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Research Article

**A TRANSVERSE STUDY ON THE ASSESSMENT OF POLY-  
ARTHROPATHY OCCURRENCE AMONG THE PATIENTS OF  
HCV PRESENTED WITH RA FACTOR****<sup>1</sup>Dr. Fatima Qayyum, <sup>2</sup>Dr. Zahid Qadeer, <sup>3</sup>Dr. Sajid Rehman**<sup>1</sup>King Edward Medical University, Lahore<sup>2</sup>Medical Officer RHC Malka, Gujrat<sup>3</sup>Medical Officer Govt. Eye cum General Hospital Gojra**Abstract:**

**Objective:** The objective of this study was the fortitude of the RA factor in the patients suffering from Hepatitis C and its correlation to joint disease.

**Matter and Methods:** This study work was transverse in nature and it was carried out at Mayo Hospital, Lahore from September 2016 to August 2017. Two hundred and seven patients of HCV with HCV ribose nucleic acid and antibodies of anti-hepatitis C through polymerase chain reaction (PCR) having disease and pain of joints were included in this study. The rheumatoid factor selection of these participants complied through ICT (immune chromatography). This is carried out with the assistance of kit for rheumatoid factor Latex assay.

**Results:** There were one hundred and thirty-eight male participants and sixty-nine were female participants in this research. The age of the patients was from twenty-one year to fifty-five years. The average age of the patients was (44.29 ± 4.61) years. The youngest patient was twenty-one year of age and the eldest patient was fifty-five year of age. Forty-seven percent of patients were in the age group of thirty-five to forty-five years. The frequency of rheumatoid factor positive was concluded in eighty-eight patients and RF-negative was concluded in one hundred and nineteen patients infected by HCV infection with pain in joints. Rheumatoid factor patients it was assessed as twenty-two patients with an important P value as 0.0367. This was of central concern in the female patients than the male participants.

**Conclusion:** RF discovery is not of much importance for the detection of the sufferers having RA in the patients of hepatitis C because of the high value of Rheumatoid Factor plasma activity.

**Keywords:** Poly-Arthropathy, RA factor, ICT, HCV, Latex Assay and PCR.

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**INTRODUCTION:**

One hundred and eighty million people of the world are suffering from HCV and its rate of occurrence is two percent. The discovery of this disease was carried out with tests of serum in the patients who gained this liver disease. About 70% of the patients of this disease have a link with the medically affected manifestations through numerous systems such as EHM (extra-hepatic chronic HCV infection manifestations) [1]. Rheumatologically manifestation is one of the most frequent among these manifestations. There was no particular style link was assessed in the hepatitis C infection link with arthropathy. Intermittent mono-oligo arthritis (IMO) and symmetrical polyarthritis (SP) are the two subsets described by medical manifestations. The connection of IMO is assessed with the occurrence of cryoglobulinemia and it also shows the participation of the joints which are larger in size as hip joints and knee [2].

Polyarthritis shows the same medical aspects as shown by rheumatoid arthritis (RA). The rheumatoid arthritis medical view does not help for the discovery of this disease and there is no discovery until medical innovations are available for particular rheumatoid arthritis. The RA disease discovery is depending upon the signs which include inflexibility at the time of the morning, swelling of the joints, the high value of ESR and a positive RA factor. In the same method, the medical arrangement of the HCVrA was also available. HCVrA main medical remarks include synovitis of small joints, tenosynovitis, arthritis, hand and small wrist joints participation. The rate of Erythrocyte Sedimentation found increased in half the quantity of patients. More than sixty-six percent patients have to suffer stiffness at the time of morning which is improved after one hour of the normal activities. IL (Interleukin Levels) 6 levels are augmented in the patients of HCV linked with arthritis & rheumatoid, performing the vital role in both of mentioned aspects [3].

Infection of HCV is also caused by the autoantibodies creation including RF which is thought to be discovery part of general serology identifier. The rate of rheumatoid factor and reactivation is increased due to the participation of articular which is observable in the sufferers of HCV from thirty-seven to eighty-one percent. The availability of rheumatoid factor is calculated at less than ten percent in the in the patients of HCV who do not have joints pain [4]. Discrimination of the Hepatitis C polyarthritis & concurrent rheumatoid factor is very complicated with the help of medical methods and it is a challenge in many cases of such nature.

**MATERIAL AND METHODS:**

This study work was transverse in nature and it was carried out at Mayo Hospital, Lahore from September 2016 to August 2017. World Health Organization model calculator was used for the calculation of the mass of samples. That calculation was carried out with ninety-five percent CI, five percent as complete precision and sixty percent anticipated occurrence. There were total two hundred and seven patients included in this research work. The age of the patients was from twenty-one years to fifty-five years. Fifty-five was the highest limit for the age. Successive sampling method was used for the gathering of samples. Every person who visited the Out-Patient Department was chosen who was fulfilling the required standard set for this research work. This study was carried out after getting approval from the ethical committee of the hospital. Written willing certificate from the participants of this research work was also taken. A serial number or ID number was given to every patient who was participating in this research work.

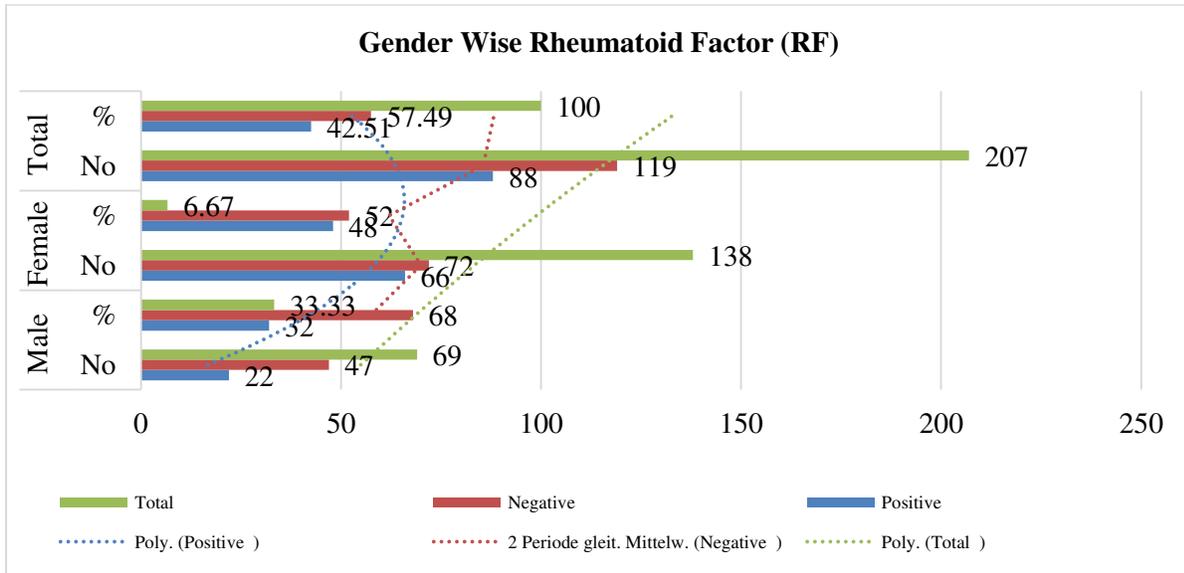
Physical checkups and brief background information of the diseases of patients was penned down including the age, serial numbers and name of the patients. The Rheumatoid Factor selection of these patients complied with the help of ICT. Rheumatoid Factor RF Latex assay kit was used for this particular purpose. SPSS software was used for the analysis of this data. Chi-square procedure was used for the calculation and comparison of the variables and P value was also observed during this calculation.

**RESULTS:**

One hundred and thirty-eight males and sixty-nine females were included in this research work. The average age of the patients was  $(44.29 \pm 4.61)$  years from twenty-one years to fifty-five years. Majority of the selected patients for this research work were in the age group of thirty-six years to forty-five years. They were forty-seven percent of the whole strength participating in this research. The frequency of Rheumatoid factor positive was found in eighty-eight patients and its negative occurrence was found in one hundred and nineteen patients who were infected by HCV with the pain of joints. Rheumatoid factor rate of the female patients was calculated in sixty-six patients and in the male patients, it was observed in twenty-two patients. The significant P amount was assessed as 0.0367. This amount was leading in female patients as compared to the male patients participating in this research work.

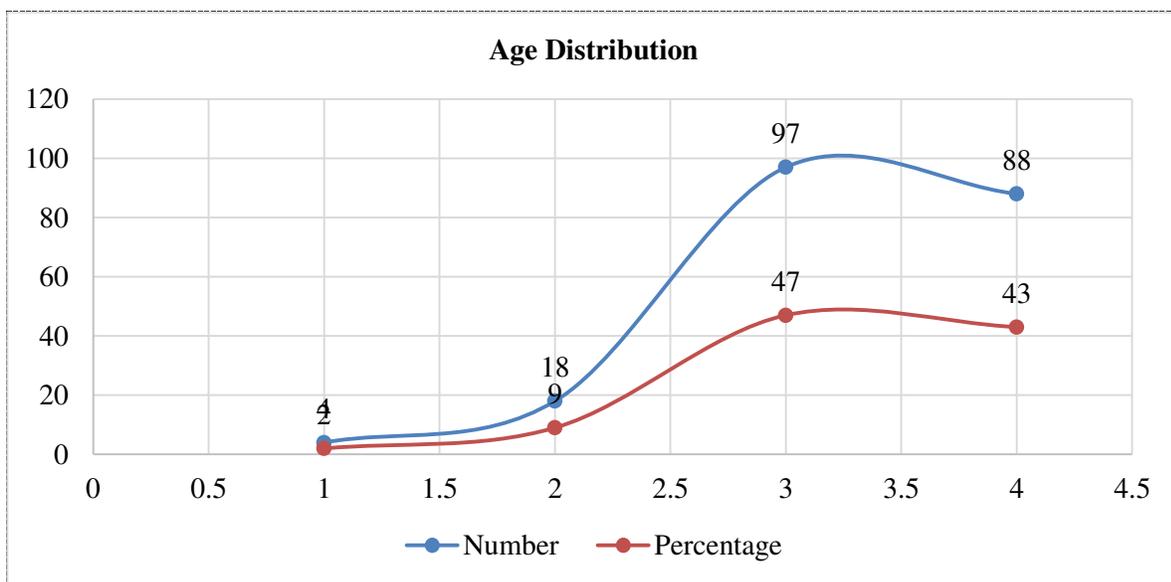
**Table – I: Gender Wise Rheumatoid Factor (RF)**

RF	Male		Female		Total		P-Value
	No	%	No	%	No	%	
Positive	22	32	66	48	88	42.51	0.0367
Negative	47	68	72	52	119	57.49	
Total	69	33.33	138	6.67	207	100	



**Table – II: Age Distribution**

Age	Number	Percentage
21 - 25	4	2
26 - 35	18	9
36 - 45	97	47
46 - 55	88	43



**DISCUSSION:**

Very common additional hepatic aspects were calculated in the occurrence frequency as 70% in the hepatitis C sufferers and features were observed in the prevalence rate as seventy percent in the HCV patients and most frequent difficulties were the manifestations of particular on chronic polyarthritis that imitate rheumatoid factor [5]. Many other types of research work to establish the connection of hepatitis C and rheumatoid factor diseases. The connection between the HCV & RA is informal because hepatitis C was calculated in only 0.45% of rheumatoid factor sufferers [6], which persuaded immunological disorders in host causing the information of autoantibodies which included the rheumatoid factor that has a connection to the propensity of the genes and not reliant on a load of virus [7].

Immune reactions are the cause of the creation of antibodies is because of these reactions among polypeptide of virus epitopes which is much similar to the antigen of the protein of humans that is the cause of swelling and injury of the tissues [8]. The patients of hepatitis C are at danger to get caught by rheumatoid factor. The conclusion of this research work stated that eighty-eight patients were found with + rheumatoid factor and - rheumatoid factor was found in one hundred and nineteen patients with hepatitis C infection linked with poly arthropathy [9]. These results are similar to the conclusion of the study carried out by Muhammad and his companions in 2015 that female dominance was also visible in that research work [10]. It is proved in this study that positive serum was found in forty-four percent sufferers linked with hepatitis C and arthropathy with rheumatoid factor found as + [11]. The results of this research work are also stating that 81.8% sufferers with infection of hepatitis C and showing the participation of arteries evaluated from the sera reactivity of the rheumatoid factor [12]. The results of as a study carried out in Egypt shows that rheumatoid factor was positive in 60% of the patients of hepatitis C suffering from poly arthropathy. Brito Zeron research also proved that point in Pakistani masses carried out in 2015 [13].

The manifestation of the rheumatoid factor as an ingredient of identification differentials which are different from patient to patient depending upon the method of treatment for diagnosis [14]. In this research work, we concentrated on the connection between the rheumatoid factor and HCV with the availability of poly arthropathy [15]. It is medically vital that occurrence of arthritis in the sufferers of hepatitis C is the result of antiviral treatment [16].

Antirheumatic medicines are evaluated for being a reason for HCV [17].

**CONCLUSION:**

Due to the high value of the Rheumatoid factor plasma activation, Rheumatoid factor discovery is not of much use for the detection of the patients having RA in the patients of chronic hepatitis C infection.

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