**A comparison of computed tomography (CT) and magnetic resonance imaging (MRI) in the diagnosis of non-accidental head injury (NAHI) in paediatrics: a narrative review of evidence**

**Abstract**

**Background:** NAHI has a 25% mortality rate, emphasising the significance of correct diagnoses. CT is currently the ‘gold standard’ imaging modality, however peer-reviewed literature presents conflicting effectiveness data. This narrative review of literature investigates the sensitivity and specificity values of CT and MRI in the diagnosis of NAHI.

**Method:** A narrative review methodology was used to conduct this study. A variety of search terms were used to gather papers; literature was obtained from various databases. Inclusion and exclusion criteria helped to focus the review e.g; literature from the last 10 years. A relevant CASP tool was used to review the literature quality and a PRISMA flowchart shows the article filtration details. Articles passing the rigorous selection procedure were of high quality and relevance to this study's aims.

**Results:** Only five papers were eligible for the review. The ranges of CT sensitivity were 25.00%-87.00%, specificity 85.70%-100.00%. rMRI with GRE sequence sensitivity was 83.20%-92.80%, specificity 90.40%-96.20%. CT with rMRI with GRE sequence showed a sensitivity of 86.00%-90.00%.

**Conclusion:** The review concluded that rMRI scans with a GRE sequence increased sensitivity. However due to the lack of papers available further research is required before these findings can influence future practice.