Annotated bibliography.

N Altman, J A Brunberg, A D Elster, A E George, D B Hackney, R B Lufkin, J S Ross, A S Smith, J D Swartz and S M Wolpert

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An extensive discussion of common and not so common infectious and noninfectious causes of chronic meningitis is presented in this well-referenced clinical review. Although the manuscript does not include significant imaging data, it will be useful in expanding the differential diagnosis of the radiologist who encounters enhancement and thickening of the meninges on MR studies.


Motor aphasia is surprisingly rare in patients with MS. Two cases are reported showing large (5 cm+) plaques in the left frontal hemisphere in one patient and left centrum semiovale in the other. Authors suggest that development of aphasia is a manifestation not only of site of lesion but also of its size.


Atherosclerotic disease of the vertebral artery origin has features in common with diseases of the internal carotid origin. Both have similar risk factors and demography, and each can cause stroke by intracranial intraarterial embolism.


This study utilizing planar MR and MR-based surface or volume renderings demonstrated focal areas of atrophy that correlated well with slowly progressive focal neurologic syndromes. Single-photon emission computed tomography (SPECT) showed corresponding hypoperfusion but abnormal areas with SPECT were larger than those suggested by MR.

DeCarli C, Haxby J, Gillette JA, Teichberg D, Rapoport SI, Schapiro MB. Longitudinal changes in lateral ventricular volume in patients with dementia of the Alzheimer type (DAT) and age-matched and sex-matched controls. Furthermore, the rate of enlargement was more specific and sensitive to the diagnosis of DAT than comparison of volumes at final evaluation. The study was carried out through CT analysis in patients followed for 9 months to over 7 years.


As technology-based diagnosis has grown more exciting, it has been difficult to contain its use. As the technology juggernaut threatens to overrun other valuable elements of the diagnostic process, clinicians need to improve their diagnostic skills, sort out when specific elements of physical diagnosis are sufficient and when more complicated diagnostic tests really are indispensable. The technological tests must not be used because of laziness or a neurotic wish to be completely sure.


Utilizing transesophageal echocardiography, the authors found mobile, frond-like projections of aortic plaque in 4% of patients with brain ischemia studied for emboli from a potential cardiac or vascular source. Previously unsuspected aortic plaque may be a underdiagnosed embolic source of stroke.

ogy 1992;42:1586–1590
In vivo $^{31}$P NMR spectroscopy yields a distinctive interictal metabolic profile in patients with intractable unilateral temporal lobe epilepsy, and may permit noninvasive lateralizing evidence of the seizure focus. SMW

Patients with pure motor hemiparesis following a stroke show significant spontaneous improvement in weakness within 7–10 days of admission compared to patients with other stroke syndromes. Patients with pure motor hemiparesis usually have lacunar infarcts in a subcortical or basal ganglia location whereas patients with other stroke syndromes have cortically located infarcts. Stratification by stroke syndrome may be necessary in the design and analysis of acute stroke intervention trials to avoid confounding factors such as differences in the early natural history of strokes. SMW

In patients with nonaneurysmal perimesencephalic hemorrhage, the presence of blood filling the perimesencephalic cisterns is necessary for hydrocephalus to occur, whereas in patients with aneurysmal subarachnoid hemorrhage the most powerful predictor for the presence of acute hydrocephalus is the presence of an intraventricular hemorrhage. The incidence of hydrocephalus in the first group is 28%, whereas it is between 5% and 10% in patients with aneurysmal subarachnoid hemorrhage. SMW

Acute infarcts can be seen with MR diffusion-weighted imaging as early as is clinically practical, when conventional CT and MR imaging may fail to demonstrate the lesion. The technique takes less than 2 minutes to apply using a standard 1.5-T scanner and therefore has a potential role in improving the diagnosis of stroke and the development and implementation of early stroke interventions. SMW

Another paper on the normal measurements of the amygdala and hippocampus as seen on a 3-D gradient-echo fast-field sequences utilizing 3-mm thick coronal views. SMW

A cystic mass in the midline of the roof of the nasopharynx between the longus capitis muscles likely represents a Thornwaldt cyst that occurs secondary to obstruction of the pharyngeal bursa (embryonic communication between the roof of the nasopharynx and the notochord). This is a concise review of the embryology, development, imaging, and differential diagnosis of this relatively uncommon entity. Image quality is excellent. JDS

Referred otalgia accounts for up to 50% of all complaints of ear pain and may result from a significant disease process in the oral cavity, pharynx, or larynx. This article provides a thorough review based in anatomy of the causes of referred otalgia. No images. JDS

A single high-quality axial CT image demonstrates an unusual anterior neck mass. Report emphasizes that this lesion is classified as a neuroendocrine carcinoma. This category includes this lesion as well as the typical carcinoid (mature carcinoid) and "small cell neuroendocrine carcinomas" (including out cell type, the intermediate cell type, and combined cell type). The authors mentioned that this tumor was grossly indistinguishable from squamous cell carcinoma but was easily differentiated histologically. JDS

Acute laryngeal edema resulted from obstruction to venous outflow following radical neck dissection and catheter thrombosis. Internal jugular vein thrombosis demonstrated with CT. JDS

Two high-quality axial CT images demonstrate a pneumolabyrinth. The pneumolabyrinth was caused by a transverse fracture. The authors emphasize that an identical finding could result from disruption of the stapes footplate at the oval window. JDS

High-quality review of anatomy, pathophysiology, and treatment of both anterior and posterior epistaxis. The anatomical review is highly useful to the radiologist. No useful images. JDS

A detailed review of otitis externa includes sections on anatomy as well as a discussion of miscellaneous causes. Treatment is also emphasized. No images are included.□JDS


A highly detailed review of the development and management of the most common congenital neck masses. Discussion includes brachial anomalies, thyroid gland anomalies, thymus gland anomalies, dermoid and teratoid cysts, laryngocele, vascular anomalies, and cystic hygromas/lymphangioma. The discussion is highly worthwhile to the radiologist, despite the fact that there are no images in this review.□JDS


MR/MR angiography demonstration of fascinating case. Excellent quality images.□JDS


Sudden hearing loss (SHL) may have autoimmune, infectious, toxic, vascular, and neoplastic causes or be caused by labyrinthine membrane rupture. Meniere disease and multiple sclerosis are also possible causes. SHL has been reported as the presenting symptom in 1%–14.2% of patients with acoustic neuroma. The authors report a patient with sudden right-sided hearing loss (only hearing ear) subsequently proven to have an intracanalicular acoustic neuroma (demonstrated with MR) whose hearing responded to steroid treatment. The authors emphasized the importance of obtaining contrast-enhanced MR in all patients with SHL regardless of their response to steroids.□JDS


The authors illustrate seven cases with plain film and/or CT. MR is not included nor discussed in this publication. The report includes anatomy, although not as detailed as that to which we have become accustomed, as well as a discussion of sources of infection and spread of infection.□JDS


The authors describe a case of sinusitis, orbital cellulitis, and subdural empyema following a spider bite. Despite excellent quality CT images, enhanced MR was required to diagnose the intracranial process. Excellent quality images.□JDS


Although infantile stridor is never normal, biphasic stridor much more often implies a pathologic condition. Causes include: hemangiomata, stenosis, and goiter as well as numerous types of vascular compression. The authors describe a case of double aortic arch, an anomaly that occurs because of failure of resorption of the right distal fourth aortic arch during embryogenesis. Lateral plain film, axial CT, and frontal angiography are included with accompanying diagrams.□JDS


The authors describe a rapidly enlarging painless left facial mass occurring after incidental trauma in a 6-year-old boy. An intraparotid hematoma was removed at surgery. This extremely rare entity is illustrated with limited quality axial and coronal CT scans.□JDS


The authors report and illustrate a benign chondroblastoma arising within the temporal bone. The destructive lesion is illustrated with axial and coronal CT.□JDS


Both cases are well-illustrated intracranial/extracranial dumbbell tumors extending through foramen ovale. Case 1: CT/MR-spindle cell carcinoma; case 2: MR/chondrosarcoma.□JDS


The dehiscent facial nerve is a potential hazard during exploratory middle ear surgery. These authors found that middle ear dehiscence occurred in 74% of their histologic sections. The most common locations were the oval window (posterior half) (57%), cochleariform process (16%), second genu (21%), and mastoid segment (18%). Photomicrographs only.□JDS


High-resolution sagittal surface coil images allow for submillimeter resolution of the orbital septum, levator apo-
neurosis, Muller's muscle, and orbital septa. Emphasis is placed on Whitnall's superior orbital ligament.


High-Quality T1-weighted MR images demonstrate this unusually rare anomaly, in this case unilateral. Single case report.


This case report describes the MR, CT, and plain film lumbar spine findings as well as peripheral knee radiographic findings of a patient with a severe peripheral neuropathy related to multiple peripheral spinal nerve root schwannomas. This earlier peripheral neuropathy lead to a Charcot knee.


This study shows that cerebral cysticercosis is a risk factor for stroke in young and middle-aged patients. After controlling for a possible confounding factor, the authors found that arterial hypertension, cardiac disease, and cerebral cisticercosis were independent risk factors for stroke.


This study showed that NAA content is reduced in the infarcted brains of eight patients, but this decrease occurred between 6 and 24 hours after ictus. The reduction of NAA was greater in the central part than in the peripheral part of the VOL.


This study showed that diffusion-weighted images were unchanged until blood-flow was reduced to 15–20 ml. 100g⁻¹min⁻¹ and below, which is similar to the threshold for maintenance of tissue high-energy metabolites and ion homeostasis. The authors raise the possibility of imaging energy failure noninvasively.


The authors quantitatively estimated the clinical value of cerebral angiography and surgery for patients with infective endocarditis, and demonstrated that it is better not to perform cerebral angiography routinely in patients with infective endocarditis. The specific subgroups in whom angiography might be beneficial have not been identified.


This review concludes that evidence indicates a clear ischemic threshold for functional impairment, and for biochemical disturbances leading to cell destruction. However, the point of no return is still undefined.


Twenty-one symptomatic patients (transitory ischemic attack or small stroke) were evaluated with ⁹⁹mTc-HMPAO-SPECT before and after acetazolamide (ACZ) challenge. This study shows that pre-ACZ/post ACZ ⁹⁹mTc-HMPAO-SPECT is a feasible method for detecting the efficacy of collateral channels in cerebrovascular obstructions. Color plates of SPECT images and cortical activity profiles.


This study found that patients with strokes who are at high clinical risk for a cardiac source for emboli are more likely to have strokes involving 1/2 lobe or larger, involving both superficial and deep structures. Deep small infarcts had a negative association with the presence of a cardiac source.


This study found that good collateral circulation on angiography was associated with improved clinical and CT outcomes with proximal and distal M1 occlusions, but not M2 occlusion.


Comprehensive review of six randomized trials of thrombolysis in acute ischemic stroke.


This comprehensive review focuses upon three principal cellular and molecular mechanisms involved in the production of brain injury in cerebral infarction: increased cytosolic Ca²⁺, acidosis, and free radical formation. Pharmacologic
interventions using glutamate antagonists, calcium channel blockers, and free radical scavengers are discussed. □ADE


Strong evidence is presented from X-chromosome inactivation and somatic deletion analysis that most glioblastomas are monoclonal—that is, they result from proliferation of a single mutated cell rather than arising as a diffuse transformation of many cells. The critical genetic deletions responsible are on chromosome 10 and/or 17. □ADE


Results of this technique in 120 patients from a multicenter study are reported with a good discussion of the technique, its limitations, and several illustrative cases. □ADE


Six patients having dorsal third ventricular and interhemispheric cysts are presented, together with clinical and radiographic features, suggesting that this lesion be classified as a distinct entity separate from holoprosencephaly. □ADE


Pineal cysts, although benign and usually discovered incidentally, may occasionally cause symptoms, as illustrated in this surgical series of six patients with a variety of signs and complaints, including paroxysmal headache, gaze paresis, and acute hydrocephalus. □ADE


Injection studies in 25 brains obtained at autopsy reveal a considerably greater variation in distribution among the anterior cerebral artery, middle cerebral artery, and posterior cerebral artery territories than is generally appreciated. A good review and critique of previous injection studies is also presented. □ADE