Classification of Guideline and Evidence

The Evidentiary Table Proposal for Imaging in Idiopathic Normal Pressure Hydrocephalus

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Classification of Guidelines

Guidelines are subdivided into three major categories:

Standard: accepted principles of management that reflect a *high degree* of clinical certainty.

Guideline: a particular strategy or range of management strategies that reflect a *moderate* clinical certainty.

Options: remaining strategies for patient management for which there is *unclear* clinical certainty.

Classification of Evidence

Classification of evidence is subdivided into three major categories:

Class I Evidence:

<u>Derived from prospective, randomized, well-controlled clinical trials.</u> Standards are generally based on *strong* Class I evidence. However, strong Class II data may be used if the form of management cannot be randomized (e.g., studies in cardiac resuscitation).

Class II Evidence:

Prospective data collection with retrospective analysis of clearly reliable data which include observational studies, cohort studies, prevalence studies, and case-control studies. This Class II evidence or a pre-ponderance of Class III evidence generally supports the "guidelines" category

Class III Evidence:

Studies based on retrospective analysis, such as chart reviews, clinical series, databases or registries, case reports, and expert opinion. This level of evidence generally supports the "options" category and is useful in guiding future studies and for educational purposes.

Accuracy of MRI Tools

The ability of MRI tool, to identify INPH patients who would benefit from a shunt is quantified in terms of sensitivity, specificity, positive predictive value, negative predictive value, and accuracy.

Although, being a shunt non-responder does not exclude the patient from the INPH category, response to shunting is the test that may be considered a standard for assessing the ability of the MRI tool.

Sensitivity:

Number of patients with positive MRI tool and who have INPH/ number of patients with INPH.

Specificity:

Number of patients with a negative MRI tool and without INPH/number of patients without INPH.

Positive predictive value :

Number of patients with a positive MRI tool who have INPH/number of patients with a positive MRI tool.

Negative predictive value :

Number of patients with a negative MRI tool and without INPH/number of patients with a negative MRI tool.

Accuracy:

Number of true-positives/number of all decisions

Evidentiary Table	Title	Case #	Description of study	Class	Conclusions

After the literature review for preparation of evidentiary tables, the goal is:

- To see how many studies were conducted so far for INPH patients utilizing these MRI tools and identify their corresponding evidence .

- If there are few publications than expected for some MRI tools, then we might discuss some other fields which utilize those tools.

MRI TOOL	Reviewer
T1/ T2/ FLAIR	Charles Raybaud
DWI-ADC	Gunes Aygok Effie Kapsalaki/ Kostas Fountas/ Aristotelis Filippidis Charles Raybaud Aziz M Ulug
DTI (FA – MD)	Effie Kapsalaki/ Kostas Fountas/ Aristotelis Filippidis Mark Wagshul/ Pat McAllister Charles Raybaud Aziz M Ulug
MR Elastography	Lynne Bilston/ Shaokoon Cheng
MPRAGE (3D T1-weighted, gradient-echo)	Charles Raybaud
Perfusion studies of the brain	Pat McAllister
ASL (Arterial Spin Labeling)	
Arterial inflow-Venous outflow studies	Vartan Kurtcuoglu Grant Bateman
Cardiac gated phase contrast via aqueduct	Bill Bradley Mark Wagshul/ Pat McAllister Effie Kapsalaki/ Kostas Fountas
FIESTA CISS	Charles Raybaud
Volumetry of CSF	Alexander Norbash/ Rafeeque Bhadelia/ Hernan Jara Effie Kapsalaki/ Kostas Fountas/ Aristotelis Filippidis Pat McAllister