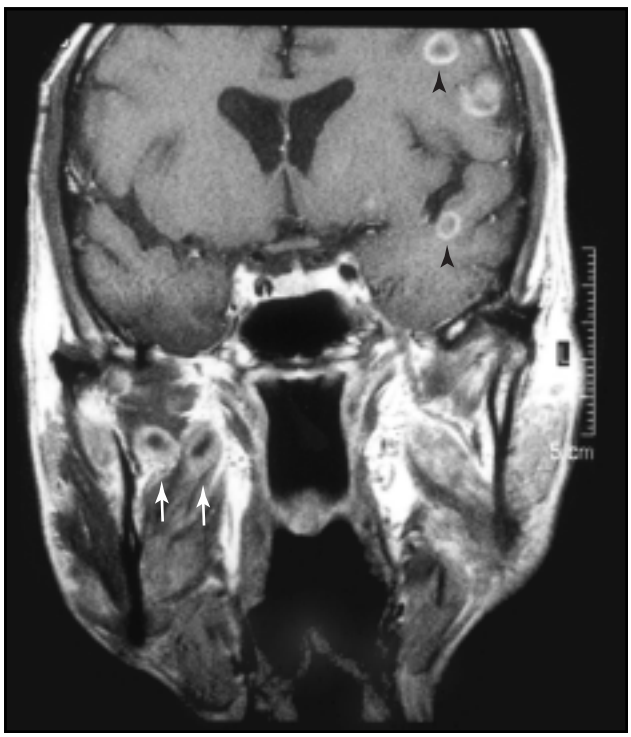
Multiple skeletal muscle metastases

A 65-year-old man, who was found to have an elevated level of carcinoembryonic antigen, was referred to the Department of Clinical Oncology at the Prince of Wales Hospital. Computed tomography of the abdomen revealed multiple lesions in the liver, and biopsy examination of the supraclavicular lymph node revealed metastatic adenocarcinoma. After commencing combination carboplatin and paclitaxel chemotherapy, the patient complained of a 2-week history of 'lumpiness' over his cheeks. Several poorly defined and non-tender subcutaneous nodules of approximately 1 cm in diameter were located over the facial muscles by palpation.

Following the injection of gadolinium, axial T1-weighted magnetic resonance images showed multiple nodules of various sizes as solid and ring enhancements throughout the masseter and pterygoid muscles and the paraspinal muscles. Coronal T1 weighted images, such as the one shown below, showed thin rim-enhancing lesions in the brain predominantly intracerebral without surrounding oedema (arrowheads) and pterygoid muscle (arrows). Fine-needle aspiration of one of the nodules in the masseter muscle indicated signet-ring cell carcinoma. The patient ran a rapid clinical course and died 3 weeks later.



Metastasis to the skeletal muscles is very rare and represents less than 1% of all haematogenous metastases from the lung, colon, kidney, or stomach, and less commonly from the breast, bladder, cervix, or thyroid.[1,2] Metastasis to the masseter muscle is even rarer.[3-5] A previous report of muscle metastasis describes a single nodule or swelling within a single muscle, and reports on the magnetic resonance imaging of such metastases has been scanty.[6]

To our knowledge, this is the first report of the involvement of multiple nodular lesions in multiple muscle groups, as visualised as solid and ring enhancements in magnetic resonance images. In a patient with a history of malignancy and subtle symptoms or signs in the muscle or soft tissues, definitive investigation is warranted.

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