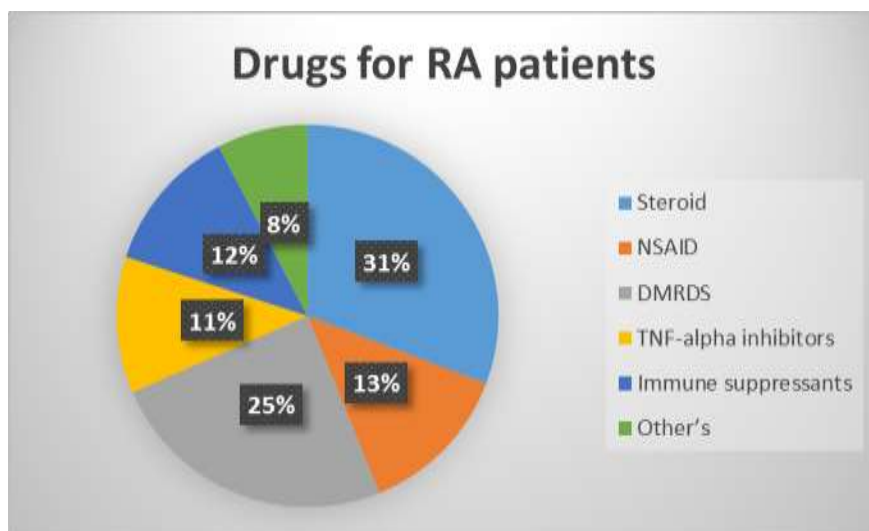


Figure 4: The graph of types of suggested drugs

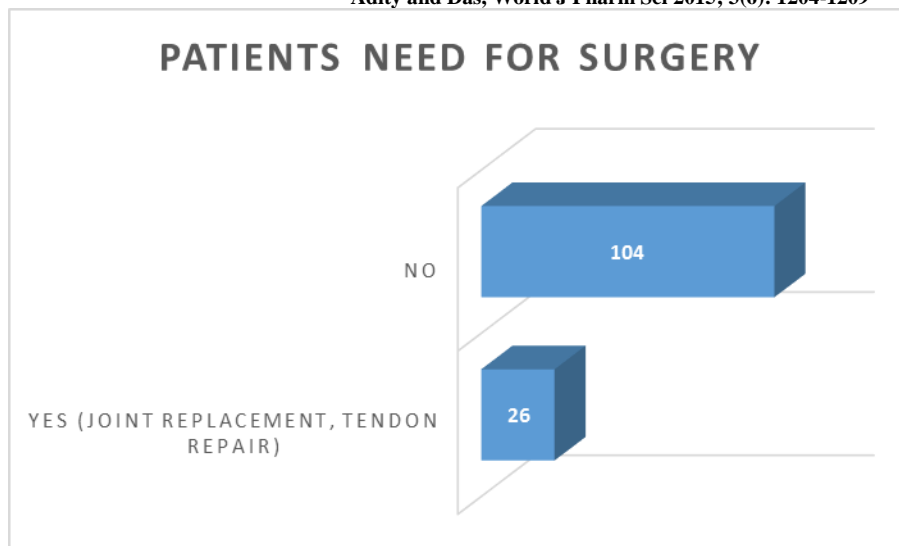


Figure 5: The graph of patient needs for surgery

Conclusion

Rheumatoid arthritis (RA) is a chronic systemic disease affecting joints as well as extra-articular structures and is one of the most common types of inflammatory arthritis worldwide and in Bangladesh also. As it is a common disease in Bangladesh, patients profile analysis was tranquil

due to availability of patients. With the best organization and best Medical facilities, accompanied with the most experienced doctors and can get quality treatment at lower cost, DHAKA MEDICAL COLLEGE HOSPITAL moves its every steps for patients health care.

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