Appendices

Appendix 1: Search terms

Raised, intracranial pressure, optical coherence tomography, children

1. Raised
2. Rising
3. Increas*
4. Elevate*
5. High
6. Intracranial hypertension
7. Intracranial pressure*
8. ICP
9. Intracerebral pressure*
10. Papilloedema
11. Papilledema
12. Optical coherence tomogra*
13. OCT

Search combination:

1 or 2 or 3 or 4 or 5

AND

6 or 7 or 8 or 9 or 10 or 11

AND

12 or 13

Appendix 2: Screening questions

Instructions for screeners: Tick the appropriate box per screening question. If "yes" at Stage 1, proceed to Stage 2; if "yes" at Stage 2, include. If "no" at any stage, exclude. If "unclear", proceed to next stage. If still "unclear" after Stage 2, then submit to third arbitrator for verdict.

Stage 1: Title and Abstract Screening

Does the study represent Level IV evidence or above, i.e. case series, cohort studies, case-control studies, randomised controlled trials (RCTs) and systematic reviews?

Yes	
No	
Unclear	

Does the study pertain to the use of optical coherence tomography (OCT) to detect raised intracranial pressure (ICP)?

Yes	
No	
Unclear	

Does the study pertain to the use of optical coherence tomography (OCT) to detect raised intracranial pressure (ICP) in children, defined as 0 to 16 years of age?

Yes	
No	
Unclear	

Does the study pertain to the use of optical coherence tomography (OCT) to detect raised intracranial pressure (ICP) in children with craniosynostosis?

Yes	
No	
Unclear	

Stage 2: Full paper screening

Does the study pertain to the use of optical coherence tomography (OCT) to detect raised intracranial pressure (ICP) in children with craniosynostosis?

Yes	
No	
Unclear	

Appendix 3: Data extraction tool, adapted from the Cochrane Collaboration

Data Extraction Sheet (adapted from Cochrane Collaboration)

General Information

Study title:
Author(s):
Source:
Date of Extraction:

Methods

Aim of study	
Study design	
Inclusion criteria	
Exclusion criteria	
Method of recruitment	
Method of randomisation (if applicable)	
Blinding (if applicable)	
Study duration	
Ethics approval	

Participants

Population description	
Setting	
Total number randomised	
Mean age	
Male/Female %	

Intervention 1

Group name	
Number in group	
Description	
Intervention parameter 1	
Intervention parameter 2 (if applicable)	
Intervention parameter 3 (if applicable)	
Intervention parameter 4 (if applicable)	
Intervention parameter 5 (if applicable)	
Intervention parameter 6 (if applicable)	
Intervention parameter 7 (if applicable)	
Intervention parameter 8 (if applicable)	
Drop-outs from group	

Outcome 1

Outcome group name	
Time points measured	
Outcome definition	
Outcome parameter 1	
Outcome parameter 2 (if applicable)	
Outcome parameter 3 (if applicable)	
Outcome parameter 4 (if applicable)	
Outcome parameter 5 (if applicable)	
Outcome parameter 6 (if applicable)	
Outcome parameter 7 (if applicable)	
Outcome parameter 8 (if applicable)	
Person measuring	
Imputation of missing data	

Intervention 2 (if applicable)

Intervention group name	
Number in group	
Description	
Intervention parameter 1	
Intervention parameter 2 (if applicable)	
Intervention parameter 3 (if applicable)	
Intervention parameter 4 (if applicable)	
Intervention parameter 5 (if applicable)	
Intervention parameter 6 (if applicable)	
Intervention parameter 7 (if applicable)	
Intervention parameter 8 (if applicable)	
Drop-outs from group	

Outcome 2 (if applicable)

Outcome group name	
Time points measured	
Outcome definition	
Outcome parameter 1	
Outcome parameter 2 (if applicable)	
Outcome parameter 3 (if applicable)	
Outcome parameter 4 (if applicable)	
Outcome parameter 5 (if applicable)	
Outcome parameter 6 (if applicable)	
Outcome parameter 7 (if applicable)	
Outcome parameter 8 (if applicable)	
Person measuring	
Imputation of missing data	

Intervention 3 (if applicable)

Intervention group name	
Number in group	
Description	
Intervention parameter 1	
Intervention parameter 2 (if applicable)	
Intervention parameter 3 (if applicable)	
Intervention parameter 4 (if applicable)	
Intervention parameter 5 (if applicable)	
Intervention parameter 6 (if applicable)	
Intervention parameter 7 (if applicable)	
Intervention parameter 8 (if applicable)	
Drop-outs from group	

Outcome 3 (if applicable)

Outcome group name	
Time points measured	
Outcome definition	
Outcome parameter 1	
Outcome parameter 2 (if applicable)	
Outcome parameter 3 (if applicable)	
Outcome parameter 4 (if applicable)	
Outcome parameter 5 (if applicable)	
Outcome parameter 6 (if applicable)	
Outcome parameter 7 (if applicable)	
Outcome parameter 8 (if applicable)	
Person measuring	
Imputation of missing data	

Appendix 4: NIH Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies

Criteria	Yes	No	Other (CD, NR, NA)*
1. Was the research question or objective in this paper clearly stated?			
2. Was the study population clearly specified and defined?			
3. Was the participation rate of eligible persons at least 50%?			
4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?			
5. Was a sample size justification, power description, or variance and effect estimates provided?			
6. For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured?			
7. Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?			
8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g., categories of exposure, or exposure measured as continuous variable)?			
9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?			
10. Was the exposure(s) assessed more than once over time?			

Criteria	Yes	No	Other (CD, NR, NA)*
11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?			
12. Were the outcome assessors blinded to the exposure status of participants?			
13. Was loss to follow-up after baseline 20% or less?			
14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)?			

*CD, cannot determine; NA, not applicable; NR, not reported

Quality Rating (Good, Fair, or Poor)	
Rater #1 initials:	
Rater #2 initials:	
Additional Comments (If POOR, please state why):	

Appendix 5: Table of excluded studies

Number	Reference	Reason for exclusion
1	Aghsaei Fard, M., et al., Optic Nerve Head and Macular Optical Coherence Tomography Measurements in Papilledema Compared With Pseudopapilledema. Journal of Neuro-Ophthalmology, 2019. 39(1): p. 28-34.	Study of adults, not children
2	Bassi, S.T. and K.P. Mohana, Optical coherence tomography in papilledema and pseudopapilledema with and without optic nerve head drusen. Indian journal of ophthalmology, 2014. 62(12): p. 1146-1151.	No patients with craniosynostosis included
3	Gospe, S.M., M.T. Bhatti, and M.A. El-Dairi, Emerging Applications of Optical Coherence Tomography in Pediatric Optic Neuropathies. Seminars in Pediatric Neurology, 2017. 24(2): p. 135-142.	Literature review, no patients with craniosynostosis included
4	Spruijt, B., et al., Algorithm for the Management of Intracranial Hypertension in Children with Syndromic Craniosynostosis. Plastic and reconstructive surgery, 2015. 136(2): p. 331-340.	Optical Coherence Tomography not used in a quantitative fashion
5	Swanson, J., et al., Optical coherence tomography: An objective modality for detecting papilledema in craniosynostosis patients with suspected intracranial hypertension. Cleft Palate-Craniofacial Journal, 2015. 52(4).	Conference paper
6	Van De Beeten, S.D.C., et al., Increased total retinal thickness on OCT: A precursor for intracranial hypertension? Child's Nervous System, 2018. 34(5): p. 1006-1007.	Conference paper
7	Van de Beeten, S.D.C., et al., Headache in Postoperative Isolated Sagittal Synostosis. Plastic and reconstructive surgery, 2019. 143(4): p. 798e-805e.	Optical Coherence Tomography not used in a quantitative fashion
8	Xu, W., et al., Noninvasive methods of detecting increased intracranial pressure. Child's nervous system : ChNS : official journal of the International Society for Pediatric Neurosurgery, 2016. 32(8): p. 1371-86	Literature review, no additional papers included further to our present study
9	Xu, W., et al., Optical coherence tomography can noninvasively detect elevated intracranial pressure in children. Cleft Palate-Craniofacial Journal, 2016. 53(4).	Conference paper