SELECTED REPORTS

Recurrent Brain Abscess*

Manifestation of Pulmonary Arteriovenous Fistula and Hereditary Hemorrhagic Telangiectasia

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A unique case of recurrent brain abscess as the primary manifestation of pulmonary arteriovenous fistula is presented. In the absence of hematologic abnormalities and characteristic physical findings, the diagnosis of pulmonary arteriovenous fistula is particularly elusive. Patients with brain abscess must be carefully evaluated for the presence of pulmonary arteriovenous fistula or hereditary hemorrhagic telangiectasia.

Brain abscess as a complication of pulmonary arteriovenous fistula is a well-recognized entity. Association of pulmonary arteriovenous fistula with hereditary hemorrhagic telangiectasia is generally accepted.8,9 Brain abscess in patients with hereditary hemorrhagic telangiectasia would therefore be expected to occur, and many cases have been reported.5,7,9

Recurrent brain abscess as the primary manifestation of pulmonary arteriovenous fistula has not been previously reported. This unique case is presented to emphasize the need for recognition and early diagnosis in these patients.

CASE REPORT

A 48-year-old housewife was hospitalized in 1968 with severe headache and progressive lethargy. Physical examination revealed right hemiparesis and a dilated left pupil. Carotid arteriographic studies revealed a lesion of the left frontal lobe. A large abscess was encountered and evacuated at craniotomy.

In 1973, the patient underwent septal and bilateral turbinate dermato-plasty for recurrent spontaneous epistaxis. In retrospect, she had had epistaxis since early childhood.

Readmission in March 1975 was precipitated by an occipital headache of two weeks' duration, lethargy, and a defect in peripheral vision. Physical examination revealed a left homonymous hemianopia. No evidence of cyanosis or clubbing was noted, nor did the patient have polycythemia. Multiple, small, well-localized telangiectatic lesions were present on the tongue, lips, and nail beds. A loud systolic bruit was heard in the left subscapular area.

A right occipital brain abscess was confirmed at craniotomy (Streptococcus viridans). The patient responded promptly to surgical drainage and antibiotic therapy.

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CHEST, 72: 5, NOVEMBER, 1977
Recurrent brain abscess has not been reported as the sole initial manifestation of pulmonary arteriovenous fistula. In previously reported cases, one or more features of pulmonary arteriovenous shunting were present, usually cyanosis, clubbing, or polycythemia or some combination of the three. Symptoms were often believed to be related to polycythemia, cerebral thrombosis, or cerebral arteriovenous malformation.

The incidence of brain abscess and meningitis in pulmonary arteriovenous fistula is reported to be at least as high as that seen with congenital heart disease. These abscesses tend to occur in the third to fifth decade of life and are associated with a high mortality. The high mortality may reflect a delay in diagnosis due to lack of recognition of this association. Surgical resection of the pulmonary lesion may prevent recurrence of the life-threatening complication of brain abscess.

**REFERENCES**

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