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OTOLOGY

Necrotizing otitis externa: the role of imaging

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Abstract

The aim of this study was to emphasize on the benefit of imaging techniques in the diagnosis of necrotizing otitis externa (NOE)

This is a retrospective study about 43 patients diagnosed with NOE. A CT-scan was performed for every patient. MRI was done in 4 cases.

The mean age of the patients was 69.4 years, predominantly female.
MOE was due to a bacterial infection (33 cases) and fungal infection (10 cases).
CT-scan showed soft tissue thickening and erosions in the bony walls of the auditory external canal (AEC) (43 cases), filling of the middle ear and mastoid cells (31 cases), erosions of the ossicles (8 cases), extension to contiguous soft tissues (10 cases).
MRI was performed in 4 cases showing: retropharyngeal abscess and extension to the skull base (case 1), thrombosis of the sigmoid sinus and the internal jugular artery (case 2), epidural abscess and atlantoaxial dislocation causing spinal cord compression (case 3), soft tissue thickening of the walls of the AEC (case 4).

NOE is a life-threatening infection that doesn't only affect external auditory canal but may also spread to the surrounding structures. CT-scan and MRI play an important role in diagnosing the disease and its complication.

Objective

- Emphasize on the benefit of imaging techniques in the diagnosis of necrotizing otitis externa (NOE)

Method

- This is a retrospective study about 43 patients diagnosed with NOE. A CT-scan was performed for every patient. MRI was done in 4 cases.

Results

- The **mean age** of the patients was 69.4 years, predominantly **female.**
- MOE was due to a **bacterial infection** (33 cases) **and fungal infection** (10 cases).
- **CT-scan** showed soft tissue thickening and erosions in the bony walls of the auditory external canal (AEC) (43 cases), filling of the middle ear and mastoid cells (31 cases), erosions of the ossicles (8 cases), extension to contiguous soft tissues (10 cases).
- **In complicated forms,** CT-scan showed an extension to surrounding structures: retropharyngeal space (1 case), parapharyngeal space (2 cases), parotid space (1 case), temporomandibular joint (1 case), nasopharynx (2 cases), epidural space (1 case), skull base (4 cases) cervical vertebras (1 case), petrous apex (1 case).
- It also showed bone lysis of: the facial nerve tympanic segment (2 cases), tegmen tympani and scutum (1 case), carotid canal (1 case) and jugular bulb (1 case).
- **MRI** was performed in 4 cases showing: retropharyngeal abscess and extension to the skull base (case 1), thrombosis of the sigmoid sinus and the internal jugular artery (case 2), epidural abscess and atlantoaxial dislocation causing spinal cord compression (case 3), soft tissue thickening of the walls of the AEC (case 4).

Conclusion

- NOE is a life-threatening infection that doesn't only affect external auditory canal but may also spread to the surrounding structures. CT-scan and MRI play an important role in diagnosing the disease and its complication.

References

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