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Research Article

**PRESENT PRACTICE AND FUTURISTIC PERSPECTIVE ON  
THE MANAGEMENT OF HEPATITIS C VIRUS THROUGH  
SOFOSBUVIR**<sup>1</sup>Dr. Junaid Hassan Khawaja, <sup>2</sup>Dr. Sohail Raheem, <sup>1</sup>Dr. Farooq Ashraf<sup>1</sup>Gujranwala Medical College Gujranwala, <sup>2</sup>Lahore General Hospital

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**Abstract:**

*Our objective was to inspect the HCV Treatment with Sofosbuvir in Pakistan at Current Scenario and Future Perspective in Pakistan. It is endemic Hepatitis C Virus (HCV) with 5-8% predominance all in all populace. It is a worldwide issue with around 1.75 million new diseases yearly. There are a few HCV genotypes and antiviral treatments are genotype subordinate. In Pakistan genotype 3a is predominant trailed by demonstratively untypable HCV variations. With rough 70% chronicity rate around 399,000 individuals pass on every year from hepatitis C. As of late sofosbuvir is presented in Pakistan on vigorously markdown. In spite of the fact that sofosbuvir indicated generally excellent continued virological reaction (SVR) comprehensively however because of various ethnicity and hereditary cosmetics, it is critical to break down the medication viability in Pakistan. Beforehand interferon based antiviral regimens were the main decision for HCV treatment in Pakistan. The present information is exceptionally constrained and it is exceedingly needed investigations announcing the sofosbuvir treatment reaction from various ethnic gatherings from the entire nation. Accessible restricted information demonstrated that general SVR/fast virological reaction (RVR) is awesome.*

**Keywords:** Direct acting antiviral; Pakistan; HCV; Sofosbuvir; Treatment.**Corresponding author:****Junaid Hassan Khawaja,**

Gujranwala Medical College Gujranwala.

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**INTRODUCTION:**

Pakistan is a nation with an extremely high weight of HCV. Hepatitis C Virus (HCV) is the worldwide issue with in excess of 170 million infections [1]. Hepatitis C Virus (HCV) is the worldwide issue with in excess of 170 million infections. It has been evaluated from demonstrating that in 2018, there were 1.75 million new HCV diseases create around the world (internationally, 23.7 new HCV contaminations per 100,000 people). In Pakistan, It is assessed that around 5-8% all inclusive community is tainted with this quiet killer [3-4]. Roughly 60-80% of contaminated individual are changed over into incessant diseases while around 15-30% are at last create hepatocellular carcinoma (HCC). Around 399,000 individuals pass on every year from hepatitis C, for the most part from cirrhosis and HCC. There are six noteworthy HCV genotypes and a few sub-types because of mistake inclined nature of viral polymerase. Topographical circulation of HCV genotypes is distinctive comprehensively. Commonness of HCV in high hazard gatherings like infusion sedate clients (IDUs), multi-transfused people, individual experienced therapeutic/dental techniques, individuals treated by badly prepared medicinal services framework is exceptionally high (30-70%) . It is as of late featured that around [10-11] million individual of Pakistan are contaminated with HCV [3-5]. Low training of social insurance gives and overall public about the commonness defeats of HCV makes condition additionally disturbing and prompts expanding weight of HCV each year [3-6]. Infection pathogenesis of various viral genotypes is essentially changes. Viral genotypes and sub-types react in an alternate manner; henceforth it is significant for medicinal services suppliers to realize the causative viral genotype before beginning the antiviral treatment. Various genotypes indicated variable physiological impacts in tainted people and can prompts differential additional hepatic signs as well [7]. The course of antiviral treatment is additionally popular genotype dependent [8]. There are a few examinations exploring the predominance of HCV genotypes from various zones of Pakistan. As of late, we have looked into the accessible information from Pakistan in regards to the predominance of HCV genotypes and the information demonstrated that 3a genotype is the most pervasive (63%) trailed by genotypes 1 (09%) and 2 (08%) alongside a disturbing number of indicatively unfilled viral genotypes (14%) in the nearby community[8-9]. There are a few examinations exploring the pervasiveness of HCV genotypes from various territories of Pakistan. As of late, we have looked into the accessible information from Pakistan in regards to the pervasiveness of HCV genotypes and the information demonstrated that 3a

genotype is the most predominant (63%) trailed by genotypes 1 (09%) and 2 (08%) alongside a disturbing number of analytically unfilled viral genotypes (14%) in the neighborhood community [8-9]. There are a few examinations exploring the commonness of HCV genotypes from various territories of Pakistan. As of late, we have assessed the accessible information from Pakistan in regards to the pervasiveness of HCV genotypes and the information demonstrated that 3a genotype is the most predominant (63%) trailed by genotypes 1 (09%) and 2 (08%) alongside a disturbing number of symptomatically unfilled viral genotypes (14%) in the neighborhood community [8-9]. There are a few investigations breaking down the proficiency of interferon based treatment against 3a GT in Pakistan. The outcomes demonstrated that 60-90% individual indicated SVR when treated with interferon based antiviral treatment. Beforehand HCV was treated with interferon based antiviral regimens. The treatment reaction of interferon based antiviral treatment is decently genotype dependent [10, 11].

As of late with the progression of research in the field of Direct Acting Antiviral (DAAs), FDA endorsed a few DAAs for HCV treatment. Because of staggering expense, at first it was exceptionally hard to get treatment with DAAs in a large portion of the creating nations including Pakistan. Albeit continued virological reaction (SVR) was very great against most pervasive HCV genotype (3a) in Pakistan, it is hard to hold up under for the majority of the patients because of serious symptoms. Anyway as of late sofosbuvir (NS5B inhibitor) was present in Pakistan on vigorously limited cost. Sofosbuvir indicated great SVR in European and Caucasian populaces. In Pakistan there are a few ethnic gatherings dwelling in various topographical regions. Various regions comprise of completely extraordinary ethnic races and there are a few sub ethnic networks in various areas of Pakistan. The aftereffects of real populace based investigations are critical to think about the effectiveness of treatment and to plan the treatment portion/span for nearby network. Remembering this significant part of treatment achievement and future forecast, the present examination was intended to break down the accessible information in regards to the HCV treatment with sofosbuvir from Pakistan. The viral genotype predominance example is likewise extraordinary in Pakistan with 3a is most common one. So it is essential to have a genuine thought regarding the SVR in people tainted with 3a genotype in Pakistan. The writing search came about into recovery of just seven investigations in regards to the HCV treatment with sofosbuvir based antiviral routine. Writing review demonstrated that there are just 07

studies announcing the antiviral reaction of sofosbuvir in Pakistan [12-18]. The accessible restricted information demonstrated that in general continued virological reaction (SVR)/quick virological reaction (RVR) is awesome. A first report was in 2016 from Rawalpindi city which included 502 patients treated with sofosbuvir and among those 91% indicated RVR [12]. Capileno et al. (2017) examine from Karachi included 153 patients and revealed that 84% patients demonstrated RVR [13]. The information of these treated patients from the whole way across the nation ought to be archived and be utilized for future rules definitions for treatment of various viral genotypes. The point by point investigation of accessible information recommended a generally excellent reaction for this DAA antiviral routine in various urban communities with in general 80-100% SVR/RVR [13-18]. There is additionally an investigation which included 37 renal transplant HCV patients from Karachi and sofosbuvir treatment indicated 89.2% RVR for these individuals [19]. The reaction may fluctuate as indicated by the host genotype and future treatment rules ought to be planned in like manner. Along these lines most extreme advantage can be accomplish with this headway of antiviral treatment.

#### REFERENCE:

1. Umer M and Iqbal M. Hepatitis C virus prevalence and genotype distribution in Pakistan: Comprehensive review of recent data. *World J Gastroenterol.* 2016; 22: 1684-1700. [DOI: 10.3748/wjg.v22.i4.1684]; [PMID: 26819533]
2. Afzal MS, Iqbal MA. Hepatitis C Virus in Pakistan: Community Education Is an Effective Weapon Against the Killer. *Viral Immunol.* 2017; 30: 548-551. [DOI: 10.1089/vim.2016.0171]; [PMID:28622101]
3. Messina JP, Humphreys I, Flaxman A, Brown A, Cooke GS, Pybus OG, Barnes E. Global distribution and prevalence of hepatitis C virus genotypes. *Hepatology* 2015; 61: 77-87. [DOI: 10.1002/hep.27259]; [PMID: 25069599]
4. Afzal MS. Hepatitis C Virus and Interferon-Free Antiviral Therapeutics Revolution: Implications for Pakistan. *Viral Immunol.* 2017; 30: 252-257. [DOI: 10.1089/vim.2016.0164]; [PMID: 28118096]
5. Afzal MS, Shah ZH, Ahmed H. Recent HCV genotype changing pattern in the Khyber Pakhtunkhwa province of Pakistan; is it pointing out a forthcoming problem? *Braz J Infect Dis.* 2016; 20: 312-3. [DOI: 10.1016/j.bjid.2015.12.011]; [PMID : 26963150]
6. Kanda T, Imazeki F, Yokosuka O. New antiviral therapies for chronic hepatitis C. *Hepatol Int.* 2010; 4: 548-561. [DOI: 10.1007/s12072-010-9193-3]; [PMID: 21063477]
7. Afzal MS. Predictive potential of IL-28B genetic testing for interferon based hepatitis C virus therapy in Pakistan: Current scenario and future perspective. *World J Hepatol.* 2016; 8: 1116-1118. [DOI: 10.4254/wjh.v8.i26.1116]; [PMID : 27660680]
8. Akhter TS, Umar M, Khaar HT, Aslam F, Nisar G, Naseer A, Ahmad S, Osama M. Sofosbuvir for the treatment of hepatitis c genotype 3 infected patients in Pakistan. *J Ayub Med Coll Abbottabad* 2016; 28: S884-S889. [PMID : 28782338]
9. Capileno YA, Van den Bergh R, Donchuk D, Hinderaker SG, Hamid S, Auat R, Khalid GG, Fatima R, Yaqoob A, Van Overloop C. Management of chronic Hepatitis C at a primary health clinic in the high-burden context of Karachi, Pakistan. *PLoS One* 2017; 12: e0180286. [DOI: 10.1371/journal.pone.0180286]; [PMID:28640872]
10. Siddique MS, Shoaib S, Saad A, Iqbal HJ, Durrani N. Rapid virological & End treatment response of patients treated with Sofosbuvir in Chronic Hepatitis C. *Pak J Med Sci.* 2017; 33: 813-817. [DOI: 10.12669/pjms.334.12785]; [PMID: 29067045]
11. Azam Z, Shoaib M, Javed M, Sarwarm MA, Shaikh H, Khokhar N. Initial results of efficacy and safety of Sofosbuvir among Pakistani Population: A real life trial - Hepatitis Eradication Accuracy Trial of Sofosbuvir (HEATS). *Pak J Med Sci.* 2017; 33: 48-52. [DOI:10.12669/pjms.331.12352. [PMID: 28367171]
12. Sarwar S, Khan AA. Sofosbuvir based therapy in Hepatitis C patients with and without cirrhosis: Is there difference? *Pak J Med Sci.* 2017; 33: 37-41. [DOI: 10.12669/pjms.331.12163]; [PMID: 28367169]
13. Munir B, Ahmed B, Kiran S, Jalal F, Zahoor MK, Shehzadi S, Oranab S, Kamran SK, Ghaffar A. Sorafenib tosylate, Ribavirin and Sofosbuvir combination therapy for HCV virus infected patients with decompensated liver cancer. *Pak J Pharm Sci.* 2017; 30: 2383-2387. [PMID : 29188773]
14. Iqbal S, Yousuf MH, Yousaf MI. Dramatic response of hepatitis C patients chronically infected with hepatitis C virus genotype 3 to sofosbuvirbased therapies in Punjab, Pakistan: A prospective study. *World J Gastroenterol.* 2017;

- 23: 7899-7905. [DOI: 10.3748/wjg.v23.i44.7899]; [PMID : 29209131]
15. Hanif FM, Laeeq SM, Mandhwani RK, Luck NH, Aziz T, Mehdi SH. Effectiveness of Sofosbuvir and Ribavirin for Eradicating Hepatitis C Virus in Renal Transplant Recipients in Pakistan:
16. Ravi S, Nasiri-Toosi M, Karimzadeh I, Khalili H, AhadiBarzoki M, Dashti-Khavidaki S. Pattern and associated factors of anti-hepatitis C virus treatment induced adverse reactions. *Expert Opin Drug Saf* 2014; 13: 277-286. [DOI: 10.1517/14740338.2014.866091]; [PMID: 24386997]
17. WHO. 2017. Available from <http://www.who.int/mediacentre/factsheets/fs164/en/> (accessed on 5th Feb 2018)
18. Afzal MS. Are efforts up to the mark? A cirrhotic state and knowledge about HCV prevalence in general population of Pakistan. *Asian Pac J Trop Med.* 2016; 9: 616-8. [DOI: 10.1016/j.apjtm.2016.04.013]; [PMID: 27262079]
19. Arshad A, Ashfaq UA. Epidemiology of Hepatitis C Infection in Pakistan: Current Estimate and Major Risk Factors. *Crit Rev Eukaryot Gene Expr.* 2017; 27: 63-77. [DOI: 10.1615/CritRevEukaryotGeneExpr.2017018953]; [PMID: 28436333].