PHARMACOTHERAPY IN THE TREATMENT OF *Clostridium difficile*: IMPACT ON CLINICAL PRACTICE

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INTRODUCTION

Clostridium difficile **is a pathogen accounting for 20-30% of cases of antibiotic-associated diarrhoea and is the most common cause of hospital-acquired diarrhoea. Transmission takes place by faecal-oral route. Colonization can be symptomatic or asymptomatic. Risk factors for *C. difficile* infection (CDI) include: recent or concomitant antibiotic exposure, older age, length of hospital stay, gastric acid suppression and immunosuppression.**

AIMS

- **To propose a framework for *C. difficile* culturing and antibiotic sensitivity testing with standardization of this testing procedure.**
- **To identify risk factors for CDI and carriage of this infection.**

METHOD

Phase 1

Sixteen publications were reviewed and cost estimates for the materials needed to run the tests were collected.

Phase 2

Medical records from patients completing a signed written informed consent and having the following inclusion criteria were reviewed (Figure 1): over 18 years of age, inpatients at the acute (MDH) and oncology hospital (SAMOC) and faecal specimen positive for Glutamate Dehydrogenase (GDH) antigen.

Data collected was statistically analysed to assess the implication of different risk factors to acquire CDI rather than carriage of *C. difficile*.

Phase 3

Risk factors for CDI were identified.

Age and gender as risk factors were statistically analysed.

RESULTS

Phase 1

A standard procedure for *C. difficile* culturing and antibiotic sensitivity testing within the hospital was proposed with a cost of €116.30 per sample test.

Phase 2

Antibiotic exposure and chronic kidney disease (CKD) were identified as risk factors to acquire CDI rather than carriage of *C. difficile*.

Phase 3

Female gender was identified as a potential risk factor for CDI.

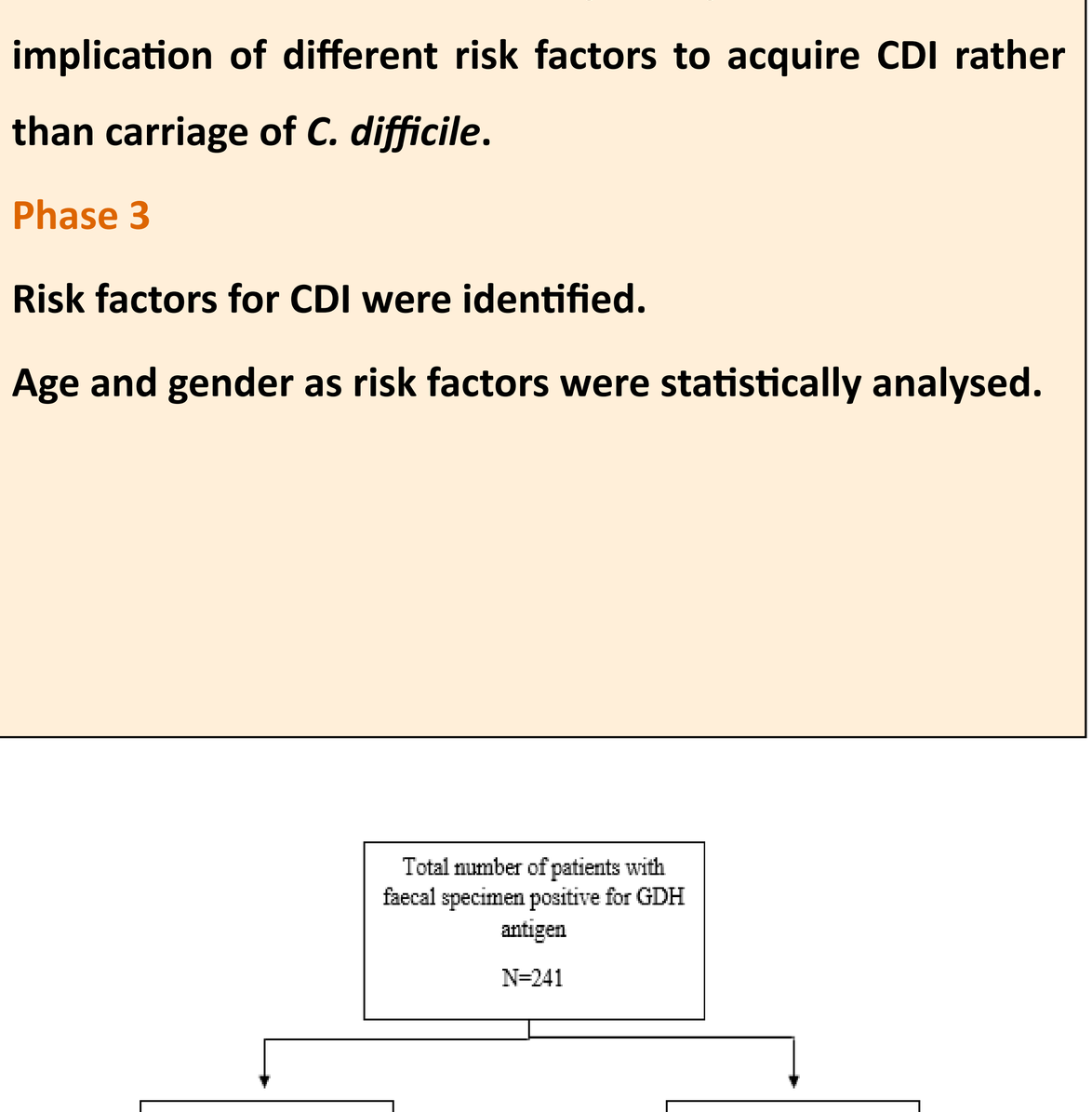

Figure 1: Participant data

CONCLUSION

This study proposed that *C. difficile* culturing and antibiotic sensitivity testing is performed in recurrent cases, outbreaks, immunocompromised patients and for the establishment of a local surveillance program.

This is an innovative study that compares carrier and active populations for the first time. Patients having recent antibiotic exposure and suffering from CKD are recommended for closer monitoring.