Classification of Rathke's Cleft Cyst Based on the Cyst Location with Primary Focus on Recurrence

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Introduction

Rathke's cleft cyst (RCC) are benign lesions located entirely intrasellar (IS), IS with suprasellar extension (IS+SS) and purely suprasellar (SS) location. The recurrence in RCC is relatively uncommon. The present study was conducted with primary focus on the analyzing the predictors of squamous metaplasia and recurrence in these three types of RCC

Methods

A retrospective review of the medical records was conducted for 87 patients with symptomatic RCCs, who underwent surgical resection. The effect of squamous metaplasia on recurrence in each location was analyzed.

Results

The mean age of 64 female and 23 male patients was 41±14 years. Sixteen patients (18%) had an entirely IS RCC, 21 (24%) had a purely SS, and 50 (58%) had an IS+SS RCC. The transsphenoidal approach was employed for all IS and (33/50) IS+SS RCCs and transcranial route for all SS, (17/50) IS+SS RCCs. Squamous metaplasia was present in 31% RCCs. The squamous metaplasia was associated with SS location (P=0.003), size (P=0.023), hypointensity on T1-weighted (16/27, P=0.005), isointensity on T2-weighted (19/27, P=0.002), and ring enhancement on gadolinium enhanced MRI (P=0.001). The SS location (P=0.018, OR-3.4, CI=1.2-9.5), size > 3.5 cm (P=0.03, OR=0.4, CI=0.2-0.93) and the ring enhancement on the preoperative MRI (P=0.002, OR=5.2, CI=1.8-14.9) were predictors of squamous metaplasia. The mean time to re-accumulation (11/87,12.6%) and recurrence (7/87, 8%) was 14±6 months. The RFS was 84.5% at mean 98.2 ±4.6 months. The age group (<18 years) (P=0.02, OR=3.8, CI-1.1-12.2) and isointensity on T2-weighted MRI (P= 0.031, OR=0.097, CI-0.012-0.8), squamous metaplasia (P=0.001, OR=34.7, CI-4.1-290.6), SS RCC (P=0.018, OR=4.8, CI=1.3-18.1), SS with squamous metaplasia

Conclusions

The age group (<18 years), isointensity on T2-weighted MRI, the squamous metaplasia, SS RCC with and without squamous metaplasia, IS+SS RCC with squamous metaplasia were predictors of recurrence.

Learning Objectives

Tailored extent of resection based on the location and predictive factors is recommended. Aggressive resection might be reasonable in recurrent cases.

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References

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