HEPATITIS C: TACKLING THE SILENT KILLER

About 200,000 people are living with hepatitis C in the UK, but it is estimated that around half of these remain undiagnosed. Identifying those at risk, offering tests and connecting those infected with treatment are crucial to tackling the disease.

BY DAWN CONNELLY

Direct-acting antivirals begin to have an impact

Following the introduction of newer, all-oral, direct-acting antivirals (DAAs) in 2014, the number of patients starting treatment has increased by almost 90%, which may be responsible for the fall in end-stage liver disease (ESLD) and hepatocellular carcinoma (HCC)-related deaths seen over the past two years.

Direct-acting antivirals begin to have an impact

There was a 48% increase in uptake of newer DAAs in 2016 compared with 2015/16, and a nearly 90% increase compared with 2009–2014.

Preliminary data suggest the fall in deaths from hepatitis C virus-related ESLD and HCC for over a decade between 2014 and 2015 (5%–14 people), a fall that appears to have been sustained in 2016 (7%–9 people).

Deaths from hepatitis C virus-related ESLD and HCC almost doubled between 2000 and 2004, from 265 to 456.

The estimated number of people starting hepatitis C virus treatment (2007–2016)

The first rapid antibody test OneQuick (QiDx Diagnostics), which gives results in 20 minutes, receives a CE mark allowing sale in Europe.

The first combination of pegylated interferon injection and oral ribavirin is approved in Europe for treatment of all genotypes. Treatment lasts 24–48 weeks and around a 50% cure rate in genotype 1 and 70% in genotypes 2/3.

The World Hepatitis Alliance is founded and launches the first world hepatitis day in July the following year.

The first two direct-acting antivirals (DAAs), boceprevir (Viekira; MSD) and telaprevir (Incivek/Viekira Prix; Vertex), are approved in Europe in combination with pegylated interferon alpha and ribavirin for genotype 1-infected patients. They improve cure rates to about 70% but worsen side effects. Treatment lasts 24–48 weeks.

One combination of velpatasvir and sofosbuvir (Epclusa; Gilead), the first single pill treatment, is approved in Europe for treatment of patients infected with genotypes 1 and 4. Daclatasvir (Xiverex; AbbVie), in combination with Viekira, is also approved for genotype 1.

A combination of sofosbuvir, velpatasvir and voxilaprevir (Voxevir; GlaxoSmithKline) and glecaprevir and pibrentasvir (Maviret; AbbVie) are approved in Europe for treatment of all genotypes.

Johnson & Johnson’s Janssen and MSD announce they are halting development of new hepatitis C treatments because of the growing number of treatment options.

The estimated number of people living with hepatitis C in the UK (2010–2018)

A hepatitis C virus test is developed to detect antibodies in the blood but it is not 100% reliable because it can take up to three months to develop antibodies after infection.

From discovery to cure

Hepatitis C is a blood-borne virus that is most commonly transmitted during injecting drug use, but other groups are also at risk.

Identifying those at risk

Hepatitis C is known as the “silent killer” because most people with the disease do not know they are infected until symptoms develop 20–30 years later.

Day 0: Acute infection

Mild flu-like symptoms that often go unnoticed. A minority of people may experience jaundice, dark urine, anorexia, aversion to smoking and abdominal discomfort.

6 months–20 years: Chronic infection 75–85%.

An estimated 6–25% of infected individuals spontaneously clear the virus.

20–30 years: Cirrhosis 20–30%

Decompensated cirrhosis

Hepatocellular carcinoma

One-year mortality rate 20%

One-year mortality rate 52%

People who have ever injected drugs

People who received a blood transfusion before 1991 or blood products before 1988

People from a country with an intermediate or high prevalence of chronic hepatitis C

Vulnerable people including prisoners, looked-after children and young people, and homeless people

Close contacts of someone with hepatitis C, e.g. sharing razors or toothbrushes contaminated with blood

Babies born to mothers infected with hepatitis C

HIV-positive men who have sex with men

FIGURE 1: Natural history of hepatitis C

The natural history of hepatitis C is unpredictable but can include a spectrum of outcomes ranging from spontaneous cure to chronicity, liver damage and death. The estimated number of deaths due to hepatitis C in the UK between 1989 and 2016 is shown. Data for England (1996–2015) and Wales (1996–2016) are shown. Deaths in people aged over 65 years are age-standardised to the age distribution of the population in the United Kingdom in 2015/16. Sources: Department of Health, Medicines and Healthcare products Regulatory Agency; Public Health England; Department of Health, Northern Ireland; Department of Health and Social Services, Northern Ireland. £ 2016 data on deaths for England and Wales are provisional, and are missing for Northern Ireland. † 2015/2016 data on treatment initiations for England and Wales are provisional, and data for 2016/2017 are provisional for England, Scotland and Wales.