Background:

- Cystic Fibrosis is an autosomal recessive genetic disorder caused by mutations in the cystic fibrosis transmembrane conductance regulator protein (CFTR), an epithelial membrane protein.
- Cystic Fibrosis is associated with an increased risk of cancer; particularly of the small bowel, colon, and biliary tract.
- Currently, the standard of care at the Minnesota Cystic Fibrosis Center is colonoscopic screening for polyps and colon cancer starting at age 40, compared to age 50 for the general population of adults.

To our knowledge, there have been no published studies examining the incidence of polyps in colonoscopic screening for Cystic Fibrosis patients.

Hypothesis

There is a higher incidence of colonic polyps, and at a younger age, in patients with Cystic Fibrosis than in the normal population. Certain risk factors affect the incidence of colonic polyps, prompting earlier screening in certain individuals.

Methods

- A Microsoft Office Access® software E-Learning course through the University of Minnesota’s Technology Training Center was used to develop skills in database development.
- 2 Databases were designed with Access® 2007 and 2003 software:
  - answer entry for a previously developed self-administered colon cancer risk assessment questionnaire
  - colonoscopy procedure report data
- Preliminary data analysis was done using the built in chart feature of Microsoft Office Access®

Results

- Cystic Fibrosis patients undergoing their first colonoscopy
  - Average age at time of procedure was 44.9 years old
  - 44.8% Male, 55.2% Female

Polyp Data for First Time Colonoscopies (n=30)

<table>
<thead>
<tr>
<th>Number of Patients with Polyps by Size for 1st Time Colonoscopies</th>
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<tbody>
<tr>
<td>Number of Patients</td>
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<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Male</td>
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<td>Female</td>
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</tbody>
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Summary

- Microsoft Office Access® software was successfully used to create 2 databases for the data storage of questionnaire response entry and colonoscopy procedure report data.
- Of 30 first time colonoscopies, 11 patients were found to have polyps.
- With an average screening age of 44.9 years, the incidence of polyps was 50% for males and 33% for females.
- Polyps were found predominantly in the transverse and descending colon.
- The majority of polyps were 10 mm or under in size.

References: