International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2016): 79.57 | Impact Factor (2015): 6.391

Overview of HCV Infection on Hemodyalisis Patients followed up in Tirana ID Service

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Abstract: ***This study aimed to investigate relationship between Hepatitis C Virus (HCV) infection in hemodialysis patients . This is retrospective study based on epidemiological, clinical, therapeutic data of HCV positive patients with CHKD (chronic kidney disease) undergo hemodyalisis, followed up in Infectious diseases service of University Hospital Cente "Mother Theresa" in Tiran, Albania. Out of 900 patients who were hemodialysed in three dialysis centers, 55 of them resulted with anti HCV Ab positive; 27 male and 28 female (F / M 1.16 ratio), with mean age 46.27 years, (24 – 79 years old) , average time in hemodialysis 10.5 years. The highest rates were age groups 26 - 30, 46 - 55 years. We distinguished 19 clinical sings , and 9 underlying associated diseases . 49.09% of them predominated with Genotype 1; Regimen of treatmenet was Peg INF α-2a. where only 23.64 of them discontinued therepy due to severe side effects. Morbidity and mortality of HCV is higher in pantients with chronic kidney diseases than in general population.***

Keywords: Hepatitis C, Hemodyalisis, Albanian Adults

1. Introduction

Hemodialysis patients represent a risk group for HCV infection[4] [5] . The prevalence of HCV infection is higher in CHKD (chronic kidney disease) than in the general population and is also associated with increased morbidity and mortality[15] [16] .

Prevalence of infection is dependent on type of dialysis: hemodialysis (hemodialysis center > home hemodialysis) > Peritoneal dialysis, frequency of hemodialysis, history of blood transfusion or transplant before effective donor screening[9] [18] [19] .

The European Centre for Disease Prevention and Control (ECDC) estimates: Hepatitis C incidence of 8.7 per 100 000 in the Member States of the European Union (EU) [1]. It has been well documented that dialysis patients have a higher rate of HCV infection. [62] The rate of seroconversion among hemodialysis patients with no other risk factors has been reported 1.38-1.9%/year.[2]

In Albania are about 30,000 people with HCV , with a prevalence ranging from 0.5 to 1.5%[3]

2. Material and Methods

It's 5 years retrospective study 2010-2014 ,from 900 patients who were hemodialysed in three dialysis centers (Hygea hospital, Amerikan hospital and Dialysis unit of UHC "Mother Theresa") in Tirana , 55 of them resulted anti-HCV Ab positive, age group 24-79 years old, who had different immunocompromising clinical conditions. They evidenced a creatine clearance of <10 ml / min, detectable anti-HCV antibody with ELISA and HCV-RNA in the serum.

The epidemiological study includes the classification of data based on gender, age and year of initiation of the hemodialysis process.

The study of clinical aspects is based on the rankings of signs and symptoms that complain patients and find their frequency. Also found the distribution of accompanying diseases that these patients carry.

We determined the genotypes, therapeutic regimens applied as well as the major side effects manifested during therapy.

3. Results

From 55 patients; 28 (50.9%) of them were female and 27 (49.1%) men. The highest rates are age groups 26 - 30, 46 - 55 years respectively 43.62%. only 3.62% of them were younger 25 years and over 70 years. The mean age of the patients involved in the study was 46.27 years.

Figure 1

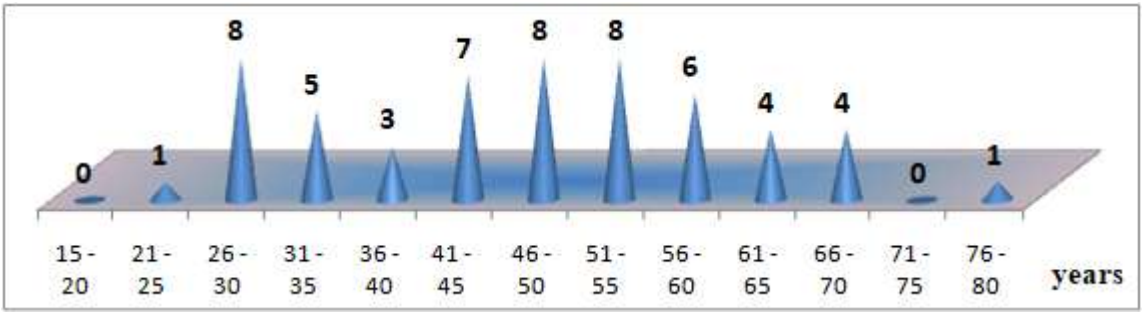

Figure 1: Distribution of cases based on age groups

- Among the dominant clinical signs were: Fatigue 94.5%, abdominal pain 90.9%, lack of appetite 87.2%, fatigue 74.5% and less frequent ; fever,dark urine , somnelence, icter, backpain respectively each of them 1.81%. (Fig 2)

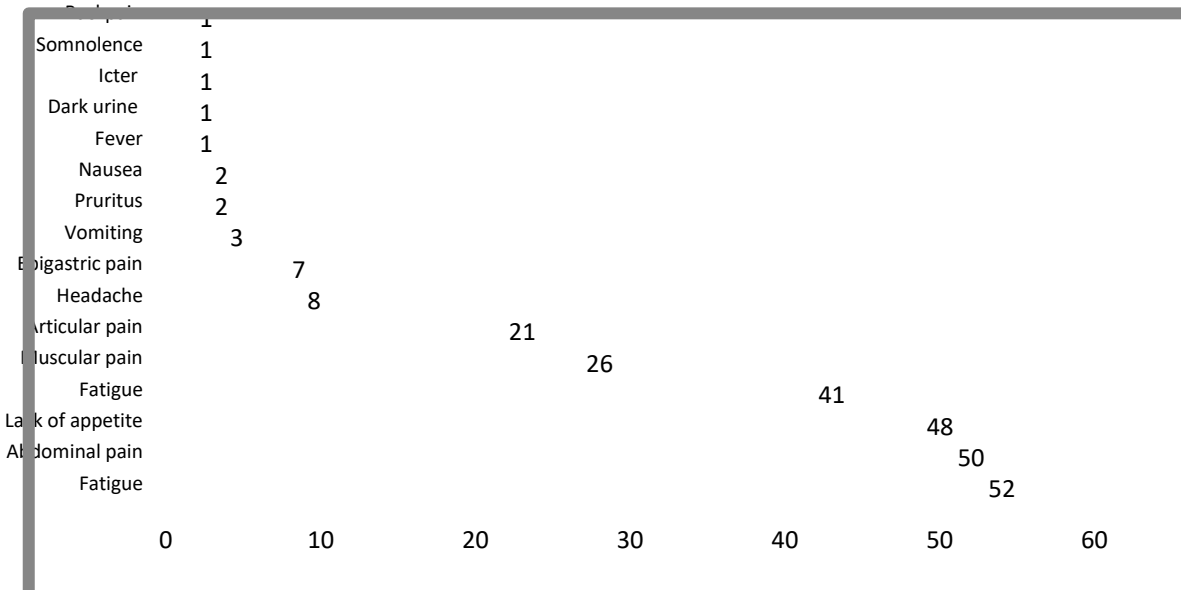

Figure 2: The clinical signs that presented in time of hospitalization

- We identified 9 underlying diseases related with CHKD , where chronic renal insufficiency predominated 100%. (Fig 3)

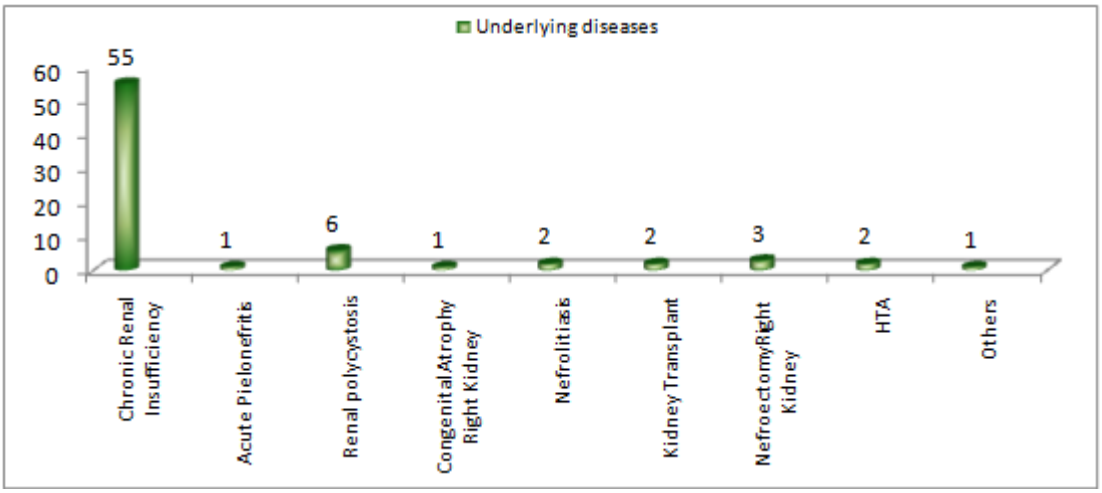

Figure 3: Underlying condition related with CHKD

- The distribution of cases by hemodialysis frequencies has almost the same rhythm from 2010 to 2013 (20.84%) and less frequent in 2014 (14.54%)

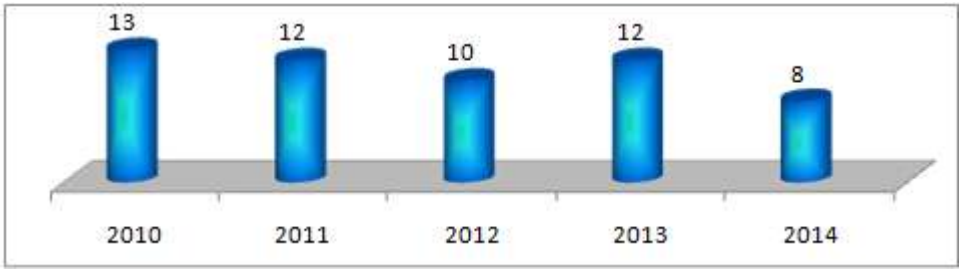

Figure 4: Frequency of hemodialisis on years

- 49.09% of them were Genotype 1; 43.63% G 2 , 7.27% G4
- Regimen of treatmenet was Peg INF α-2a 134 mcg/ sc three times/ week; for G (1+4) - 48 weeks and G2 - 24 weeks
- 73.63% patients completed the full cycle with peginterferon, 23.64% discontinued therapy due to side effects
- The most common side effects from the therapy being recorded were: Flu-like symptoms 90.9%, Systemic symptoms 54.5%, Psychiatric disorders 25.4%,Autoimmune disorders 3.63%,Allergic reactions 25.45%, Hematological changes 96.36%, Hemorrhagic phenomena 21.8%

4. Conclusions

In summary in our study , hemodialysis patients with HCV have a higher prevalence of infection than those in the general population.

Prevalence of HCV in HD patients in our study resulted 6.11%

More problems were relating to therapeutic performance and multiple side effects to it

5. Discussion

Liver disease in an immunosuppressed patient, as CHKD, is typically severe with an unusually rapid progression to cirrhosis. However, the combination of HCV infection and immunosuppression may lead to different conditions ranging from enhancement to inhibition of HCV replication/infection and from worsening to improvement of liver damage. These possibilities should be accurately evaluated in each patient, taking into consideration variables such as the type of immunosuppression and the liver pathology to be treated[13] [14] .

Reasons for testing CHKD patients for HCV include: diagnostic evaluation of the cause of CHKD, particularly HCV- associated glomerulonephritis ; control of infection in hemodialysis units ; optimum care before and after the renal transplant ; treatment of HCV infection as soon as possible in a CHKD patient who may benefit from antiviral treatment[12] [13] 20] .

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