Setting up an integrated service for PSC-IBD patients: A quality improvement project

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Background

➢ Primary sclerosing cholangitis (PSC) is a chronic inflammatory condition closely associated with inflammatory bowel disease (IBD), and characterised by progressive fibrosis of biliary tract leading to cirrhosis and its complications.
➢ There is an appreciable annual risk of cholangiocarcinoma (CCA), gallbladder carcinoma, colorectal cancer (CRC) and hepatocellular cancer.
➢ Annual surveillance with magnetic resonance cholangiopancreatography (MRCP), colonoscopy, ultrasound (US) (6 monthly if cirrhotic) is advised.

Aim

➢ To assess the quality of liver and bowel surveillance, and detection of complications, before and after the introduction of an integrated Hepatology and IBD service.

Methods

➢ Retrospective data on PSC/IBD patients.
➢ Service assessed prior to introduction of integrated service (August 2016).
➢ Prospective database of patients maintained after introduction of integrated service.
➢ Data collection and analysis performed on management of patients following the integrated service.

Results

Pre-integrated service:

➢ Retrospective data identified 29 patients with IBD-PSC.
➢ Annual MRCP was performed in 55.2% (16/29), colonoscopy in 55.2% (16/29), 48% having chromoendoscopy and US in 7%.
➢ 51% (15/29) were not under joint IBD and hepatology service.
➢ This indicated significant variability in care and poor adherence to guidelines.

Interventions:

➢ Reiteration to physicians at every IBD clinic to actively identify PSC-IBD patients.
➢ Prospective database maintained.
➢ PSC-IBD patients were discussed in hepatology and IBD multidisciplinary meetings (MDM) regularly and surveillance arranged.
➢ A joint PSC/IBD clinic was established for this cohort.

Pathway for intervention:

- Abnormal LFTs in IBD clinic
- PSC not confirmed
- Back to IBD clinic
- Added to prospective database
- Review in joint IBD-PSC clinic
- Annual surveillance organized
- Results discussed in MDM

Post-integrated service:

➢ 47 PSC-IBD patients were identified.
➢ To date, 38 have been seen in joint PSC/IBD clinic, 45 have been reviewed in MDM and annual surveillance has improved to 91% with MRCP (p=0.01), 86% with colonoscopy (p=0.01), 74% with chromoendoscopy (p=0.03), 91% with MRI liver (instead of US).
➢ 49% (22/45) had a change in management following MDM discussion.
➢ Improvement in management and surveillance led to diagnosis and appropriate treatment of 1 CCA, 2 PSC with autoimmune overlap, 3 small duct PSC, 4 patients with dysplastic polyps as well as 2 new cases of CRC and 1 case of multifocal dysplasia which resulted 3 colectomies.

Demographics

<table>
<thead>
<tr>
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<th>n = 47</th>
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<tbody>
<tr>
<td>Age (mean)</td>
<td>47</td>
</tr>
<tr>
<td>Gender male %</td>
<td>64%</td>
</tr>
<tr>
<td>IBD subgroup n(%)</td>
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<tr>
<td>Ulcerative colitis</td>
<td>33 (70.2%)</td>
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<tr>
<td>Crohn’s disease</td>
<td>11 (23.4%)</td>
</tr>
<tr>
<td>IBD unclassified</td>
<td>3 (6.3%)</td>
</tr>
<tr>
<td>Review n(%)</td>
<td></td>
</tr>
<tr>
<td>Joint PSC/IBD clinic</td>
<td>38 (80.8%)</td>
</tr>
<tr>
<td>MDM review</td>
<td>45 (95.7%)</td>
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Comparison of management of PSC-IBD patients pre and post integrated service:

Mortality and morbidity in the total cohort

<table>
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<tr>
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<th>n(%), 3 (6%)</th>
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<tr>
<td>CCA</td>
<td>3 (6%)</td>
</tr>
<tr>
<td>CRC</td>
<td>6 (12.7%)</td>
</tr>
<tr>
<td>Colectomy (CRC or dysplasia)</td>
<td>10 (21.7%)</td>
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<tr>
<td>Cirrhosis</td>
<td>7 (14.7%)</td>
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<tr>
<td>Referral for liver transplantation</td>
<td>10 (48.5%)</td>
</tr>
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Conclusions

➢ Robust surveillance in this group leads to timely diagnosis of malignancies and treatment.
➢ Establishment of integrated service for PSC-IBD patients streamlines management, thus resulting in early detection of complications, better compliance to guidelines and appropriate management of patients.

This presenter has the following declarations of relationship with industry: None