

The preliminary impact of a chronic pancreatitis MDT clinic on acute and elective admissions

A.MAVILAKANDY ^{1a}, T. OYEBOLA ^{1a}, R. BOYCE ¹, B. RAITHATHA ², N.BUCCHERI ¹, G.GARCEA ¹, N.BHARDWAJ ¹

1) Department of Hepatobiliary and Pancreatic Surgery, University Hospitals of Leicester 2) Department of Anaesthesia, University Hospitals of Leicester. A) joint first author

Introduction

Chronic pancreatitis is a condition progressive inflammatory condition of the pancreas which leads to impairment of exocrine and endocrine functions. The resultant symptoms, including chronic pain, exocrine insufficiency and pancreatogenic diabetes is associated with increased morbidity and can be burdensome on healthcare systems due to repeat admissions. The yearly cost per patient due to chronic pancreatitis-related acute admissions is estimated to be at least \$40 000. Multidisciplinary team (MDT) management has been shown to be of clinical benefit in chronic pancreatitis, but investigation into the effect on unplanned hospitalisation and cost is lacking.

Methods

Admission data from the two years preceding and following assessment in the pilot Chronic Pancreatitis (CP) MDT clinic at the University Hospitals of Leicester NHS Trust HPB Unit were retrospectively analysed. Patients enrolled within the clinic that had four years' worth of admission data were included – two years prior to their first CP MDT clinic appointment and two years subsequent. Patients recruited to the clinic had radiological evidence of CP with symptoms suggestive of exocrine or endocrine dysfunction. Data was collected from the electronic patient records and physical notes. Statistical analysis was performed using Wilcoxon signed-rank and Log-rank tests. P<0.05 considered statistically significant.

Outcomes

Primary outcomes were number and type of admissions. Admissions were classified by elective (planned) or acute (unplanned), and then further subdivided into CP-related or non CP-related. CP-related referred to those admissions in which the presenting complaint was attributable to CP disease process.

Results – Admissions

Thirty-four patients were included in the analysis. Table 1 illustrates the basic demography and clinical information of the cohort. Table 2 illustrates the pre- and post- clinic admission data. There were statistically significant reductions in total and average length of stay irrespective of admission type, reduction in number of acute admissions, and number of CP-related acute admissions. Further analysis demonstrated statistically significant reductions in the number of inpatient CT scans (20 to 9, p=0.0313), total number of admissions due to abdominal pain (43 to 17, p=0.049) and statistically significant increase in median number of elective procedures (0 to 1, p=0.002), the majority of which being for analgesic procedure such as coeliac plexus block or TAP block).

Table 2. Acute and elective admissions - Pre-Clinic vs. Post-Clinic

| Variable | Median per patient (IQR) | | Total (Across entirety of cohort) | | P-value |
|--|--------------------------|------------|-----------------------------------|------|---------|
| | Pre | Post | Pre | Post | |
| Number of admissions | 2 (1.4-4.5) | 1 (0-3.25) | 99 | 75 | 0.207 |
| Total LOS/days across all admissions | 3.5 (0-17) | 0 (0-5) | 539 | 256 | 0.0223 |
| Average LOS/days per admission per patient | 2.375 (0-4.25) | 0 (0-3.25) | N/A | N/A | 0.0264 |
| Number of acute admissions | 1 (0-4) | 0 (0-1.25) | 79 | 35 | 0.0101 |
| Number of elective admissions | 0 (0-1) | 1 (0-2) | 20 | 40 | 0.0016 |
| CP related – Acute admissions | 1 (0-2.25) | 0 (0-1) | 57 | 24 | 0.0139 |
| CP related – Elective admissions | 0 (0-1) | 0 (0-1.25) | 19 | 31 | 0.0629 |
| Non-CP related – Acute admissions | 0 (0-1) | 0 (0-0) | 22 | 11 | 0.3281 |
| Non-CP related – Elective admissions | 0 (0-0) | 0 (0-0) | 1 | 9 | 0.2500 |

Financial analysis - £77,533 saving from 283 bed days

Discussion

To our knowledge, this is the first study in the available literature that aims to elucidate the efficacy of CP MDT care on hospitalisation. Preliminary evidence presented here suggest dedicated, holistic, multidisciplinary care can reduce the number of acute admissions as a result of CP and improve access to elective outpatient management such as nerve blocks. The cost saving potential of the clinic is further compounded by potential reduction in disruption to elective surgical activity as a consequence of fewer occupied bed days. Further, longitudinal investigation into this with greater patient numbers is required to give further credence to this assertion.

Figure 1 – Flowchart of CPMDT clinic at University Hospitals of Leicester

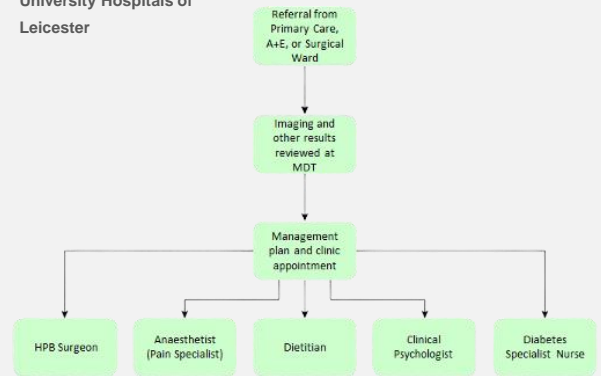


Table 1 Two year Cohort Patient Characteristics on admission to CP MDT Clinic

| | |
|------------------------------|----------------|
| Gender (%) n=34 | |
| Male | 23 (67.6) |
| Female | 11 (32.3) |
| Age/years (Median (IQR)) | 55.5 (48.5-65) |
| Aetiology (%) – | |
| Alcohol | 20 (58.8) |
| Gallstone disease | 7 (20.6) |
| Other (including idiopathic) | 7 (20.6) |
| Known Past Medical History | |
| Cardiovascular disease | 6 (17.6) |
| Chronic respiratory disease | 5 (14.7) |
| Chronic liver disease | 4 (11.8) |
| Miscellaneous* | 2 (5.89) |

