which showed a large laryngeal mass situated posteriorly within the larynx extending from the base of the epiglottis to the level of the cricoid cartilage. The laryngeal lumen was severely compromised. There was destruction of the cricoid, arytenoid and thyroid cartilages. The anatomy of the neck was disrupted by the presence of extensive surgical emphysema due to breach of the laryngeal wall by the inflammatory mass and leakage of air into the surrounding tissues (see Fig. 1). Laryngoscopy and biopsy of the mass was carried out. Biopsy of the left laryngeal ventricle revealed chronic inflammatory tissue infiltrating the subepithelial stroma associated with oedema and mild fibrosis consistent with rheumatoid synovial inflammation. Biopsy of the arytenoid area consisted of confluent rheumatoid nodules with total destruction of the arytenoid cartilage. He underwent further debridement of the inflammatory tissue with subsequent improvement in his stridor and dysphagia. His tracheostomy was removed 1 week postoperatively. When he was last seen his tracheostomy had healed well, he had no stridor and only minimal residual dysphagia. He continues on the anti-rheumatic medication listed above.

Rheumatoid nodules and destructive inflammatory masses of the larynx and trachea have been described rarely in the literature. The cricoarytenoid joint in the larynx is a synovial joint and pathological descriptions of villous synovial proliferation and surrounding cartilage destruction characteristic of rheumatoid synovitis occurring at this joint were first made in the 1960s [1]. Symptoms of cricoarytenoid arthritis are frequently mild,
consisting of intermittent dyspnoea and sore throat, although occasionally acute life-threatening stridor can develop due to fixation of the vocal cords in the midline [2–4]. Rheumatoid nodules can develop within the larynx and trachea in rheumatoid arthritis and can themselves erode through local structures [5]. If large, the nodules can cause dyspnoea, due to obstruction of the larynx, and dysphagia, due to extrinsic compression of the pharynx. Nodulosis occurs more frequently and more rapidly with methotrexate treatment, with 5–10% of patients treated with methotrexate developing nodules [6]. This gentleman was on treatment with methotrexate and had rheumatoid arthritis nodules elsewhere and therefore was at risk of developing laryngeal nodulosis. The inflammatory mass in this case appeared to be a mixture of synovitis and nodule formation; the exact origin could not be determined due to the extensive nature of the lesion at the time of diagnosis.

Endoscopy of the upper gastrointestinal tract is not good at detecting problems within the pharynx, as this area is frequently not visualized during the procedure, and this was almost certainly the cause of the negative upper gastrointestinal endoscopy report in this case. Rheumatologists should have a low threshold for referring rheumatoid arthritis patients with high dysphagia for laryngoscopy, particularly if dyspnoea or a sore throat accompanies it.

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