

# AJNR

## **Adult cerebellopontine angle choroid plexus papilloma: MR evaluation.**

W J Ford, B S Brooks, T el Gammal, C E Massey and W D Beveridge

*AJNR Am J Neuroradiol* 1988, 9 (3) 611

<http://www.ajnr.org/content/9/3/611.citation>

This information is current as of March 15, 2025.

## Adult Cerebellopontine Angle Choroid Plexus Papilloma: MR Evaluation

Choroid plexus papillomas are uncommon tumors in children and are even more unusual in adults. The cerebellopontine angle (CPA) is a rare location for these lesions. As far as we know, this is the first description with radiologic illustration of such a case.

### Case Report

A 44-year-old man presented with a chief complaint of severe headaches of 3 weeks duration and left-sided unsteadiness. Cranial CT showed a well-margined, oval, homogeneously enhancing mass within the left CPA cistern. The lateral ventricles appeared moderately dilated. MR study (Fig. 1) showed a parenchymal isointense mass within the left CPA producing upward displacement of the left middle cerebellar peduncle. The tumor appeared to extend from the lateral recess of the fourth ventricle into the CPA via the foramen of Luschka. Extension through a ventricular outlet has recently been emphasized as a characteristic of choroid plexus papillomas [1]. The associated hydrocephalus, especially the dilatation of the anterior third ventricle, also was well delineated by the MR examination [2]. At surgery a red, friable solid lesion  $1.0 \times 0.5 \times 0.5$  cm with cystic components resembling a cauliflower was removed from the CPA and left cerebellar hemisphere. Microscopic examination showed papillae composed of a single layer of columnar epithelium supported by a stroma of vascularized connective tissue. The specimen was devoid of fibrillary neuroglia, a finding that distinguished the specimen from ependymoma [3]. Pathologic evaluation was consistent with choroid plexus papilloma.

### Discussion

Papillomas of the choroid plexus are rare, accounting for approximately 0.5–0.6% of all intracranial tumors [4]. The prevalence in children is greater, as high as 3.9% in children under 13 years old [5]. In a review of 245 cases of choroid plexus papilloma in all age groups, Rovit et al. [6] found that 43% were located in the lateral ventricle, 39% in the fourth ventricle, 10% in the third ventricle, and 9% in the CPA. The fourth ventricle is the most frequent location in adults, and the lateral ventricle is the most frequent in children [7].

The associated hydrocephalus, present even in the absence of intraventricular obstruction, is thought to be the result of the four to five times increased production of CSF in patients who have these tumors [8]. Additional causes of hydrocephalus may be related to increased protein content of CSF around the tumor or to adhesions around the exit foramina of the fourth ventricle caused by CSF with high protein content or by hemorrhage.

The superior imaging capability of MR showed both the nonobstructive hydrocephalus and the intra- and extraaxial components of the mass. Although the pathology literature [2] describes CPA choroid plexus papillomas, this is, to the best of our knowledge, the first choroid plexus papilloma imaged in this location by radiologic means. Though unusual, choroid plexus papilloma should be considered in the differential diagnosis of CPA masses.

William J. Ford  
Betty S. Brooks  
Taher El Gammal  
Clinton E. Massey  
Wayne D. Beveridge  
Medical College of Georgia  
Augusta, GA 30912

### REFERENCES

- Hopper KD, Foley LC, Nieves NL, Smirniotopoulos JG. The interventricular extension of choroid plexus papillomas. *AJNR* 1987;8:469–472
- El Gammal T, Allen MB Jr, Brooks BS, Mark ED. Magnetic resonance in the evaluation of hydrocephalus. *AJNR* 1987;8:591–597
- Russell DS, Rubenstein LJ. *Pathology of tumors of the nervous system*, 3rd ed. London: Edward Arnold, 1971:163
- Zulch KJ. *Brain tumors: their biology and pathology*, 2nd ed. New York: Springer-Verlag, 1965
- Matson DD, Crofton FD. Papilloma of choroid plexus in childhood. *J Neurosurg* 1960;17:1002–1027
- Rovit RL, Schechter MM, Chodroff P. Choroid plexus papillomas: observations on radiographic diagnosis. *AJR* 1970;110:608–617
- Zimmerman RA, Bilaniuk LT. Compared tomography of choroid plexus lesions. *CT* 1979;3:93–102
- Milhorat TH, Hammock MK, Davis DA, Fenstermacher JD. Choroid plexus papilloma. I. Proof of cerebrospinal fluid overproduction. *Childs Brain* 1976;2:273–289

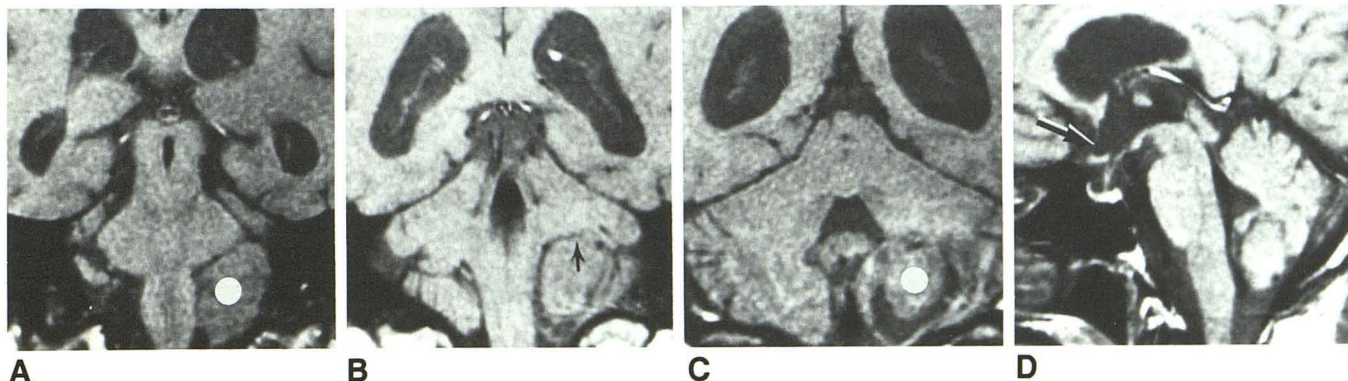


Fig. 1.—MR images 800/25 (1.5 T) show intra- and extraaxial choroid plexus papilloma involving left lateral recess of fourth ventricle with extension into cistern of cerebellopontine angle (CPA).

A and B, Tumor in left CPA (dot) with elevation of middle cerebellar peduncle (arrow).

C, Tumor infiltrating left cerebellar tonsil (dot). Soft tissue in relation to floor of fourth ventricle appeared to represent superior pole of inferior cerebellar vermis.

D, Midsagittal section shows hydrocephalus. Note dilatation of anterior third ventricle (arrow).