# INPLASY PROTOCOL

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**Support:** No.

**Review Stage at time of this submission:** Data extraction.

**Conflicts of interest:** None declared.

## Meta-analysis of cognitive level of Benign epilepsy of childhood with centrotemporal spikes (BECT) in China evaluating by Chinese Wechsler Intelligence Scale

Wu, XF[1]; Zhu, ZH[2]; Zhang, XG[3].

**Review question / Objective:** Chinese Wechsler Intelligence Scale was used to evaluate the cognitive level of Chinese BECT. The control group was healthy children or children with atypical BECT.

**Condition being studied:** BECT is the most common age-dependent idiopathic focal epilepsy syndrome in children, accounting for about 15% to 25% of children's epilepsy. The onset age ranges from 3 to 14 years old, with a high incidence of 9 to 10 years old. Previous scholars believed that BECT had a good outcome and did not affect children's cognition. However, in recent years, more and more studies have shown that children with BECT have lower cognition than normal healthy children, especially children with atypical BECT. There are also a large number of studies in China using Wechsler Intelligence Scale to compare the cognitive level of children with BECT and healthy children, as well as the cognitive level of children with typical BECT and atypical BECT. No meta-analysis has been conducted to synthesize the results.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 June 2022 and was last updated on 15 June 2022 (registration number INPLASY202260065).

## INTRODUCTION

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affect children's cognition. However, in recent years, more and more studies have shown that children with BECT have lower cognition than normal healthy children, especially children with atypical BECT. There are also a large number of studies in China using Wechsler Intelligence Scale to compare the cognitive level of children with BECT and healthy children, as well as the cognitive level of children with typical BECT and atypical BECT. No meta-analysis has been conducted to synthesize the results.

## METHODS

**Search strategy:** terms：Chinese Keyword：“儿童良性癫痫伴中央颞区棘波”“伴中央颞区棘波的儿童良性癫痫”“良性癫痫伴中央颞区棘波”“儿童良性Rolandic癫痫“，“认知”“心理”“记忆”“智力“”注意“”语言“. English Keywords:“Benign epilepsy of childhood with centrotemporal spikes “, “Benign Rolandic epilepsy” “cognitive”. databases：Wanfang, VIP, CNKI and biomedical literature and Pubmed database.

**Participant or population:** A Chinese child diagnosed with BECT had the cognitive data assessed by the Chinese Wechsler intelligence Scale.

**Intervention:** Chinese Wechsler Intelligence Scale (WISC-CR).

**Comparator:** Healthy children from the same hospital who were matched with the case group for age and sex, or diagnosed atypical BECT.

**Study designs to be included:** Case-control studies or cohort studies.

**Eligibility criteria:** Exclusion criteria: 1. The diagnosis was not BECT; 2. The cognitive assessment method is not the Chinese Wechsler Intelligence Scale (WISC-CR); 3. The healthy control group was set unreasonably, and the healthy children were not matched by age and gender.

**Information sources:** Two different physicians searched Chinese common databases (CNKI, Wanfang, VIP, biomedical literature) and Pubmed according to keywords, and the research objects were Chinese children with BECT evaluated by WISC-CR. Further data tracking was carried out according to the references of the literature searched.

**Main outcome(s):** 1. The verbal IQ (VIQ), performance IQ (PIQ) and full IQ (FIQ) of BECT children were compared with those of healthy children. 2. Comparison of verbal IQ (VIQ), performance l IQ (PIQ) and full IQ (FIQ) between children with typical BECT and children with atypical BECT.

**Quality assessment / Risk of bias analysis:** Using The Newcastle-Ottawa Scale to evaluate the Literature quality, and bias was analyzed by meta-regression.

**Strategy of data synthesis:** Stata15 software was used for data analysis.

**Subgroup analysis:** No.

**Sensitivity analysis:** 1. Controversial studies by two physicians are evaluated by a third physician. 2. Low-quality studies are excluded. 3. Appropriate statistical methods or models will be used to analyze data.

**Language:** Chinese and English.

**Country(ies) involved:** China.

**Keywords:** Benign epilepsy of childhood with centrotemporal spikes; Benign Rolandic epilepsy; cognitive.

**Contributions of each author:**
Author 1 - Xiaofang Wu.
Author 2 - Zhonghai Zhu.
Author 3 - Xiaoge Zhang.