**Supplementary Table 1**

Structured radiological checklist for chronic inflammatory middle ear pathology.

|  |  |  |
| --- | --- | --- |
| **Radiological features based on HRCT** | **Presence** | **Absence** |
| **Opacification location and extension**  |   |   |
|   | Tympanum: | Epitympanum | ☐ | ☐ |
|   |  | Mesotympanum  | ☐ | ☐ |
|   |  | Hypotympanum | ☐ | ☐ |
|   | Mastoid: | Mastoid Antrum | ☐ | ☐ |
|   |   | Mastoid Air Cells | ☐ | ☐ |
| **Ossicular chain involvement** |   |   |
|   | Displacement without erosion | ☐ | ☐ |
|   | Malleus erosion | ☐ | ☐ |
|   | Incus erosion | ☐ | ☐ |
|   | Stapes erosion | ☐ | ☐ |
|   | Oval window erosion | ☐ | ☐ |
| **Facial nerve canal involvement** |   |   |
|   | Intact | ☐ | ☐ |
|   | Dehiscent | ☐ | ☐ |
|   | Eroded: | Proximal tympanic segment | ☐ | ☐ |
|   |  | Distal tympanic segment | ☐ | ☐ |
|   |  | First genu | ☐ | ☐ |
|   |  | Mastoid segment | ☐ | ☐ |
| **Labyrinth involvement with semicircular canal erosion\* (according to Dornhoffer and Milewski)** |
|   | Intact | ☐ | ☐ |
|   | Incomplete fistula  | ☐ | ☐ |
|   | Complete fistula  | ☐ | ☐ |
| **Middle ear bony wall erosion** |   |   |
|   | Tegmen tympani: | Intact | ☐ | ☐ |
|   |  | Thinned | ☐ | ☐ |
|   |  | Eroded | ☐ | ☐ |
|   | Scutum:  | Intact | ☐ | ☐ |
|   |  | Blunted | ☐ | ☐ |
|   |  | Eroded | ☐ | ☐ |
|   | Korner’s septum: | Intact | ☐ | ☐ |
|   |  | Eroded | ☐ | ☐ |
|   | Sigmoid plate: | Intact | ☐ | ☐ |
|   |  | Eroded | ☐ | ☐ |
|   | Mastoid cortex: | Intact | ☐ | ☐ |
|   |  | Eroded | ☐ | ☐ |
| **Eustachian tube patency**  |   |   |
|   | Patent | ☐ | ☐ |
|   | Partially obstructed | ☐ | ☐ |
|   | Completely obstructed | ☐ | ☐ |
| **Intra/Extra cranial complications**  |   |   |
|   | Extra-cranial extension | ☐ | ☐ |
|   | Intra-cranial extension | ☐ | ☐ |
| **ADDITIONAL: Vascular anatomical variants** |   |   |
|   | Jugular bulb: | Normal positioning  | ☐ | ☐ |
|   |  | Procidence | ☐ | ☐ |
|   |  | Dehiscence | ☐ | ☐ |
|   | Internal Carotid Artery: | Normal positioning  | ☐ | ☐ |
|   |  | Procidence | ☐ | ☐ |
|   |  | Dehiscence | ☐ | ☐ |
| **ADDITIONAL: Pattern of mastoid pneumatisation\*\* (according to Dexian Tan et al.)** |
|   | Petrous apex pneumatisation: | Hypopneumatisation | ☐ | ☐ |
|   |  | Mild pneumatization | ☐ | ☐ |
|   |  | Moderate pneumatization | ☐ | ☐ |
|   |  | Hyperpneumatisation | ☐ | ☐ |
|   | Mastoid pneumatisation:  | Hypopneumatisation | ☐ | ☐ |
|   |  | Mild pneumatization | ☐ | ☐ |
|   |  | Moderate pneumatization | ☐ | ☐ |
|   |  | Hyperpneumatisation | ☐ | ☐ |
|   | Infralabyrinthine pneumatisation: | Non-pneumatised | ☐ | ☐ |
|   |  | Partly pneumatised | ☐ | ☐ |
|   |   | Well-pneumatised | ☐ | ☐ |
| **ADDITIONAL: Tissue characterization based on DW-MRI** | **(Computed ADC value)** |
|   | Abscess |  |
|   | Cholesteatoma |  |
|   | Granulation tissue |   |

***Legend:***

*\* Labyrinth involvement with semicircular canal erosion (according to Dornhoffer and Milewski)*

*Intact: no bony erosion*

*Incomplete fistula: erosion of the bony labyrinth with intact endosteum (type I)*

*Complete fistula: complete erosion with opened perilymphatic space, without (type II) or with (type III) concomitant involvement of the membranous labyrinth.*

*\*\* Pattern of mastoid pneumatisation (according to Dexian Tan et al.)*

*Petrous apex pneumatisation:*

*Hypopneumatisation - No air cells are present in the vicinity of the inner ear*

*Mild pneumatisation - Less than half of the petrous apex medial to the labyrinth is pneumatized*

*Moderate pneumatisation - More than half of the petrous apex medial to the labyrinth is pneumatized*

*Hyperpneumatisation - Most of the petrous apex area medial to the labyrinth is composed of air cells*

*Mastoid pneumatisation:*

*Hypopneumatisation – Pneumatization anteromedial to the line drawn at the most anterior point of the sigmoid sinus*

*Mild pneumatisation - Pneumatization up to the space between the 2 arbitrary lines drawn at the most anterior point of the sigmoid sinus and the most lateral aspect of the sigmoid sinus*

*Moderate pneumatisation - Pneumatization up to the space between the 2 arbitrary lines drawn between the most lateral aspect of the sigmoid sinus and the most posterior point of the sigmoid sinus*

*Hyperpneumatisation – Pneumatization beyond the arbitrary line drawn at the most posterior point of the sigmoid sinus*

*Infralabyrinthine pneumatisation:*

*Non-pneumatised - absence of air cells at the most inferior and medial portion of the petrous apex*

*Partly pneumatised - limited pneumatized bone below the labyrinth*

*Well-pneumatised - well-pneumatized temporal bone at the most inferior and medial portion of the petrous apex below the internal auditory meatus on the sagittal plane*