Cost-Effective Treatment of Genotype-3 Chronic Hepatitis C

Sir,

This is with reference to the article "Conventional Interferon Regimen should not be the standard of care for management of Pakistan genotype-3 in chronic hepatitis C" by Muhammad Salim Qureshi, *et al*.[1]

The authors have stated that pegylated (peg)-interferon therapy is cost-effective as compared to conventional interferon therapy. Clinical studies including this one show that the conventional interferon therapy is quite effective and efficacious for the treatment of genotype-3 chronic hepatitis C patients and the side effects are nearly the same with both treatments. The number of patients treated in the present study is too small to make valid statistical conclusion, required in evidence based clinical trials. The cost of 6 months duration treatment with conventional interferon is Rs. 15,000 while that of peg interferon is over Rs. 100,000 approximately. In addition, there are expenses of laboratories tests and management of complication etc. About 40% population of Pakistan lives below poverty line meaning lower strata. Even the Armed Forces cannot afford peg-interferon therapy for their patients suffering from Geno-3 Chronic Hepaptitis C as the cost adds up to hundreds of millions of Rupees. The conventional interferon therapy provides satisfactory results and is far more cost effective as the outcomes of treatment and prices of interferons shows in a significant number of patients. Likewise, civil healthcare facilities barring few exceptions can afford only the conventional interferon therapy which provides satisfactory outcomes. Affordability is important consideration even for the well-developed wealthy nations, it is much more important for the poor countries surviving on aids and loans.

In view of the satisfactory results achieved, the conventional interferon therapy and the cost of its treatment in Pakistan is nearly 1/7 of peg-interferon therapy. It is obvious that the conventional interferon therapy is affordable and cost effective therapy thereby rational to use in Pakistan.

The new drug "sovaldi" generally "sofosbuvir" costs $ 84000 for a course of 3 months treatment in the USA with much higher rate of cure and lower side-effects. It has been considered by a panel of experts in San Francisco to be providing low value for treating most patients in large part because of its high price.

REFERENCES

1. Iqbal M, Qureshi MS, Noumani AZ, Rasheed K. Conventional interferon regimen should not be the standard of care of management of Pakistan Genotype-3 in Chronic Hepatitis C. *J Coll Physicians Surg Pak* 2014; **24**:70-2.

Mahmud Ahmad Akhtar

Correspondence: Lt. Gen. Prof. Mahmud Ahmad Akhtar (Prof. Emeritus), 43 Race Course Road, Rawalpindi.
E-mail: mahmudahmadakhtar@hotmail.com

Received: May 06, 2014; Accepted: August 04, 2014.

Author's Reply:

Reference to the above, we would like to differ very emphatically with the objections.

Conventional interferon therapy was no doubt the standard of care for chronic HCV related liver disease but that was in 1990's and early 2000. The authorities have noted previously as well that the previous optimistic SVR rates of 80 - 85% in western studies was due to wrongly combining the response rates of Genotypes-2 and 3. In case of local studies, it was always due to calculating SVR rates on patients who achieved EOT CR and not on the cohort which started treatment.

Regarding expenses of pegylated interferon viz-a-viz standard interferon and the fact that Pakistan is a poor country on loans, the standard interferon costs around Rs. 30,000 which is 1/3rd and not 1/7th of the current pegylated interferon cost. In addition, regarding the comment on cost effectiveness it is clear that the relapse rates with standard interferon is higher. Even with very optimistic projections, the response rate is not greater than 70%.

Gastroenterology units now have a significant portion of non-responders and relapsers to standard interferon, many of whom decompensate and develop portal hypertension and hepatocellular carcinoma. When cost effectiveness is calculated this enormous burden offsets any saving until proven different.

Recent data support the observation that Genotype-3 is a difficult-to-treat genotype. Many local studies have reported 67% end of treatment response and SVR rates of around 50.5% with standard interferon,[1] supporting the view that standard interferon is showing a declining response rate. Recently Zuberi *et al*. has shown very low SVR rates of upto 30% and EOT 70%.[2]

Case series have shown superiority of pegylated interferon on treating non-responders to standard interferon based combination therapy in our population.[3]

SVR not only improves morbidity and mortality but also causes reduction of liver fibrosis and hence reduced cases of liver cancer.[4] The compromised outcomes in patients receiving standard interferon gives rise to an ever growing pool of non-responders and relapsers.

Cost effectiveness of a treatment is determined by taking into account multiple factors like life time health care cost, quality adjusted life expectancy and likelihood of disease progression as recommended by Markov Model.[5,6] Sullivan concluded that peg IFN plus ribavirin is cost effective as compared with standard IFN when above mentioned factors are taken into account. This observation has been supported by others like Siebert proving that peg IFN along with ribavirin improves histology, decreases progress of liver disease, reduces risk of liver cancer and improves survival rate.[7-9] The high viral eradication rate as seen with peg interferon and ribavirin will translate into benefits beyond most medical intervention by extending average life span 4 - 5 years along with reduction in other liver-related complications.[10]

REFERENCES

1. Idrees M, Riazuddin S. A study of best positive predictors for sustained virologic response to interferon alpha plus ribavirin therapy in naive chronic hepatitis C patients. *BMC Gastroenterol* 2009; **9**:5.
2. Zuberi B, Zuberi F, Memon S. Sustained virological response based on rapid virological response in Genotype-3 Chronic Hepatitis C treated with standard interferon in the Pakistani population. *World J Gastroenterol* 2008; **14**:2218-21.
3. Shahid S, Anwaar AK, Shandana T. Pegylated vs. Standard interferon in combination with ribavirin for genotype-2 and 3 in chronic hepatitis C: 10 years experience in local population. *Annals* 2011; **17**:108-12.
4. Veldt BJ, Heathcote EJ, Wedemeyer H, Reichen J. Sustained virologic response and clinical outcomes in patients with chronic hepatitis C and advanced fibrosis. *Ann Intern Med* 2007; **147**:677-84.
5. Benett W, Inoue Y, Beck J. Estimates of the cost effectiveness of a single course of interferon alpha-2b in patients with histologically mild chronic hepatitis C. *Ann Intern Med* 1997; **127**:855-65.
6. Sullivan S, Craxi A, Alberti A, Giuliani G. Cost effectiveness of peg interferon alpha-2a plus ribavirin versus interferon alpha-2b plus ribavirin as initial therapy for treatment naïve chronic hepatitis C. *Pharmacoeconomics* 2004; **22**:257-65.
7. Siebert U, Sroczynski, Rossol. Cost effectiveness of peg interferon α-2b plus ribavirin versus interferon α-2b plus ribavirin for initial treatment of chronic hepatitis C. *Gut* 2003; **52**:425-32.
8. Bonis P, Ioannidis J, Cappelleri JC, Kaplan MM, Lau J. Correlation of biochemical response to interferon-alfa with histological improvement in hepatitis C: a meta analysis of diagnostic test characteristics. *Hepatology* 1997; **26**:1035-44.
9. Reichard O, Glaumann H, Fryden A. Two-year biochemical, virological, and histological follow-up in patients with chronic hepatitis C responding in a sustained fashion to interferon alfa-2b treatment. *Hepatology* 1995; **21**:918-22.
10. Wright J, Weinstein M. Gains in life expectancy from medical interventions-standardizing data on outcomes. *N Engl J Med* 1998; **339**:380-6.

Muhammad Saleem Qureshi

Correspondence: Dr. Muhammad Saleem Qureshi, Head of Department of Medicine, KRL Hospital, Islamabad.
E-mail: profmsq@gmail.com