The Effectiveness of a Combined ENT-Radiology Clinic in the Management of Oropharyngeal Dysphagia: A Single Centre Study

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• Oropharyngeal dysphagia (OD) is prevalent in almost 40% of elderly patients

• OD is a common presentation in general practice

• Potentially debilitating condition
  • Symptoms ranging from pain, regurgitation and even choking

• Therefore imperative to investigate the root cause of the dysphagia
• Old Pathway:
  - Patients would be referred to the otorhinolaryngology (ENT) services for an initial consultation
  - Followed by an initial consultation from the surgeon
  - Subsequently patients would be referred for a contrast swallow, if indicated
  - The results would be conveyed in a follow up appointment with the ENT surgeon
    - This would often take a number of months (Figure 1).
• To introduce and highlight the benefits of an alternate pathway by offering a combined one-stop ENT-Radiology service for OD patients (Figure 2).

• Specifically looking at reducing waiting times, radiation dose and providing a more cost-effective pathway compared to previous.
Method

• Quantitative data collected in retrospect for 129 patients from 201-2020
  • (n= 81 in pre-combined ENT-Radiology, n=39 in combined ENT-Radiology cohorts).

• Inclusion criteria included presenting complaint of OD requiring subsequent investigations and imaging.

• Nine patients were excluded due to lack of information available regarding follow up.

• 120 participants were followed through from initial referral to outpatient clinic review/discharge.

• Run chart analysis was utilised to review the effectiveness of the new pathway over the four-year period.

• Additionally, quantitative analysis on radiation dose was done to allow a comparison between the pathways.
Prior to the combined ENT-Radiology clinic:

❖ Average waiting time for ENT follow up after contrast imaging = 63.2 days
❖ Median waiting time of = 48 days.
❖ 41.9% (34/81) of these patients subsequently required regular ENT follow-up.

Following combined ENT-Radiology clinic:

❖ Average waiting time for ENT follow up after contrast imaging dropped to = 2.3 days
❖ Median waiting time of = 0 days.
❖ Additionally 94.9% (37/39) of patients were advised regarding their follow-up on the same day as their imaging
❖ 61.5% (24/39) of these patients were discharged the same day without further follow-up.

Furthermore, radiation dose was reduced by an average of 622.38 cGy/cm² amounting to a 73.6% dose reduction.
### Results

<table>
<thead>
<tr>
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<th>Old Pathway</th>
<th>New Pathway</th>
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</thead>
<tbody>
<tr>
<td>Average waiting time for ENT follow up (days)</td>
<td>63.2</td>
<td>2.3</td>
</tr>
<tr>
<td>Median waiting time for ENT follow up (days)</td>
<td>48</td>
<td>0</td>
</tr>
<tr>
<td>Average radiation dose to patients (cGy)</td>
<td>845.7</td>
<td>223.3</td>
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</tbody>
</table>

Table 1: Results

* Table above demonstrating direct comparison of old and new pathways.
The combined ENT-Radiology clinic provides multifactorial benefit for patients with OD.

Primarily, the time taken for follow up appointments has reduced significantly allowing patients to receive effective treatment/management plan sooner than previously.

Additionally, discharging patients from care who do not require further follow-up reduces the patient load, allowing for shorter waiting lists and subsequently improving efficiency.

The new pathway provides significant reductions in cost and time providing an effective model in the management of OD. Furthermore, the new pathway demonstrates a vast reduction in the radiation dose to the patient, thereby optimising patient safety and avoiding unnecessary radiation exposure.

This model of quality improvement has proven extremely effective in this centre; however, further analysis and involvement of multiple centres are required to fully understand its benefits and efficacy on a wider scale.