LETTER to the EDITOR

HCV, Interferon Therapy Response, Direct Acting Antiviral Therapy Revolution and Pakistan: Future Perspectives

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Dear Editor

In this issue of APJCP, Akhtar and colleagues (16: 3; 2015) published an interesting report and highlights an important issue of interferon plus ribavirin therapy response against different HCV genotypes. The study included 3,800 HCV patients who were treated with interferon alfa-2a plus ribavirin for 6-months and were followed for therapy response. The results showed that 97% (3,677) patients showed sustained virological response (SVR) while 3% (123) patients were non-responders. In next round of therapy Peg-interferon and ribavirin was used to treat non-responders (123) and relapsed (5) patients for next 6 months, which resulted into elimination of HCV RNA from 86% of these patients. These results enlighten the future potential of interferon therapy usage in Pakistan in era of direct acting antiviral agents (DAA). DAA provide new opportunities for HCV treatment and resulted in increased SVR and avoids the side effects of interferon treatment. Several DAA including simeprevir, boceprevir, telaprevir, asunaprevir (NS3/4A inhibitor), daclatasvir (NS5A inhibitor), Sofosbuvir (NS5B polymeraps inhibitor) showed promising results and resulted in shorten therapy duration (Gane, 2014). These DAA can be used in combination regimens with or without ribavirin. Although these combinations of DAA resulted in increased SVR but the cost is too high. For example, the cost of 12 and 24 week course of US-FDA approved sofosbuvir, an NS5B inhibitor is about $84,000 and $168,000 respectively (Amer et al., 2014) while 12 week therapy of simeprevir and sofosbuvir will cost $150,000 (Gane, 2014).

Pakistan ranked second in the world in term of HCV burden with more than 10 million infections (Afzal et al., 2014 a,b). Pakistan is a resource constrains country with very low per capita income. The total expenditure on health is just 2.7% of GDP (WHO, 2012) and the endemics of dengue and polio virus also results in shifting of priorities. The results of recent studies showed that irrespective of the HCV genotype SVR rate of interferon alfa-2a plus ribavirin is quite good (80-97%) in Pakistan (Akhtar et al., 2015; Ahmad et al., 2012; Ahmad et al., 2013). In Pakistan major prevalent HCV genotype (3a), which is generally considered a good responder of interferon therapy, host and viral factors cumulatively favors therapy response (Afzal et al., 2011, 2013, 2014; Anjum et al., 2013 a, b). The higher SVR of interferon therapy and high cost of DAA raise the question of DAA future in developing countries like Pakistan. This high cost of DAA will be the major obstacle in HCV eradication from the globe because the developing world accounts for 80% of the global HCV burden. Interferon based therapy will remain the first choice of major proportion of HCV patients because of high cost of DAA and no insurance/ reimbursement programme in developing countries.

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