



Case Study 2: Clinical Application

From the course entitled *Empowering Physicians, Nurses and Other Non-Dental Healthcare Providers in the Prevention and Early Detection of Oral and Oropharyngeal Cancer*, of the *Oral-Systemic Health for Non-Dental Healthcare Providers* curriculum.

Case Study 2 highlights the consequences for a patient of a delayed diagnosis of tonsil cancer, including delayed treatment and unnecessary stress. Look closely at the primary care provider's (PCP's) and ear, nose and throat (ENT) specialist's approaches: what should they have done differently?

Day 1: A 47-year-old man noticed a sudden neck swelling while he was shaving. The swelling was not tender and was laterally located on the right neck. The patient was otherwise healthy with no history of smoking and only occasional alcohol use. Concerned about the neck swelling, he visited a walk-in clinic at a local pharmacy, where he was prescribed a round of antibiotics and told to follow up with his PCP.

Day 14: The patient went to see his PCP and reported that some of the swelling decreased while he was taking the antibiotics but that he felt the swelling was essentially unchanged from two weeks ago. Otherwise, the patient felt fine, with no constitutional symptoms (see *Figure 99*; arrows indicate areas of swelling). The swelling was not painful. A 2.5-cm, non-tender, non-mobile swelling of the left neck was noted in the patient's records. The PCP placed the patient on another round of antibiotics and referred him to an ENT specialist.

Discussion question: As the PCP, what actions would you take in caring for this patient?

Consider: Palpation of both the right and left neck for any other swellings is indicated. Questions about fever or night sweats should be asked, if lymphoma is a concern, as well as questions about voice changes and difficulty swallowing, when looking for throat symptoms. A complete blood count [CBC] should also be ordered.

Day 21: The ENT specialist examined the patient and concluded that the swelling most likely represented an enlarged lymph node, noting as well that it also could represent a benign branchial cleft cyst. The patient was prescribed another round of antibiotics and was advised that if the neck mass persisted after the antibiotic course, it would need to be biopsied.



Figure 99. An otherwise healthy 47-year-old male patient presents with a lateral neck swelling.

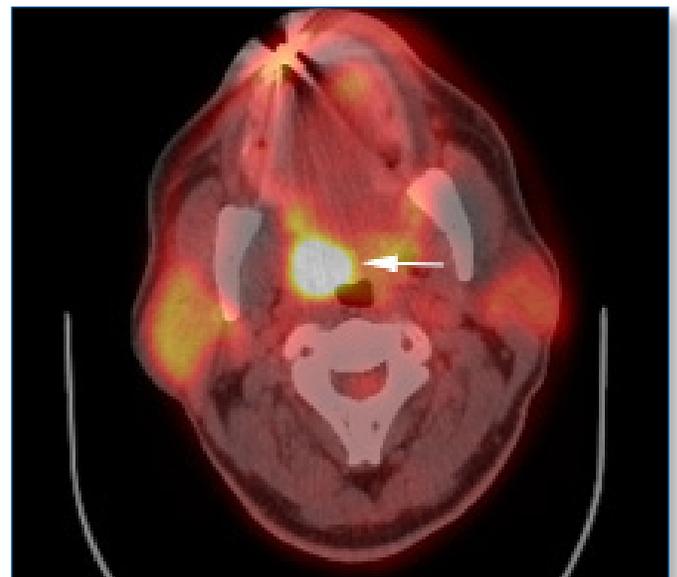


Figure 100. Axial view of CT-PET scan showing tumour in tonsil region.





Case Study 2: Clinical Application (continued)

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Discussion question: As the ENT specialist (or MD, nurse practitioner or physician assistant), what would be the best approach in managing a patient with a unilateral neck swelling that is not responding to four weeks' worth of antibiotics? What type of tests should be ordered?

Consider: Direct examination of the oral cavity and oropharynx and palpation of the right and left neck for any other swellings is indicated. Palpation of the thyroid gland to rule out obvious thyroid masses is also indicated. If no obvious masses are noted during direct examination, then a flexible endoscopic examination of the nasal cavity, nasopharynx, oropharynx, hypopharynx and larynx should be done. A fine needle aspiration [FNA] biopsy of the neck mass should be ordered. Fine needle aspiration biopsy is the diagnostic test of choice for assessing cervical lymph nodes. Fine needle aspiration is highly accurate and can be performed under local anesthesia. The use of FNA reduces the risk of potential morbidity from an open biopsy, including scarring, cranial nerve injury and infection.

Day 45: Two weeks later, the patient underwent an FNA of the neck mass, where a needle was inserted into the enlarged lymph node and cells were removed for examination.

Day 55: The pathology report noted a carcinoma arising in the lymph node.

Day 65: When the ENT surgeon examined the patient for a primary tumour in the oral cavity, nasal cavity, oropharynx and larynx, he noted some asymmetry of the left tonsil on endoscopic examination and performed a biopsy.

Day 80: The pathology report indicated tonsil cancer that was positive for high-risk HPV. The patient then underwent a specialized radiographic scan called a computed tomography (CT) X-ray scan, which was combined with a positron emission tomography (PET) scan (see *Figure 100*; axial view of the combined CT-PET scan showing that the tumour was present in the

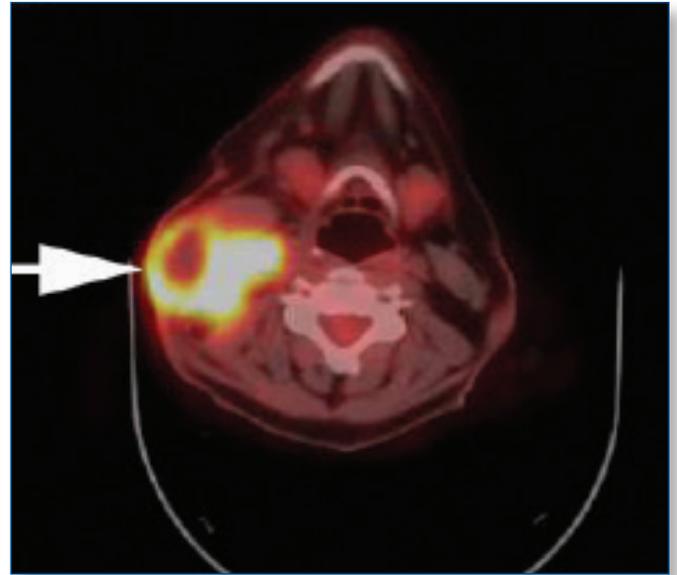


Figure 101. CT-PET scan of patient's neck area. The large lymph node in the neck is positive for cancer.

tonsil region). (A note about how this scan is performed: Patients are injected with radioactive glucose [sugar] before the scan. A PET scan produces a three-dimensional computerized image and can show areas in the body that are using the glucose. Cancer cells use more glucose than normal cells and will show up as a bright yellow signal on the PET scan. The higher the level of cancer activity, the brighter the PET signal.)

Figure 101 shows a combined CT-PET image of the patient's neck area; the large lymph node in the neck is positive for cancer.

Conclusion: Although the four- to six-week delay in diagnosis most likely did not affect the overall patient outcome, recognizing this common presentation of oropharyngeal cancer can reduce unnecessary tests, antibiotic administration and office appointments. Healthcare providers who are familiar with this clinical presentation of oropharyngeal cancer can reduce patient anxiety by arriving at a diagnosis quickly, so that the patient can commence therapy.