

Hospitalised Older People with Covid-19: One Month Outcomes

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Abstract

Aims

COVID-19 disproportionately affects older people, with those aged ≥ 65 years representing a significant proportion of hospital admissions and deaths. Our aim was to examine characteristics, inpatient course and one-month outcomes of older patients with COVID-19 managed in an Irish urban tertiary hospital.

Methods

A retrospective cohort study of patients aged ≥ 65 diagnosed with laboratory-confirmed-COVID-19 over one-month and managed as inpatients in an Irish tertiary referral hospital. Electronic and paper medical records were reviewed.

Results

Eighty-six inpatients aged ≥ 65 years (mean age 77) with laboratory-confirmed-COVID-19 were included. Participants were frail (Median Clinical Frailty Scale:5) with multiple comorbidities (Median Charlson Comorbidity Index:5). One month after diagnosis, 44.2% (38/86) were discharged, 33.7% (29/86) had died and 14.0% (12/86) were awaiting rehabilitation or long-term care(LTC). The remainder were medically recovering.

Discussion

COVID-19 had a significant impact on older people admitted to hospital with high case-fatality rates. The proportion awaiting rehabilitation or LTC at four weeks demonstrates a significant functional impact on this cohort.

Introduction

Since the emergence of COVID-19, it has become clear that older adults are more vulnerable to severe infection and death, with increasing prevalence of comorbidities with age compounding risk¹. In Ireland, persons aged ≥ 65 years account for 24% of COVID-19 cases, but 54% of hospital admissions and over 92% of deaths^{2,3}.

Older adults are a heterogeneous group, with medical comorbidities often contributing to a complicated inpatient course. In patients with COVID-19, the Charlson Comorbidity Index (CCI) has been shown to predict mortality⁴. Higher Clinical Frailty Scale⁵ (CFS) ratings have been associated with lower probability of discharge home⁴. Previous studies demonstrated that older patients with COVID-19 often present atypically. Delirium is a common presenting feature⁶ and associated with poor four-week functional outcomes⁷.

Our aim was to describe hospital inpatient course of older people diagnosed with COVID-19 over one month in an Irish, urban tertiary hospital and outcomes four weeks after diagnosis.

Methods

A retrospective cohort study of those aged ≥ 65 years with laboratory-confirmed COVID-19 diagnosed over a one-month period (25/03/2020-24/04/2020) and managed as inpatients. Medical records of included patients were accessed to review demographics, baseline function, CCI, inpatient course and outcomes four weeks post diagnosis. Delirium diagnosis and CFS were deduced through geriatrician review of multidisciplinary (MDT) medical records when not explicitly stated.

Results

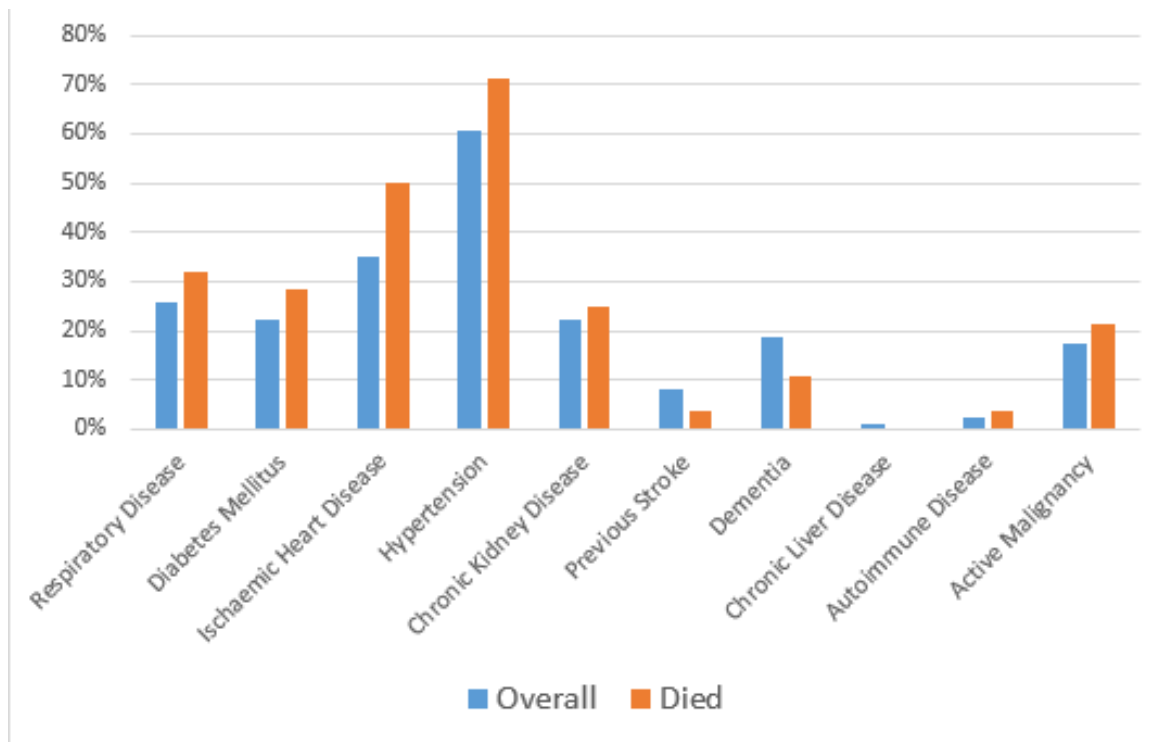
Eighty-six older patients, aged ≥ 65 years, were diagnosed with laboratory-confirmed COVID-19 and managed as inpatients during the study period, compared to 79 patients aged < 65 years. Only older patients were included in final analysis including 46 patients diagnosed with COVID-19 as a result of testing completed in the Emergency Department (ED) and a further 40 patients diagnosed through inpatient testing. Mean age was 77 years (range 65-93). Of those diagnosed with COVID-19 through ED testing, 37 patients (80%) had mild disease at presentation, eight (17%) moderate and one patient (2%) severe⁸.

Twenty older patients (23%) were managed on specialist geriatric wards. Six (7%) were admitted to ICU during their admission, all of whom were intubated. Comorbidities were common [Table 1]. Median CCI was 5. Median pre-admission CFS was 5 (mildly frail). This was significantly higher in patients managed on geriatric wards compared to other wards (CFS: 6 vs 4, $p=0.01$). Delirium was present in 31 patients (36%).

At baseline, 46 patients (53%) were independently mobile without aids, 30 (35%) mobile with aids and 10 (12%) wheelchair-dependent or bedbound. Thirty-nine patients (45%) required assistance with personal activities of daily living. Seven (8%) were nursing home residents. Ten (12%) experienced a fall during admission. During admission, 56 patients (65%) were reviewed by physiotherapy, 36 (42%) by occupational therapy, 52 (61%) by nutrition and dietetics and 37 (43%) by speech and language therapy. New dysphagia post COVID-19 diagnosis was noted in 16 patients (19%).

Four weeks after COVID-19 diagnosis, 38 patients (44.2%) were discharged, 29 (33.7%) had died, and 19 (22.1%) remained in hospital, of whom six (31.6%) remained medically unwell, four (21.1%) awaited rehabilitation and 8 (42.1%) awaited LTC. Mean age in those who had died was 79.7 years compared to 76.0 years for those still alive ($p=0.07$). Mean CCI was 5.8 and mean CFS 5.2 in those who had died compared to 5.0 and 4.1 respectively for those still alive.

Table 1: Comorbid illness in older patients with COVID-19 (n=86) vs patients who died (n=28).



Discussion

The inpatient population in this study had multiple comorbidities, with functional impairment and frailty common at baseline. They had a complex inpatient course, with delirium in over a third, a similar proportion to previously published studies⁹. Delirium diagnosis was ascertained from chart review, therefore likely an underestimate as delirium is frequently under-recognised. Inpatient falls and newly recognised dysphagia were prevalent. Many required MDT rehabilitation. One third of older patients had died at four weeks and co-morbidities in this group were similar to those previously reported¹⁰.

Patients managed on specialist geriatric wards were significantly frailer, with a higher baseline CFS, and the majority of these remained inpatients four weeks following COVID-19 diagnosis. Nearly two-thirds (63.2%) were awaiting off-site rehabilitation or LTC, reflecting the impact of COVID-19 hospitalisation on the functional status of older people with frailty. Rehabilitation facilities were closed or admitting smaller numbers, with further repercussions for those deconditioned following acute illness.

This study demonstrates the significant impact of COVID-19 on older people, particularly those with frailty, with a complex inpatient course and functional decline frequently experienced.

Declaration of Conflicts of Interest:

The authors have no conflicts of interest to declare.

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