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RHINOLOGY

Allergic fungal rhinosinusitis: Imaging features

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Abstract

- Our aim was to describe the imaging features of allergic fungal rhinosinusitis (AFR) on CT-scan and MRI.
- This is a retrospective study about 7 patients diagnosed with AFR. A CT-scan was performed in all cases. MRI was done in 3 cases.
- The mean age of the patients was 31.7 years, predominantly female.
- CT-scan showed complete opacification of the sinuses in all cases. This opacification was bilateral in 3 cases. It also showed erosions of the bony walls of the sinuses (4 cases), hyperdense material (2 cases).
- MRI was performed in 3 cases showing: low signal intensity on T1-weighted images and intermediate signal intensity on T2-weighted images (1 case), signal void on T2-weighted images (2 cases). No endocranial or orbital extension was noted.
- **AFR** is a common form of fungal rhinosinusitis. The diagnosis of AFR is based on several criteria (clinical, biological, radiologic, and histologic). Imaging features are one the major criteria. MRI has been shown to demonstrate a high specificity for AFR, especially when combined with CT-scan. Hyperdense material (CT scan) and signal void on T2-weighted images (MRI) are very suggestive of AFR.

Objective

- To Describe the imaging features of allergic fungal rhinosinusitis (AFR) on CT-scan and MRI.

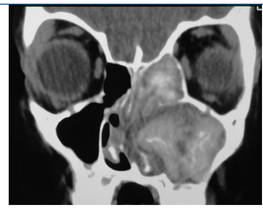
Method

- This is a retrospective study about 7 patients diagnosed with AFR. A CT-scan was performed in all cases. MRI was done in 3 cases.

Results

- The mean age of the patients was 31.7 years, predominantly females.

- **CT-scan showed**
  - complete opacification of the sinuses → all cases
  - bilateral (3 cases) I
  - erosions of the bony walls of the sinuses (4 cases)
  - hyperdense material (2 cases)



CT scan (frontal section) showing opacification of ethmoidal and maxillary sinuses with erosions of the bony walls of the sinuses and hyperdense material

- **MRI showed:**
  - low signal intensity on T1-weighted images and intermediate signal intensity on T2-weighted images (1 case)
  - signal void on T2-weighted images (2 cases)
  - no endocranial or orbital extension

Conclusion

- **AFR** is **a common** form of fungal rhinosinusitis.
- The diagnosis of AFR is based on **several criteria** (clinical, biological, radiologic, and histologic).
- **Imaging features** are one the major criteria.
- MRI has been shown to demonstrate a high specificity for AFR, especially when combined with CT-scan.
- **Hyperdense material** (CT scan) and **signal void on T2-weighted images** (MRI) are very suggestive of AFR.

References

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