Cureus
Part of SPRINGER NATURE

Open Access Case Report

A Case Report on Dual-Lumen Obstruction: Synchronous Laryngeal and Colorectal Malignancies

Review began 10/26/2026
Review ended 11/15/2026
Published 11/18/2026

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DOI: 10.7759/cureus.119866

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Abstract

Squamous cell carcinoma is one of the most common aerodigestive malignancies, while colorectal cancer is one of the most prevalent cancers worldwide. Although these cancers share similar risk factors, synchronous presentation is rare. We report the case of a woman who successfully underwent a total laryngectomy and right hemicolectomy during a single operative session. She presented with a three-month history of dysphonia and weight loss. Laryngoscopy revealed a suspicious vocal cord lesion, confirmed on a positron emission tomography (PET) scan. Incidentally, PET also demonstrated a colonic lesion. Colonoscopy confirmed a synchronous caecal tumour. As a result of clinical deterioration, she required emergent admission for dyspnoea and necessitated a tracheostomy. Following multidisciplinary team discussion, a decision was made to proceed with simultaneous laryngectomy and right hemicolectomy. The postoperative course was unremarkable. This case highlights the importance of multidisciplinary collaboration and careful preoperative planning in managing synchronous malignancies.

Categories: Otolaryngology, General Surgery
Keywords: colorectal cancer, laryngeal squamous cell cancer, multi-disciplinary team, right hemicol, total laryngectomy

Introduction

Squamous cell carcinoma is the most common malignancy of the upper aerodigestive tract [1]. Approximately 2,300 cases of laryngeal cancer are diagnosed annually in the UK [2]. The current incidence of laryngeal squamous cell carcinoma is approximately 2.7 cases/year per 100,000 inhabitants [3]. Advanced laryngeal squamous cell carcinoma is treated with either laryngectomy or chemoradiation therapy [4], depending on stage. Patients with laryngeal squamous cell carcinoma are at risk of developing secondary malignancies, most commonly within the head and neck region or the lungs. However, the reported incidence varies according to the study population and whether synchronous and metachronous tumours are considered [5].

Colorectal adenocarcinoma is one of the most common cancers in the Western world, with an estimated incidence of 12% in the UK [6]. Alcohol and tobacco smoking are established risk factors for both laryngeal and colorectal cancer. These shared exposures may be relevant to synchronous presentation of both these cancers, although a direct causal relationship has not been established [7,8].

Patients presenting with both laryngeal squamous cell carcinoma and colorectal adenocarcinoma simultaneously are rare and pose unique management challenges.

We report the case of a woman in her 60s who successfully underwent both a laryngectomy and right hemicolectomy for malignancies in the same surgical procedure.

Surgical management of the larynx was provided by head and neck surgeons, while reconstruction was provided by a plastic surgery team, and simultaneously a colorectal team conducted a right hemicolectomy. Our report highlights the importance of situational awareness, teamwork, and good communication in an operating room with multiple teams, with the goal of improving patient safety and associated clinical outcomes [9].

Case Presentation

A cachectic woman in her 60s (BMI of 17 kg/m^2) with a 50-pack-year smoking history and chronic obstructive pulmonary disease (COPD) presented to our tertiary referral centre with a three-month history of dysphonia and unintentional weight loss. Preoperative assessment demonstrated limited physical reserve corresponding to American Society of Anesthesiologists physical status IV (ASA 4). Rhino laryngoscopy showed a suspicious exophytic lesion on the right vocal cord.

She underwent a microlaryngoscopy and biopsy, which demonstrated a lesion extending up to the right false cord. Multidisciplinary team meeting (MDT) discussion of her pathology confirmed invasive moderately differentiated squamous cell carcinoma. Subsequent imaging included magnetic resonance imaging (MRI), computed tomography (CT) of the neck, and staging positron emission tomography (PET).

Her PET scan showed a large right-sided piriform mass with right-sided cervical nodal disease concerning for metastatic disease, as well as incidental hypermetabolism in the ascending colon, which was suspicious for colonic cancer (Figures *1*-*2*).

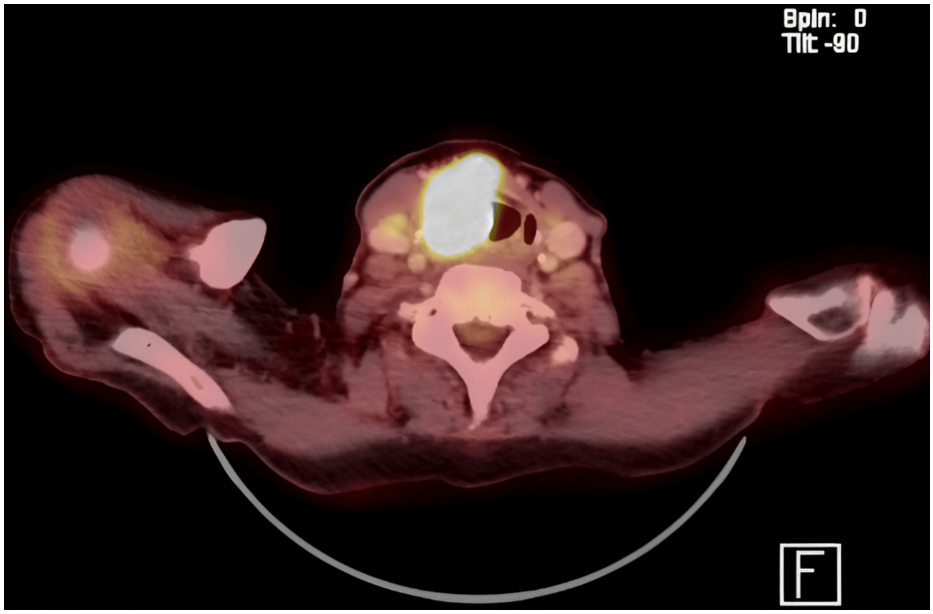


FIGURE 1: PET-CT demonstrating a fluorodeoxyglucose (FDG)-avid mass in the right piriform sinus of the larynx

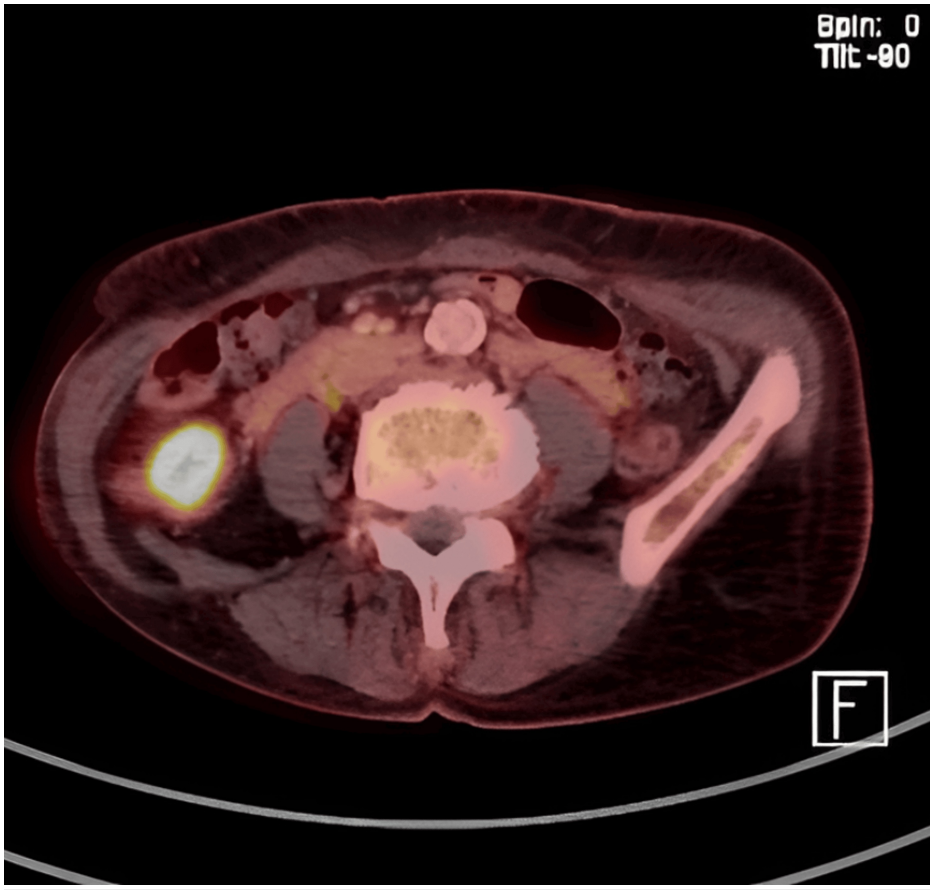


FIGURE 2: Increased FDG uptake in the ascending colon, suggestive of primary colonic cancer on PET-CT

During her workup, she was admitted as an inpatient due to dyspnoea and constipation. She underwent a colonoscopy, which showed a synchronous obstructing caecal tumour. Biopsies resulted in a diagnosis of primary well-differentiated adenocarcinoma. Her repeat imaging showed impending large bowel obstruction.

Day 1 after her colonoscopy, she was very dyspnoeic and hypoxic with increased oxygen requirements and work of breathing. She required emergent surgical tracheostomy and high-dependency unit (HDU) monitoring because of her upper airway obstruction.

She had a repeat discussion and perioperative assessment at our MDT, which deemed the impending obstruction of both her bowel and airway necessitating simultaneous laryngectomy and right hemicolectomy.

Intraoperatively, she initially had laparoscopic right hemicolectomy with primary anastomosis. Afterwards, a total laryngectomy, bilateral neck dissection, and pectoralis major flap were performed on the same day as her bowel surgery. A pectoralis major flap was performed given the risk of anastomotic leak and need for postoperative radiation therapy.

The patient experienced an uneventful postoperative recovery. Following surgery, she was managed in the intensive care unit (ICU) for three days before stepping down to the HDU for an additional 24 hours. She subsequently completed a 17-day recovery period on the general surgical ward before being discharged. Throughout her hospitalization, she received comprehensive multidisciplinary rehabilitation including occupational therapy, physiotherapy, and speech and language therapy.

She later received 30 fractions of 60 (GY) Gray of radiation therapy to her larynx and neck to reduce the risk of recurrence, as planned pre-operatively.

Postoperatively, histology of her colorectal cancer showed that she had a pT3N0R0 low-grade adenocarcinoma of her cecum (Figures *3*-*5*). There were clear surgical margins. Seventeen regional lymph nodes were retrieved, all of which were negative for metastatic involvement. Microsatellite instability testing demonstrated microsatellite stable disease. Intramural perineural invasion was seen in the caecal

tumour specimen.

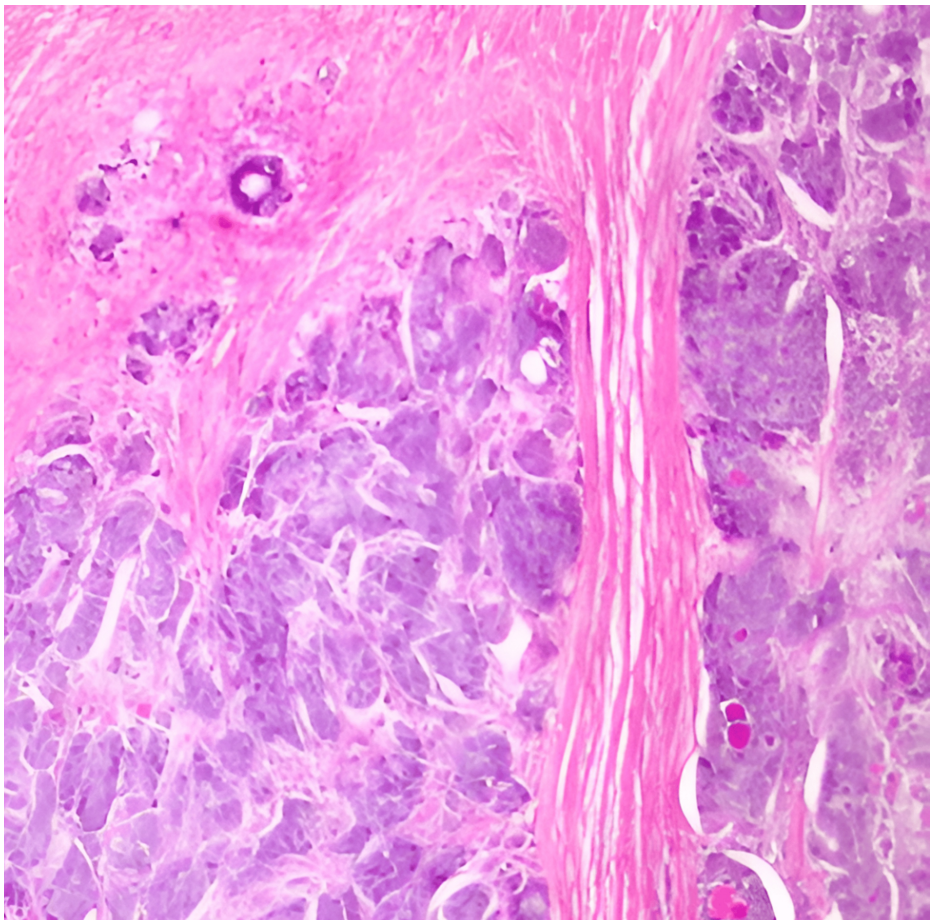


FIGURE 3: Invasive colorectal carcinoma, moderately differentiated/low grade

H&E 4x

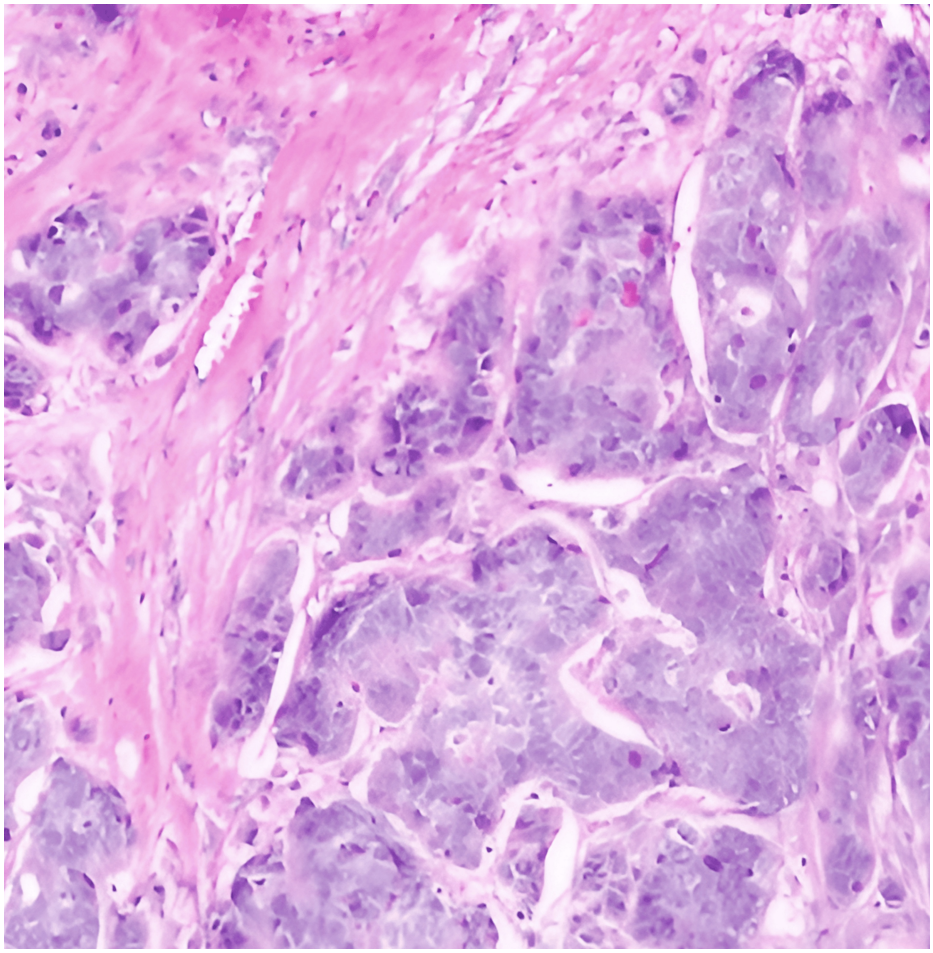


FIGURE 4: Invasive colorectal carcinoma, moderately differentiated/low grade

H&E 10x

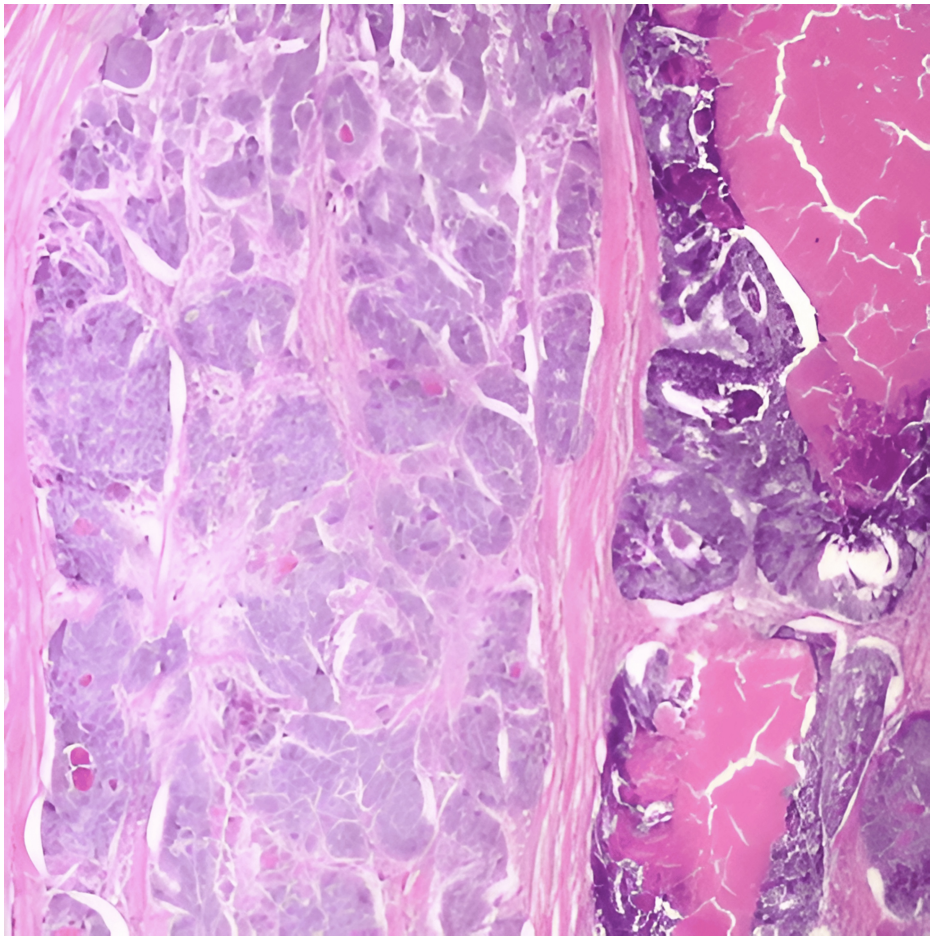


FIGURE 5: Invasive colorectal carcinoma, moderately differentiated/low grade, with necrosis

H&E 4x

Meanwhile, histology of the larynx showed moderately differentiated invasive squamous cell carcinoma (Figures *6-8*) invading through the outer cortex of the thyroid cartilage, and 43 lymph nodes were removed from the bilateral neck dissection, which were negative for metastatic disease, pT4N0M0.

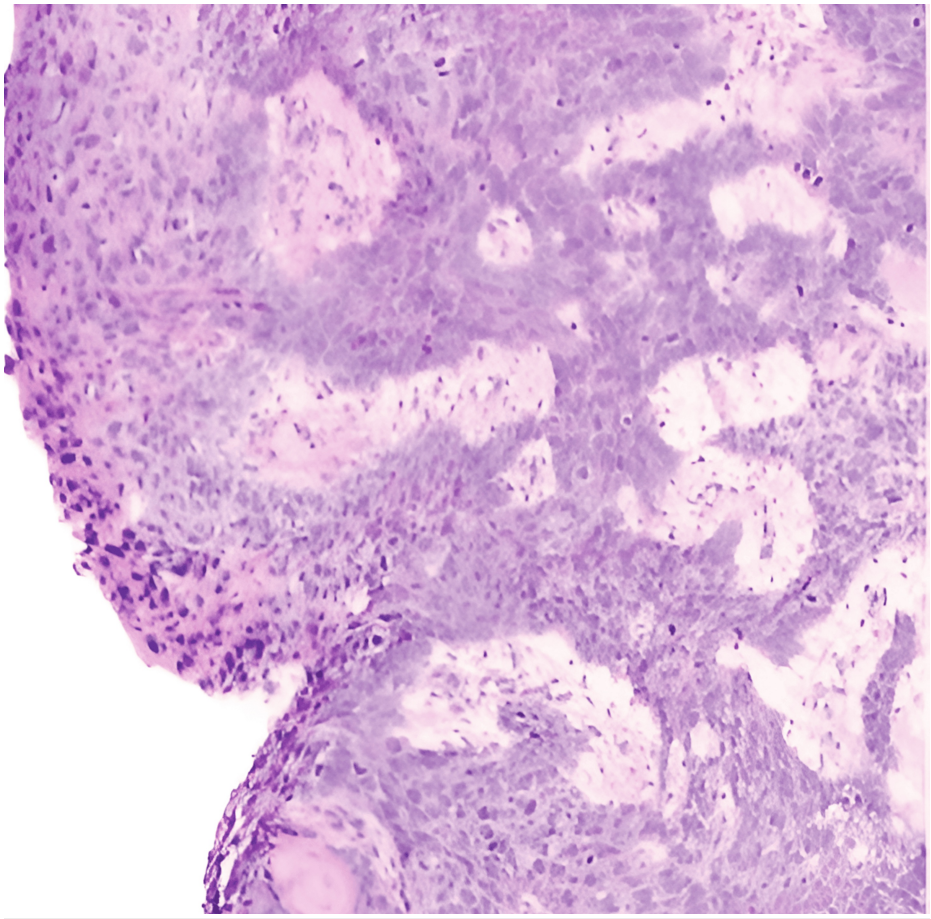


FIGURE 6: Invasive laryngeal squamous cell carcinoma, conventional type, moderately differentiated/grade 2

H&E 10x

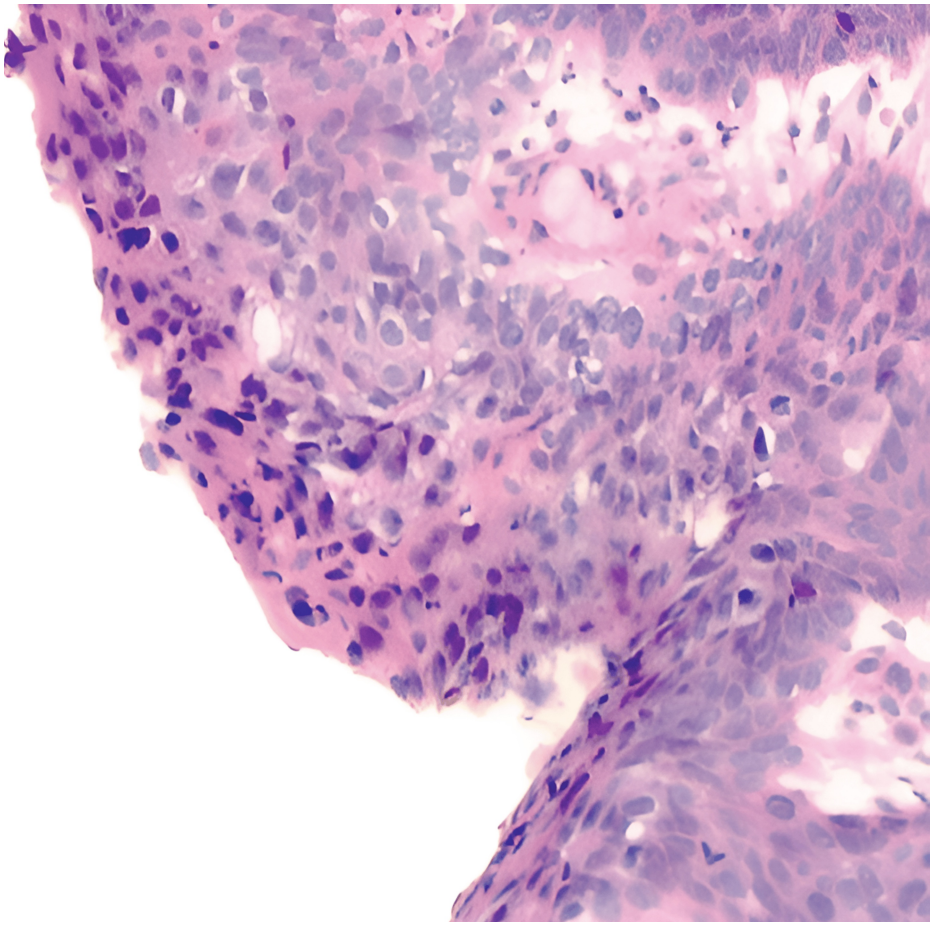


FIGURE 7: Invasive laryngeal squamous cell carcinoma, conventional type, moderately differentiated

H&E 20x

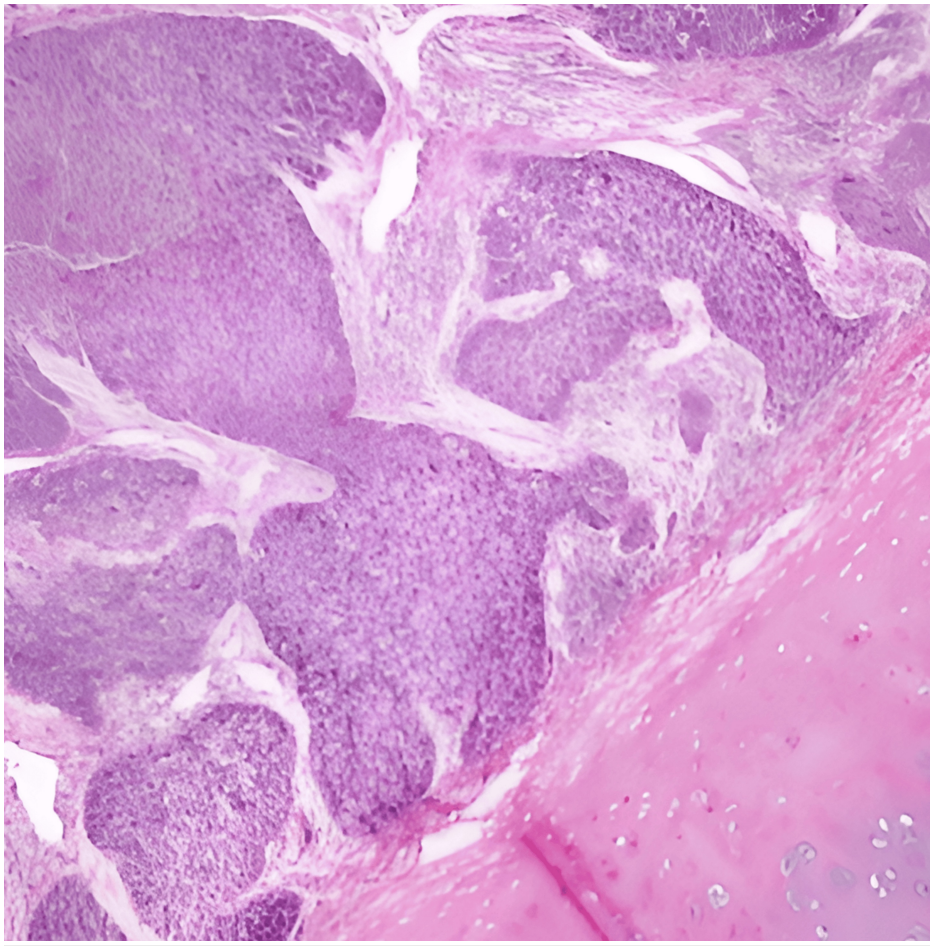


FIGURE 8: Invasive laryngeal squamous cell carcinoma, conventional type, with malignant cells in nests

H&E 4x

Postoperative histopathological findings were reviewed at the multidisciplinary oncology meeting. Although perineural invasion was identified in the caecal tumour, the consensus was to proceed with close clinical and radiological surveillance rather than adjuvant systemic chemotherapy, taking into consideration the patient's low body mass index, frailty and physiological reserve. At three months postoperatively, she was reviewed in the outpatient clinic and underwent interval CT imaging of the thorax, abdomen, and pelvis, which demonstrated no evidence of local recurrence or distant metastatic disease.

Discussion

Both laryngeal squamous cell carcinoma and colorectal adenocarcinoma pathogenesis are well described in the medical literature [10,11], but there is little literature on both occurring together at the same time. The aetiological factors of both these cancers are similar, which include tobacco smoking and alcohol, and may account for the synchronous presentation of this case; however, reports describing both appear to be limited [12].

Management options for laryngeal squamous cell carcinoma include chemoradiation or surgery [13]. Meanwhile, colorectal adenocarcinoma can be treated with either surgery, chemotherapy, or immunotherapy and is heavily dependent on the extent of the disease [14]. There is limited knowledge on the medical management of synchronous laryngeal squamous cell carcinoma and colorectal adenocarcinoma, and management is heavily dependent on MDT input with shared expertise between colorectal and head and neck teams. We favoured close surveillance after initial treatment due to the potential for recurrence or development of new primary cancers, considering her prior medical history.

This case presents several clinical dilemmas that needed to be addressed in managing both tumours. Preoperative planning was required between multiple teams given the logistical dilemma of operating on different sites at the same time. Human factors principles were implemented to minimize risk from miscommunication and reduce the chances of error [15]. We utilised both closed-loop communication and

dedicated surgical time-outs to help with this.

The choice of reconstructive option with a pectoralis major pedicled flap facilitated simultaneous work on the lower and upper halves of the patient. Ensuring no cross-contamination between operating sites reduced chances of postoperative infection. Additionally, to prevent cross-contamination between cervical and abdominal operative fields, we divided the two operative sites with two separate teams. Each team had its own scrub nurse, instrument trolley, suction, and electrocautery system. The cervical and abdominal areas were divided with a mid-thoracic isolation drape dividing the two operative sites.

Anaesthetic perioperative management in the intensive care allowed the patient to recover from both surgeries. A modified version of the different enhanced recovery after surgery protocol (ERAS) used in our institution was implemented to take into consideration the differing protocols between both surgical teams. In light of the two surgeries, we used nasogastric feeding for enteral feeding for the first seven days before allowing the patient oral intake, to allow the pharynx to heal, as well as involving our allied healthcare professionals early in her care to support functional and swallowing rehabilitation.

Conclusions

The synchronous presentation of both laryngeal carcinoma and colorectal adenocarcinoma is uncommon. Our case highlights how complex oncological cases like this can be managed effectively with good preoperative planning, multidisciplinary collaboration, and effective communication to facilitate coordinated surgical management and optimise patient outcomes.

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

Concept and design: Martin Safari Aketch, Mel Corbett, Ruzaimi Ramli, Susannah Staunton, Fergal O'Duffy

Acquisition, analysis, or interpretation of data: Martin Safari Aketch, Mel Corbett, Ruzaimi Ramli, Susannah Staunton, Fergal O'Duffy

Drafting of the manuscript: Martin Safari Aketch, Mel Corbett, Ruzaimi Ramli, Susannah Staunton, Fergal O'Duffy

Critical review of the manuscript for important intellectual content: Martin Safari Aketch, Mel Corbett, Susannah Staunton, Fergal O'Duffy

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Disclosures

Human subjects: Informed consent for treatment and open access publication was obtained or waived by all participants in this study. **Conflicts of interest:** In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

References

1. Argiris A, Karamouzis MV, Raben D, Ferris RL: Head and neck cancer. Lancet. 2008, 371:1695-709. 10.1016/S0140-6736(08)60728-X
2. What is laryngeal cancer?. (2026). Accessed: October 21, 2026: https://www.cancerresearchuk.org/about-cancer/laryngeal-cancer/what-is-laryngeal-cancer.
3. Sangal NR, Xu K, Kaki P, Cannady S, Brody RM: Laryngeal squamous cell carcinoma incidence and survival trends in the United States: a population-based analysis of two decades. Head Neck. 2025, 47:1816-30. 10.1002/hed.28077
4. Steuer CE, El-Deiry M, Parks JR, Higgins KA, Saba NF: An update on larynx cancer . CA Cancer J Clin. 2017, 67:31-50. 10.3322/caac.21386
5. Afify AY, Ashry MH: Exploring the risk of second primary malignancies in laryngeal cancer survivors: insights from the SEER database. Eur Arch Otorhinolaryngol. 2024, 281:4409-17. 10.1007/s00405-024-08731-9
6. Bowel cancer incidence statistics . (2026). Accessed: October 21, 2026:

https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/bowel-cancer/incidence.

7. Boffetta P, Hashibe M: Alcohol and cancer. Lancet Oncol. 20061, 7:149-56. 10.1016/S1470-2045(06)70577-0
8. Kuper H, Boffetta P, Adami HO: Tobacco use and cancer causation: association by tumour type . J Intern Med. 2002, 252:206-24. 10.1046/j.1365-2796.2002.01022.x
9. Flin R, Patey R: Improving patient safety through training in non-technical skills . BMJ. 2009, 339:b3595. 10.1136/bmj.b3595
10. Yamagishi H, Kuroda H, Imai Y, Hiraishi H: Molecular pathogenesis of sporadic colorectal cancers . Chin J Cancer. 2016, 35:4. 10.1186/s40880-015-0066-y
11. Hardisson D: Molecular pathogenesis of head and neck squamous cell carcinoma . Eur Arch Otorhinolaryngol. 2003, 260:502-8. 10.1007/s00405-003-0581-3
12. Coca-Pelaz A, Rodrigo JP, Suárez C, et al.: The risk of second primary tumors in head and neck cancer: a systematic review. Head Neck. 2020, 42:456-66. 10.1002/hed.26016
13. Marioni G, Marchese-Ragona R, Cartei G, Marchese F, Staffieri A: Current opinion in diagnosis and treatment of laryngeal carcinoma. Cancer Treat Rev. 2006, 32:504-15. 10.1016/j.ctrv.2006.07.002
14. Fadlallah H, El Masri J, Fakhereddine H, Youssef J, Chemaly C, Doughan S, Abou-Kheir W: Colorectal cancer: recent advances in management and treatment. World J Clin Oncol. 2024, 15:1136-56. 10.5306/wjco.v15.i9.1136
15. Shouhed D, Gewertz B, Wiegmann D, Catchpole K: Integrating human factors research and surgery. JAMA Surgery. 2012, 147:1141-6.