

Appendix 1 (as supplied by the authors)

Diagnostic workup of a cystic hypopharyngeal mass in a 64-year-old woman with treatment-resistant rheumatoid arthritis

The cystic appearance of the mass made it unlikely to be a rheumatoid nodule. Because our patient had a negative tuberculosis skin test and Interferon Gamma Release Assay before treatment with biologics, a diagnosis of tuberculosis was unlikely. During the trans-nasal laryngoscope to obtain tissue biopsy, the hypopharyngeal cystic structure seen on CT scan was poorly visualized and was described as a “prominence” rather than a discrete lesion. On microscopic examination of the tissue, only the superficial strips of epithelium were obtained. Although no high-grade dysplasia or carcinoma was seen on pathology, malignancy could not confidently be ruled out. In light of the low likelihood of malignancy based on the CT appearance of the cystic lesion and a lack of lymphadenopathy, we did not pursue a repeat biopsy due to concern over patient safety. As an alternative, we conducted an extensive work-up for malignancy including CT scan of the chest, abdomen and pelvis, as well as a whole-body PET scan. The PET study confirmed a Fludeoxyglucose (FDG)-avid linear focus present in the left supraglottic region extending into the subglottis, corresponding to the CT finding. This result was consistent with an inflammatory response based on its standard uptake value (SUV) and pattern. Multiple joints also showed increased activity compatible with inflammatory arthropathy, consistent with the patient’s persistent chronic synovitis despite treatment with rituximab. There were no worrisome FDG-avid lymph nodes in our patient’s PET study.