

**Patient Attitudes towards Ribavirin Changing:
A report from a hepatitis C patient group as requested by CADTH
submitted by HepCBC Hepatitis C Education and Prevention Society
February 15, 2016**

SUMMARY: We looked at how ribavirin is used in current hepatitis C treatments, and some current presentations about ribavirin aimed at the medical profession, then decided to do our own very informal poll of patients recruited through an article in our online monthly newsletter. We got some very interesting results which we include below. Our conclusions:

(1) Almost half of patients (47.4%) said they take whatever their doctor recommends. Only 10.5% said they would never take ribavirin. The remainder compared the benefits versus the drawbacks and felt the use of ribavirin is justified in contexts where it gives them an increased chance of a sustained viral response (SVR). The average minimum increased chance of gaining SVR which they would accept was 18% (range 1 – 30%). Clearly, the higher the benefit (difference in % of SVR attained with ribavirin vs. without it), the more patients are willing to take ribavirin. However, there are a few patients who will simply refuse to take anything with ribavirin in it.

(2) The patients who had taken both interferon-containing medications (unsuccessfully) and later, a new DAA +ribavirin for 12 weeks all said the side-effects were either non-existent or far less serious in the later treatment, and all happily achieved SVR (except one who is undetectable but still awaiting SVR verification).

(3) We also saw a need for physicians and/or nurses to counsel patients being prescribed one of the new DAA treatments including ribavirin who may be reluctant to take it:

- Compared to other ribavirin treatments patients may have heard about, current ribavirin treatments do not generally contain interferon, boceprevir, or telaprevir. These three ingredients may have been responsible for side-effects patients have heard about. Because of this, the side-effects of another drug may have been incorrectly ascribed to ribavirin.
- The side-effects of ribavirin are cumulative, developing and worsening over time. Current ribavirin-containing treatments are typically 8-16 weeks, so in many cases side-effects may not even have time to show up before the treatment is over.

FACTS we worked with:

- GT1a cannot take Holkira Pak without ribavirin.
- GT1b cirrhotics cannot take Holkira Pak without ribavirin.
- GT2 have little option but to include ribavirin, especially if they fail sofosbuvir+daclatasvir.

- GT3 often need ribavirin.
- SVR rates have been shown to be improved in other GT cirrhotics if ribavirin is included.
- Ribavirin generally has “a bad name” among patients.

SOURCES: We saw confirmation in Professor Graham Foster’s video (<https://www.youtube.com/watch?v=vCcpES8O6P0> from the Viral Hepatitis Congress in Germany on 10-12 Sept., 2015) that ribavirin still is included for some genotypes, stages of liver disease, and other conditions, and why.

We also saw an interesting discussion of HCV resistance and ribavirin at <http://www.clinicaloptions.com/Hepatitis/Treatment%20Updates/HCV%20Resistance%20Alert/Clinical%20Thoughts/CT2.aspx>

OUR ONLINE (Doodle) POLL (ran online Feb. 3-15, 2016)

Recruiting and characteristics of participants = readers of February issue of bulletin Hep C Bull (http://hepcbc.ca/wp-content/uploads/minutes-agendas-newsletters/hepc-bull_2016-02-01.pdf)

Number of participants = 19

TEXT: Ribavirin's side-effects can be awful. However it is cheap, has no long-term effects, and when combined with new HCV treatments, can boost the chance of a cure for some genotypes, or for those with cirrhosis. It also can prevent drug-resistance when re-treating. OUR QUESTION: How many percentage (%) points IMPROVEMENT IN YOUR CHANCE OF A CURE would be necessary for YOU to take (or re-take) a new HCV treatment with added ribavirin for 12-16 weeks? Select the answer closest to your own feelings about this

ANSWERS to each of the Choices:

At least 1% improvement necessary = 1/19 = 5.3%

At least 5% improvement necessary = 1/19 = 5.3%

At least 10% improvement necessary = 1/19 = 5.3%

At least 20% improvement necessary = 1/19 = 5.3%

At least 30% improvement necessary = 3/19 = 15.8%

I will never take ribavirin = 2/19 = 10.5%

I take anything my doctor recommends = 9/19 = 47.4%

Did not select any answer; left comment instead = 1/19 = 5.3%

PATIENT COMMENTS:

Comment #1:

I was treated and cured with a triple combination which included Ribavirin after relapsing after my first treatment with Interferon and Ribavirin only. The side effects were awful including rosacea, however all the skin side effects were gone soon after my treatment was finished. It was gruelling going through the treatment, however it was very much worth the result - I'm cured! [NOTE: This patient's side-effects could have been due to interferon and the 1st generation DAA, as well as ribavirin; hard to 'tease out' in this case]

Comment #2:

Took Ribavirin 3 different times. First 2 times I had to give up or would have killed me. The last time I was on a drug study for sofosbuvir and ribavirin. For 12 weeks, it made me sick but cleared my hep-c on the third week.

Comment #3:

My choice was made to go ahead with peg interferon /ribaviron only because I trusted my doctor's judgement in this case. Otherwise I may not have.

Comment #4 (from patient who got HCV from blood transfusion 1955, genotype 2):

The poll wasn't really relevant to my situation since I hadn't even considered side effects of Ribavirin. I just knew I couldn't tolerate Interferon, so waited 20 years until something came along that didn't include it and offered potentially good results. SOF with RBV was nothing like Interferon!!!! [This patient sent the chart below comparing side-effects experienced during the 2 treatments, stand-alone interferon for 5 months versus sofosbuvir+ribavirin for 12 weeks:]

1995 IFN (Intron A), 3 injections /week, dosage reduced twice and discontinued by doctor at 5 months - unsuccessful

-extreme fatigue

-insomnia

-nausea, vomiting

-early hallucinations

-joint and muscle pain

-headaches

- hair loss
- severe itching
- depression
- weight loss/ loss of appetite
- chills /shivering, mild fever
- persistent cough,
- sore throat
- back ache
- pain around liver
- nose bleeds, bleeding gums, mouth sores
- diarrhea

2015 SOF with RBV-12 weeks: SVR not confirmed yet but HCV undetectable at end of treatment

- fatigue
- insomnia
- early mild nausea, dizziness
- lower abdominal pain
- irritability/ impatience
- constipation

Comment #5 (Patient with genotype 1b):

- (1) Treatment with interferon plus ribavirin for 48 weeks. Completed treatment though side-effects terribly debilitating. Partial response only.
- (2) Another treatment with interferon (unknown whether stand-alone or not) for 30 weeks. Had to be pulled off due to side-effects.
- (3) Now cirrhotic, in early 2015 he took 12 weeks of Holkira Pak™ with ribavirin. He has been virus-free for 9 months (Feb., 2016). He experienced NO side-effects with this treatment.
