**INTRODUCTION**

In March 2016 the Australian federal government subsidised Direct Acting antivirals (DAAs) for Hepatitis C (HCV). Through universal health care these medications are available for all Australians living with HCV infection. (1)

In order to assess the uptake and impacts of DAAs, a national registry was established (Observational Prospective Epidemiological Registry in Australia of Hepatitis C, OPERA-C).

**AIM**

To examine the clinical epidemiology of hepatitis C in Australia, treatment uptake and outcomes in the post-DAAs era.

**METHODS**

OPERA-C is an investigator-initiated, prospective study across 29 tertiary hospitals in Australia. After informed consent patient details on HCV treatment history, disease severity and comorbidities are collected.

Six monthly data collection follows-up HCV treatment and cure (sustained viral response, SVR), and other complications such as liver cancer and decompensation.

Patient data are collected from the patients’ medical charts by trained nurses at sites and data-entered centrally.

Data are linked to cancer and death registries and the national Medicare system.

**RESULTS**

**Figure 1. Recruitment numbers by hospital and state**

Between Feb 2016 to Sep 2017, 2306 patients were recruited from 7 Australian states/territories, and 26 hospitals (Fig 1). We are currently seeking ethics/governance approval to recruit from 3 hospitals.

**Study participants**

Patients recruited to date had a mean age of 52 years (range 18-90), 66% were male, 87% Caucasian, and 76% Australia born.

**Genotype**

(G) data were available for 2250 patients: G1 n=1281 (1a 93%/1b n=275/1a and 1b n=10), G2 n=104, G3 n=819, G4 n=25, G6 Other n=21, Missing n=56).

**Coinfection**

19 patients had HIV coinfection and 32 had HBV coinfection (423 of 1308 patients tested had evidence of prior exposure to HBV). HCV was diagnosed a mean 23 years prior to study enrolment (SD= 11.8), median duration 22 years, range 0.5 to 75 years), with only 6% of patients having a new diagnosis of HCV.

**Cirrhosis**

1673 patients underwent transient elastography (TE) with mean of 11.1 kPa (1.5-75 kPa, SD 10.7), and 397 patients had TE ≤12.4 kPa. Of 2203 patients where a clinician was confident to make the determination, 692 (30%) were considered cirrhotic.

**Treatment**

1738 patients were treatment naïve, 424 had had one prior treatment, 95 had 2, and 22 had 3 or more prior treatments. Of the 541 prior treatments there had been 16 SVR, 223 relapers, 253 non-responders (49 unknown). Prior treatment included PEG/Interferon (483), and a protease inhibitor for 71 patients.

**Follow up data 6 months after recruitment**

Data is available for 1584 patients. SVR rates were excellent. Of patients with completed SVR data (n=798) SVR rates were 97.5%, with little difference between genotype or cirrhosis status (Graph 1).

**Hepatocellular carcinoma (HCC)**

Sixty-one patients had HCC diagnosis at baseline. At the 6 months follow up, 11 additional patients were diagnosed with HCC in the study period. The incidence rate was 14.5 HCC cases per 1000 person years or 2.36 per 100 cirrhotic person years. All HCC occurred in patients with cirrhosis.

Nine had received or were currently on treatment, with one patient achieving SVR. Three patients were G1, one G2, three G3 and two G4. All except one with incomplete data were considered cirrhotic.

**Deaths**

11 deaths (3 liver related, 1 not liver related, 1 accidental death, 6 missing)

**CONCLUSION**

In this national registry approximately one third of patients have cirrhosis and one quarter are treatment experienced.

Available data on SVR were excellent irrespective of genotype or cirrhosis status.

The observed incidence of HCC is comparable to that observed in other cohort studies from Italy (6.3 per 100 cirrhotic person years) (1) and the USA (1.82 per 100 cirrhotic person years) (2).

Data collection on treatment, SVR and HCC outcomes is continuing.

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