Editorial

Hepatitis C: the challenges to link patients to the cure

Liver diseases are a major burden to patients and health-care systems worldwide, and liver disease-related deaths are still rising. The Liver Meeting organised by the American Association for the Study of Liver Diseases held in November 2019, in Boston (MA, USA), attracted leading scientists from all over the world to share the latest research and clinical data. This year’s meeting covered various topics on non-alcoholic steatohepatitis, the gut microbiota in mediating non-alcoholic fatty liver disease, acute liver failure, hepatitis, and liver transplantation and paediatric liver diseases. One new addition to this year’s conference schedule was the women’s health programme, which focussed on the effect of chronic liver disease and liver transplantation on maternal fertility and pregnancy. The session, led by Monika Sarkar, from the University of California (San Diego, CA, USA), and Kidist Yirman, from the California Pacific Medical Center (San Francisco, CA, USA), shed light on the challenges of reproductive-aged women when diagnosed with liver diseases. The talk by Michael Heneghan, from King’s College Hospital (London, UK), provided management guidelines for successful and safe pregnancies in patients with portal hypertension. A strong recommendation for family planning as part of the routine practice by hepatologists was made by the speakers and the committee.

Hepatitis C and related clinical issues were one of the main topics of the conference even though a cure for the disease has been on the market since 2013. Hepatitis C is caused by the hepatitis C virus (HCV), which primarily affects the liver. Acute infection usually causes symptoms, such as fever, fatigue, abdominal pain, or nausea and vomiting, a few weeks after infection. In 80% of cases, acute infection develops into chronic infection, during which time affected people usually do not experience any significant symptom, although viral replication is still detectable. The biggest medical concern for patient with chronic infection is that this disease can lead to liver cirrhosis or liver cancer. HCV can be transmitted from person to person via blood-to-blood contact. This includes blood transfusions, intravenous drug use, sexual intercourse, and mother-to-child transmission. HCV is still the most common blood-borne infectious disease in the USA, with about 1% of the population living with HCV. Direct-acting antiviral (DAA) are today’s standard of care for hepatitis C. As the name indicates, DAAAs act directly at the HCV. Before such DAA treatment for hepatitis C, standard of care involved a 6–12-month interferon regimen, which successfully cured less than 70% of patients but was associated with significant side-effects. The DAA treatment was approved by the US Food and Drug Administration in December 2013, and within the first 30 weeks, 60,000 people were treated in the USA alone. With a 12-week treatment regimen, the proportion of patients who are cured after treatment is up to 97%, with only mild side-effects, such as headache and difficulty sleeping. WHO even put the drug on their List of Essential Medicine.

Considering all the medical progress and success, why is the disease still a hot topic at one of the biggest scientific meetings in the field? Several talks at the recent meeting provided various answers to this question. Chronic HCV remains unnoticed in about 80% of people who are infected, leaving a high risk of cross infection. Furthermore, if chronic HCV stays undiagnosed, the risk of progression to more severe disease with higher treatment cost and lower efficacy is even increased. As Maya Balakrishnan from the Ben Taub General Hospital (Houston, TX, USA) pointed out in her talk, hepatitis C testing is essential to achieve the 2030 WHO goal to eliminate HCV. Universal screening for HCV is recommend, but yet not standard procedure, according to Ray Kim from Stanford University (Stanford, CA, USA). Even though the prevalence of HCV is decreasing in the USA, new infections are on the rise. This increase is due to reasons that vary depending on the region and country. Drug use, needle sharing, and sexual risk factors play an important role, but all these reasons are heterogenous, with some areas also seeing a strong decline mostly due to awareness campaigns. In China, the burden of HCV is increasingly high, with almost 10% of people with HCV worldwide living in China. One of the major issues that seems to be common for most countries is that although the disease is curable, there are still barriers to get patients linked to treatment. For example, screening for HCV in risk groups is challenging because most people with chronic HCV are unaware of the disease. Furthermore, identifying the people who should get tested is a major effort that takes time and money. Several talks at the meeting highlighted that convenience, regional demographics, and travel to testing centres are strong barriers preventing attendance at screening centres. Moreover, the stigma associated with such a request seems to be one of the leading reasons people refrain from testing. HCV is still associated with unconventional or unlawful social behaviour that most patients do not want to admit to, even though the diagnosis could not only help them and also their potentially infected children. Overall, if positive rest result is received after successful screening, high medical costs and the fear of such costs is the most prevalent reason for not getting treatment. Treatment in the USA costs about US$75,000, whereas, in developing countries, the costs are far lower, at about $900. Most US health insurance companies do not cover the cost and if they do, there are still high copay costs. David Goldberg from the University of Pennsylvania (Philadelphia PA, USA) presented his study on screening efforts to identify infected children of HCV-infected baby boomers with sobering results. Overall, the proportions of baby boomers and their children who consented to testing were low, and even after testing only 1% of people who were infected were linked to treatment and successfully completed the therapy. This
percentage is alarming in various ways: although predicted efficient, universal testing will not be able to overcome such barriers. Furthermore, and probably even more troubling, despite the availability of an effective drug, patients cannot receive treatment because they cannot afford it.

In the November 2019 issue of *EClinicalMedicine*, we published a randomized controlled trial done by Thomas Fitzpatrick from University of Washington (Seattle, WA, USA) and colleagues on a crowdsourcing intervention approach using images and videos to promote HCV testing in men with sexual risk behaviour from various regions in China. Although there was no difference in test uptake in the intervention and control groups (no images and videos), nearly 20% of all enrolled men participated in the testing. This uptake shows that overall increased awareness can help increase testing in certain populations. *EClinicalMedicine* will support such efforts and will continue to publish Articles that address all aspects of this complex medical challenge.