Genotype 5

Facts about hepatitis C genotype 5, including where it originated and how to treat it. This article originally appeared in the HCV Advocate

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Of all the genotypes identified, Genotype 5 is the least studied, and the least prevalent. However, it is possibly the most interesting in terms of where it is believed to have originated and where there are pockets of it found around the world.

Epidemiology

In terms of the worldwide prevalence of genotype 5 it is estimated at 1.5 million. The highest incidence of genotype 5 is found in the northern part of the nation of South Africa. Globally, there are an estimated 436,000 people in Eastern sub-Sahara, 47,000 people in North Africa, the Middle East, 80,000 people in South Asia, 26,000 people in Western Europe, Southern Latin America and 887,000 people Southern sub-Africa.

The percentage of genotype 5 is found in the following countries: South Africa-northern (39%); France-central (14%); Syria (10%); Saudi Arabia (1%); Canada-Montreal, Quebec (5%); Belgium (4%); Spain-southeast (10%).

Origins and Spread

The exact origin of genotype 5 is unknown, but there have been studies that have been able to 'predict' where it originated and how it spread with a reasonable certainty. However, like most facts in science, it needs more studies to confirm if it is a fact and until it is confirmed or disproved, it remains a theory.

What is on scientific ground is that the hepatitis C virus originated in Africa and most likely in Western or Central Africa. Genotype 5 most likely originated in Central Africa possibly what is now the Democratic Republic of Congo more than 120 years ago based on the genetic testing of the viral makeup. However, why is the highest prevalence of genotype 5 in the northern part of South Africa and only in small pockets in other regions of the world? That question has been not fully answered, but there are some interesting theories. There were trade routes from Central Africa to South Africa that could have spread genotype 5 from central Africa to South Africa. The pockets of genotype 5 in Belgium, France, and the Netherlands can be explained by the European trade and colonization of Africa.

Genotype 5 only has one subtype – 5a. This means that the viral diversity remained intact because it was not widely transmitted like the other genotypes. There have been studies in the other clusters of genotype subtype 5a but most of them have been isolated in ethnic communities in Belgium, the Netherlands, Luxembourg and rural France. Many of those that have been studied have found that the infections had come from a single source of infection.

Treatment

There have been only a handful of studies about treatment of genotype 5. Pegylated interferon plus ribavirin for a treatment duration of 24 to 48 weeks achieved cure rates from 64% to 71%.

In a study recently released at the EASL 2015 conference showed great promise with interferon-free and ribavirin-free therapy. The study included 41 genotype 5 patients—21 treatment naïve/20 treatment experience patients treated with Harvoni (ledipasvir/sofosbuvir) for 12 weeks. The cure rates were 95% (20 of 21 pts) of treatment naïve patients and 95% (19 of 20 pts) in the treatment experienced patients. The treatment was safe and well tolerated.

These are very high cure rates. Very good news for those with genotype 5.

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