Optimising One Medication for Patients with Cirrhosis (OOMPa-C); an innovative model of pharmacist-led integrated care

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Introduction

Management of portal hypertension with carvedilol is suboptimal.

- Carvedilol prevents decompensation and improves survival in patients with compensated cirrhosis and clinically significant portal hypertension (CSPH).[1]
- Doses up to 12.5mg per day as tolerated are recommended.
- However, carvedilol dose titration is done inconsistently.
- Remote patient monitoring and pharmacist-led beta blocker titration has not yet been explored in patients with cirrhosis.

Aim

To investigate the effectiveness and safety of a pharmacist-led carvedilol dose titration clinic (OOMPa-C) using remote patient monitoring for patients with compensated cirrhosis.

Method

Population

- Adult ambulatory patients with compensated cirrhosis and CSPH
- Referred from outpatient clinics or endoscopy, triaged by medical staff
- Taking suboptimal carvedilol dose ≤ 6.25mg per day

Intervention

From April 2022, the OOMPa-C clinic was delivered as per Figure 1.

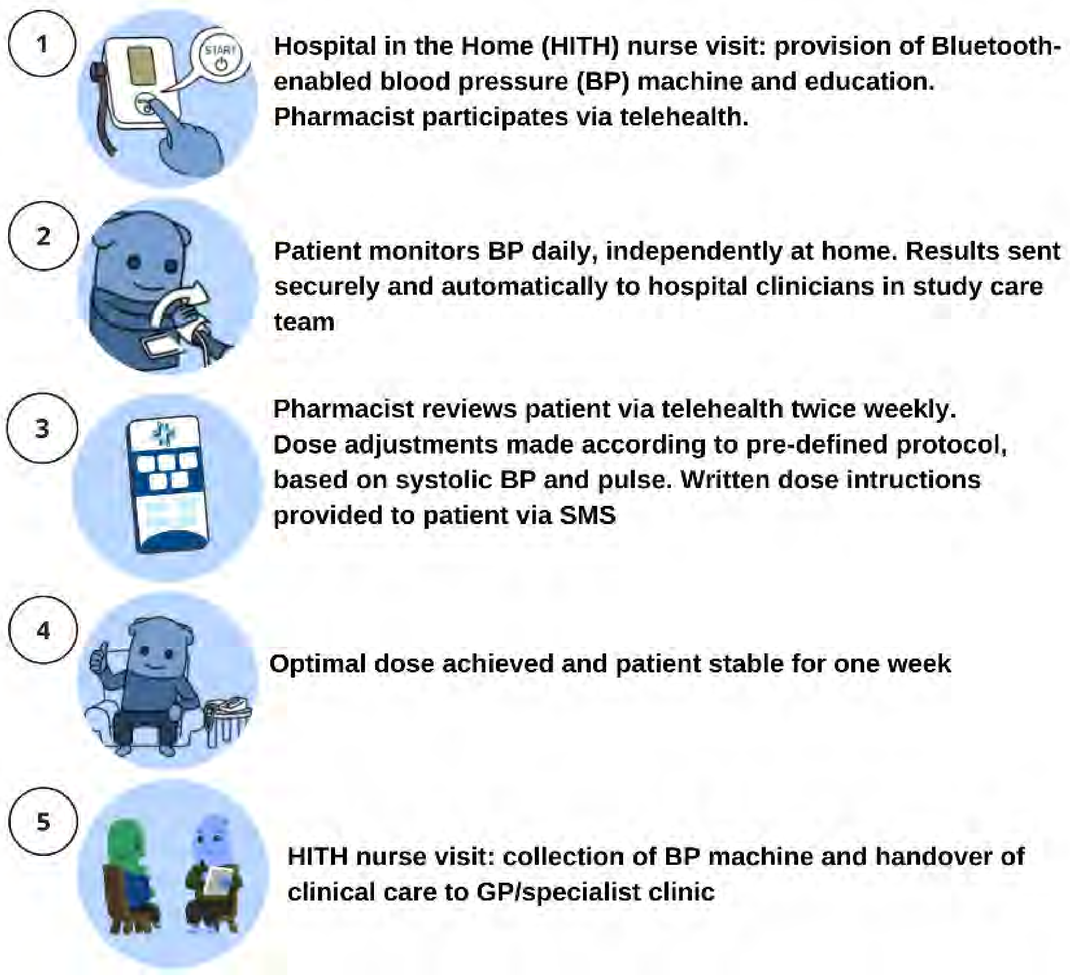

Figure 1: The OOMPa-C intervention

Analysis

Once 10 participants had completed the intervention (21st July 2022) an interim analysis was conducted via review of study records.

Results

We present the interim findings of the OOMPa-C feasibility study as per Figure 2.

Participants are described in Table 1.

- Five were taking 3.125mg of carvedilol daily at referral.
- Four were co-prescribed diuretics.
- One participant was taking ramipril concurrently.

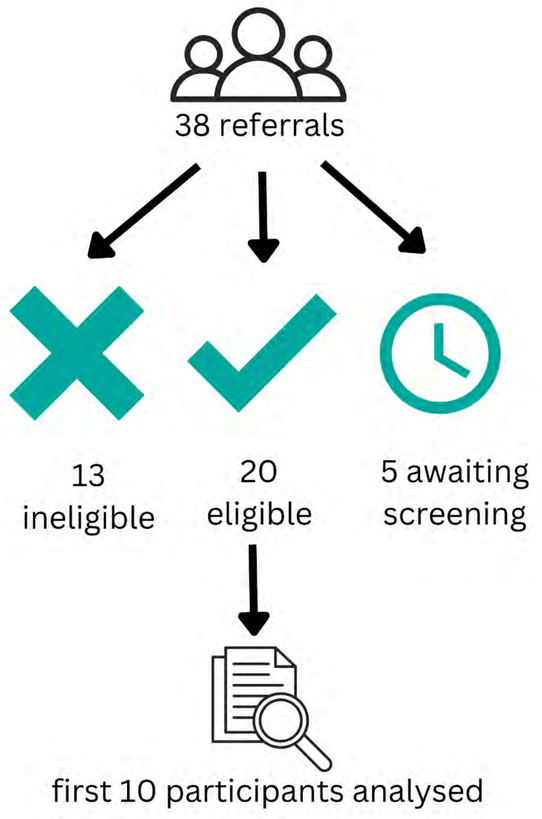

Figure 2: Referral and analysis flowchart

Median age, years (IQR*)	55 (44-59.3)
Male gender, n (%)	7 (70%)
Child Turcotte Pugh Class, n (%) Class A Class B Class C	 7 (70%) 3 (30%) 0 (0%)
Model for End-Stage Liver Disease score, median (IQR)	14 (8 -16.3)
Charlson co-morbidity index, median (IQR)	5 (4 -6.3)
Completed secondary schooling, n (%)	5 (50%)
Employed (full or part-time), n (%)	4 (40%)

Table 1: Demographic data for participants in OOMPa-C (n = 10), *IQR; interquartile range

Nine participants achieved dose optimisation, one did not tolerate carvedilol due to exacerbation of asthma. No other adverse events were reported. Additional findings are shown in Figure 3.

Figure 3: Outcomes of interim analysis (n = 10)

Discussion

Pharmacist led carvedilol dose optimisation can be achieved effectively and safely in a short timeframe among patients with cirrhosis.

Early results show high levels of patient engagement and adherence in a diverse, real-world population with this multi-disciplinary model of technology-enabled care.

Once completed, the OOMPa-C feasibility study will inform implementation of the next iteration of the OOMPa-C clinic.

References:

1. De Franchis R, Bosch J, Garcia-Tsao G et al; Baveno VII Faculty. Baveno VII - Renewing consensus in portal hypertension. J Hepatol. 2022 Apr;76(4):959-974. doi: 10.1016/j.jhep.2021.12.022.

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