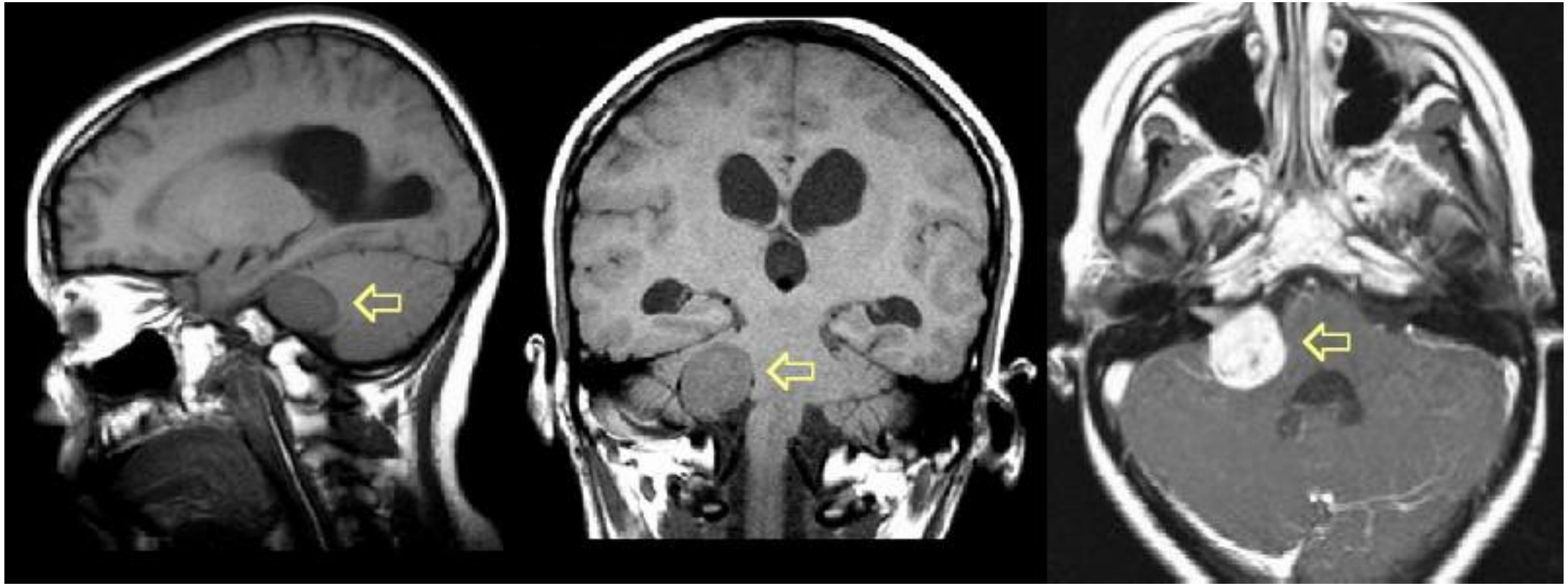
Audiology Directed MRI Referral for Vestibular Schwannoma



Aims of the project

Utilise the skills mix available, improve patient care, streamline the patient journey, free up clinic slots and economise on a diagnostic pathway that is known to be high volume and low yield.

6%

of all intracranial tumours

94%

Present with Hearing Loss

96%

Sporadic and Unilateral

83%

Present with Tinnitus

49%

Experience Vertigo

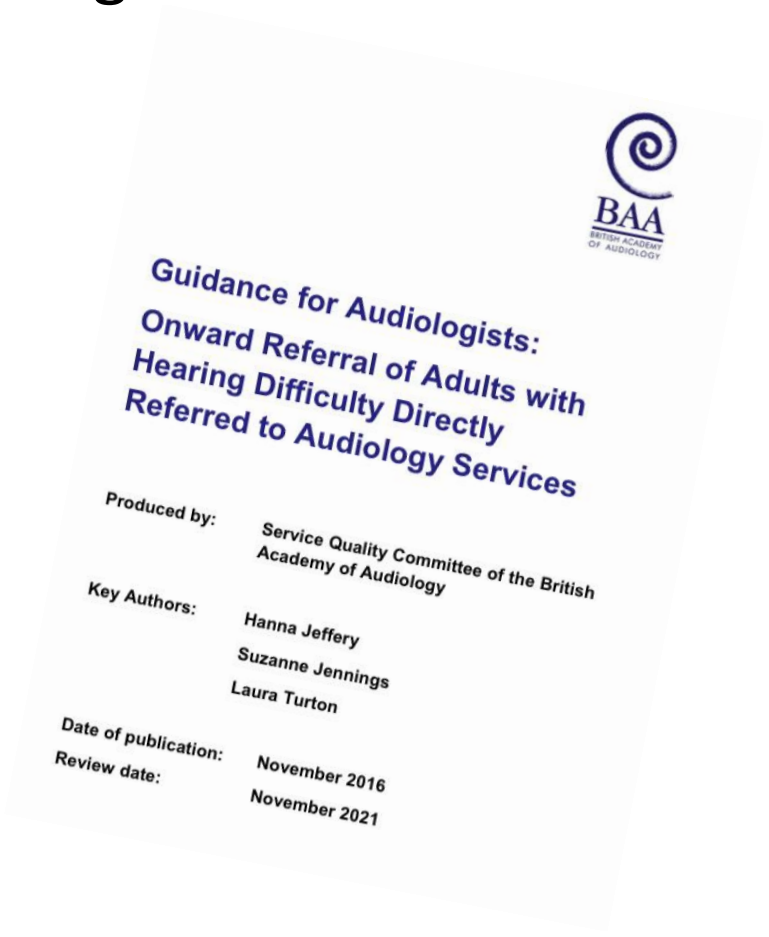
Vestibular Schwannoma

1.2

Per 100 000 population

Previous Pathway

- BAA produce a guidance document for Audiologists
  - Aware of regional variations
  - Reasons for onward referral include
    - Sudden hearing loss
    - Numbness in the face (or facial droop)
    - Otalgia
    - Discharge
    - Rapid hearing loss (90 days or less)
    - Fluctuating hearing loss
    - Hyperacusis
    - Tinnitus
      - Unilateral
      - Pulsatile
      - Significant change in tinnitus
    - Vertigo



Previous Pathway

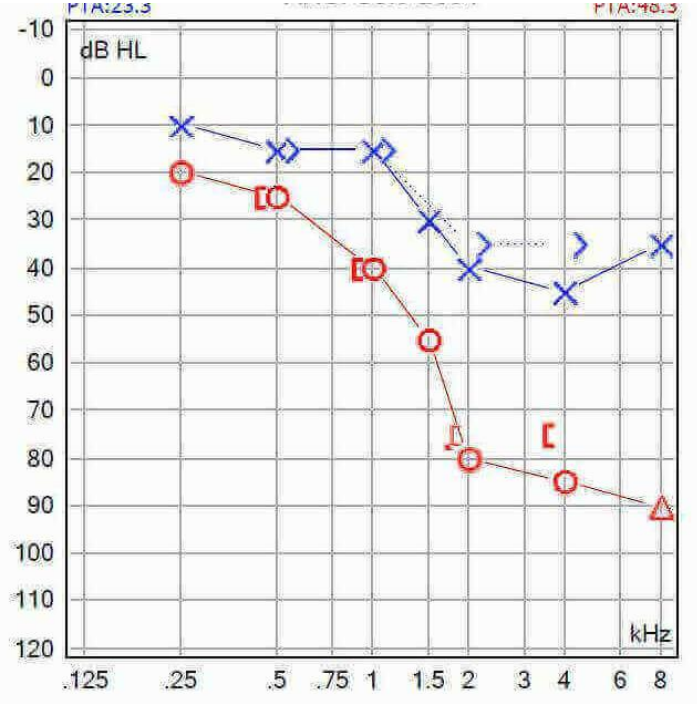
- Referral to ENT
  - For most of the symptoms above ENT will request and MRI scan
    - Want to rule out Vestibular Schwannoma
  - Patient waits for ENT appointment (12 weeks)
    - ENT retake history, request up to date PTA, refer for scan
      - Patient waits for scan (4 weeks)
      - Patient waits for review appointment to discuss results
    - ENT refer back to Audiology for management if no abnormality on MRI

- Audiologists are well versed in the referral criteria
  - Should they not be able to request a scan without ENT input?

New Pathway

Clear guidelines drawn up (collaboration by ENT and Audiology)

- Asymmetrical sensorineural hearing loss (unexplained)
  - 20dB or more at two or more frequencies up to 4kHz
  - Or asymmetry of 30dB or more at 6 and 8kHz
- Patient under the age of 75 years
  - MRI scan
- Patient over the age of 75 years
  - 6 month repeat hearing test
  - Unless red flags present
    - Unilateral tinnitus
    - Vertigo
    - Unexplained imbalance
    - Sudden hearing loss



New Pathway

MRI Training (2 hours)

- Training session with Radiologists
  - Contraindications of MRI
  - Information required when referring for MRI
  - ICE patient management system training

- Patient information sheets
  - Already available

- MRI results to ENT
  - Discharge via letter
  - Appointment if required

6% of those referred attended ENT

Outcomes from Audiology directed MRI referral

289.5

Clinical hours saved

£143,592

Saved (ISD NHS Tayside ENT outpatients tariff of £124 and based on requirement of initial and follow up appointment.

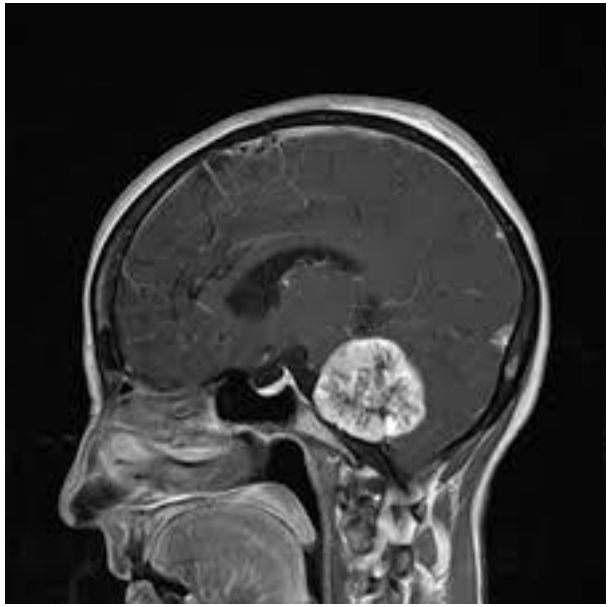
Results

- Since August 2014
  - 619 patients have attended MRI scan following Audiologist referral
    - 40 Patients attended an outpatient appointment
      - 11 with confirmed Vestibular Schwannoma
      - 29 due to other conditions picked up
        - Superficial Siderosis
        - Aneurysms
        - Meningioma
        - Hemispheric stroke
        - Small vessel Ischemia
        - Fluid in mastoid cells
        - Parotid Tumour
        - Cyst
  - Vestibular Schwannoma detected in 1.78% (within the literature expected yield rate of 1-4%)

Outcomes

- Audiologist are well placed to triage and refer for MRI to rule out Vestibular Schwannoma
- Multidisciplinary working with ENT and Radiology
- First department in Scotland to implement the pathway
  - Disseminated
  - Others currently trying different variations

Thanks for Listening



References

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