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NECK SURGERY

Features of Whartin’s tumor on MRI

Naija S, Zitouni C, Gharsalli J, Chebbi G, Akkari K

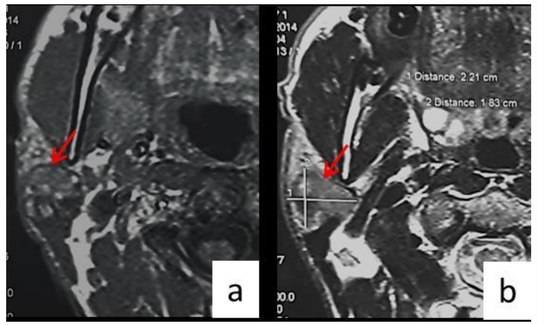
ENT department, Military Hospital, Tunis, Tunisia

Abstract

- The aim of this study was to determine the role of MRI in distinguishing Whartin’s tumor from other tumors.
- This is a retrospective study including patients operated on for parotid tumor in our ENT department during a period of 16 years (2006–2021). We conducted a statistical study in order to identify the predictors of Whartin’s tumor on MRI.
- Our study included 64 patients. On histological exam, it was a malignant tumor in 12 cases and a benign tumor in 52 cases. Pleomorphic adenoma (n=28) and Whartin's tumor (n=19) were the most frequent benign tumors.
- Predictive factors of Whartin’s tumors were: inferior pole location, high-signal-intensity areas on T1-weighted sequences, bilateral tumors, low ADC values and type B perfusion curve.
- On multivariate study, we did not identify any predictive factor of Whartin’s tumor.
- In this study, we concluded that MRI is an important tool for predicting the histological type of parotid tumors preoperatively particularly Whartin’s tumors. However, it is essential to combine different sequences to improve its diagnostic performance.

Results

- Our study included 64 patients.
- **Histological exam:**
  - malignant tumor → 12 cases
  - benign tumor → 52 cases
    Pleomorphic adenoma (n=28)
    Whartin's tumor (n=19)
- **Predictive factors of Whartin’s tumors on MRI:**
  - inferior pole location
  - high-signal-intensity areas on T1-weighted sequences
  - bilateral tumors
  - low ADC values
  - type B perfusion curve
- **Multivariate study** → no predictive factor of Whartin’s tumor.



MRI (axial section) showing hyperintense signal on T1-weighting sequence and hypointense signal on T2-weighting sequence.

Objective

- To determine the role of MRI in distinguishing Whartin’s tumor from other tumors.

Conclusion

- In this study, we concluded that MRI is an important tool for predicting the histological type of parotid tumors preoperatively particularly Whartin’s tumors.
- However, it is essential to combine different sequences to improve its diagnostic performance.

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Method

- This is a retrospective study including patients operated on for parotid tumor in our ENT department during a period of 16 years (2006–2021). We conducted a statistical study in order to identify the predictors of Whartin’s tumor on MRI.

References

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