

MRI Orbit, Face, Neck

CPT: 70540, 70542, 70543

1 Major Symptom or Complaint presented as primary indication

1.1 Airway Compromise

1.1.1 Enlarged thyroid

1.1.2 Neck mass

1.2 Epistaxis, uncontrolled by usual methods

1.3 Facial Mass, swelling, pain or tenderness

1.4 Neck mass

1.4.1 Mass detected in a child (<18 years)

1.4.2 Mass detected in an adult 40 or older

1.4.3 Mass detected in an adult younger than 40 that is either

1.4.3.1 Growing, OR

1.4.3.2 Larger than 3cm. OR

1.4.3.3 Mass not responding to antibiotic therapy

1.4.4 Recurrence, or new mass, at site of previously treated tumor

1.4.5 Thyroid eye disease (including myopathy)

References and Note:

- Current Otolaryngology > VII. Neck > Chapter 26. Neck Masses Derrick T. Lin, MD, Daniel G. Deschler, MD from <http://www.accessmedicine.com/content.aspx?aID=282717> accessed 12/28/08 "The most important element in the evaluation of a neck mass is the age of the patient. Most pediatric neck masses are inflammatory or congenital and resolve spontaneously or after appropriate medical therapy. In contrast, a neck mass in an adult over the age of 40 should be considered neoplastic in origin unless proven otherwise. The probability of a benign neck mass in this age group is low, particularly in the setting of tobacco or alcohol use."

1.5 Orbital or periorbital mass

1.6 Proptosis

1.7 Unilateral exophthalmos or enophthalmous

1.8 Vision loss

2 Working Diagnosis or Rule Out presented as primary indication

2.1 Brachial Plexus Pathology

2.1.1 Breast or lung cancer

2.1.2 History of radiation therapy to the chest, breast or axilla

2.1.3 Numbness

2.1.4 Palpable mass

2.1.5 Paresthesias

2.1.6 Radiating pain

2.1.7 Weakness of upper extremity

References:

1. Devin K. Binder, M.D., Ph.D.; Justin S. Smith, M.D., Ph.D.; Nicholas M. Barbaro, M.D Primary Brachial Plexus Tumors: Imaging, Surgical, and Pathological Findings in 25 Patients Neurosurgical Focus Medscape Radiology accessed 12/28/08
2. Bowen B, Seidenwurm DJ, Davis P, et al, Expert Panel on Neurologic Imaging, American College of Radiology, Appropriateness Criteria, Plexopathy, accessed at http://www.acr.org/SecondaryMainMenuCategories/quality_safety/app_criteria/pdf/ExpertPanelonNeurologicImaging/PlexopathyDoc12.aspx x 12/28/08
3. ACR Appropriateness Criteria Plexopathy p10 Accessed 12/28/08

2.2 Optic neuritis

2.2.1 Marcus Gunn pupil Asymmetric pupillary response to light

2.2.2 Ophthalmoplegia paralysis of some or all of the muscles of the eye

2.2.3 Pain with movement of the eye

2.2.4 Scotoma

References:

1. Balcer, LJ. Clinical practice. Optic neuritis. N Engl J Med 2006; 354:1273
2. Riordan-Eva P. Chapter 7. Disorders of the Eyes & Lids. In: McPhee SJ, Papadakis MA, Rabow MW, eds. CURRENT Medical Diagnosis & Treatment 2012. New York: McGraw-Hill; 2012. <http://www.accesmedicine.com/content.aspx?aID=2002>. Accessed November 25, 2012.
3. Hickman SJ, Toosy AT, Miszkiel KA, Jones SJ, Altmann DR, MacManus DG, Plant GT, Thompson AJ, Miller DH Visual recovery following acute optic neuritis—a clinical, electrophysiological and magnetic resonance imaging study. J Neurol. 2004;251(8):996
4. Rizzo JF 3rd, Andreoli CM, Rabinov JD Use of magnetic resonance imaging to differentiate optic neuritis and nonarteritic anterior ischemic optic neuropathy. Ophthalmology. 2002;109(9):1679.
5. Kupersmith MJ, Alban T, Zeiffer B, Lefton D Contrast-enhanced MRI in acute optic neuritis: relationship to visual performance. Brain. 2002;125(Pt 4):812
6. G. R. Bonhomme, A. T. Waldman, L. J. Balcer, A. B. Daniels, G. I. Tennekoon, S. Forman, S. L. Galetta, and G. T. Liu Pediatric optic neuritis: Brain MRI abnormalities and risk of multiple sclerosis Neurology, Mar 2009; 72: 881 – 885.

2.3 Orbital cellulitis

2.4 Parathyroid pathology

2.4.1 Elevated serum calcium or parathyroid hormone (PTH)

2.4.2 Mass by physical examination or other imaging.

2.4.3 Nuclear or Ultrasound examinations nondiagnostic

2.5 Suspected salivary duct stone Ultrasound and/or sialography nondiagnostic or not feasible

2.5.1 Acutely swollen and painful gland

2.5.2 Mass by physical examination or other imaging.

2.5.3 Recurrent infections

References

1. Nicholas A. Drage, Jackie E. Brown, Michael P. Escudier, and Mark McGurk Interventional Radiology in the Removal of Salivary Calculi Radiology January 2000 214:139-142
2. Varghese, JC, Thornton, F, Lucey, BC, Walsh, M, Farrell, MA, Lee, MJ A prospective comparative study of MR sialography and conventional sialography of salivary duct disease Am. J. Roentgenol. 1999 173: 1497-1503 Does not support the use of MR to discover stones
2.5.4.2 Varghese, JC, Thornton, F, Lucey, BC, Walsh, M, Farrell, MA, Lee, MJ A prospective comparative study of MR sialography and conventional sialography of salivary duct disease Am. J. Roentgenol. 1999 173: 1497-1503 Does not support the use of MR to discover stones
3. Kalinowski, Marc, Heverhagen, Johannes T., Rehberg, Elisabeth, Klose, Klaus Jochen, Wagner, Hans-Joachim Comparative Study of MR Sialography and Digital Subtraction Sialography for Benign Salivary Gland Disorders AJNR Am J Neuroradiol 2002 23: 1485-1492 Also favors sialography as more accurate
4. Scleritis inflammation of the dense fibrous opaque white outer coat enclosing the eyeball except the part covered by the cornea
5. Uveitis inflammation of the middle layer of the eye consisting of the iris and ciliary body together with the choroid coat — called also vascular tunic

2.8 Vocal cord paralysis

References

1. Chin, Shy-Chyi, Edelstein, Simon, Chen, Cheng-Yu, Som, Peter M. Using CT to Localize Side and Level of Vocal Cord Paralysis Am. J. Roentgenol. 2003 180: 1165-1170
2. Glazer, HS, Aronberg, DJ, Lee, JK, Sagel, SS Extralaryngeal causes of vocal cord paralysis: CT evaluation Am. J. Roentgenol. 1983 141: 527-531

3 Abnormal Physical Exam Finding presented as primary indication

3.1 Airway Compromise

3.1.1 Enlarged thyroid

3.1.2 Neck mass

3.2 Nasal endoscopy suggests tumor

3.3 Mass

3.3.1 Mass detected in a child (<18 years)

3.3.2 Mass detected in an adult 40 or older

3.3.3 Mass detected in an adult younger than 40 that is either

3.3.3.1 Growing, OR

3.3.3.2 Larger than 3cm. OR

3.3.3.3 Mass not responding to antibiotic therapy

3.3.4 Recurrence, or new mass, at site of previously treated tumor

3.3.5 Thyroid eye disease (including myopathy)

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3.4 Optic atrophy by fundoscopic examination

3.5 Orbital or periorbital mass

3.6 Papilledema by fundoscopic examination

3.7 Unilateral exophthalmos or enophthalmous

3.8 Vocal cord paralysis

References:

1. Chin, Shy-Chyi, Edelstein, Simon, Chen, Cheng-Yu, Som, Peter M. Using CT to Localize Side and Level of Vocal Cord Paralysis Am. J. Roentgenol. 2003 180: 1165-1170
2. Glazer, HS, Aronberg, DJ, Lee, JK, Sagel, SS Extralaryngeal causes of vocal cord paralysis: CT evaluation Am. J. Roentgenol. 1983 141: 527-531

4 Abnormal Lab or Imaging presented as primary indication

4.1 Orbital tumor by Physical exam or imaging

5 Significant Prior Medical History presented as primary indication

5.1 Cancer, Nasopharyngeal or head and neck

5.1.1 Initial staging and evaluation

5.1.2 Interval follow up after treatment

5.1.3 Restaging

5.1.4 Worsening clinical situation

5.2 Pre- or Post-operative evaluation

5.3 Recurrent sinusitis after appropriate antibiotic therapy, nasopharyngeal tumor suspected