



Congenital anomalies in children born after assisted reproduction in the Czech Republic: Population based study.

Antonín Šípek Jr^{1,2}; Vladimír Gregor ^{2,3}; Antonín Šípek ^{2,3,4,5}; Jan Klaschka ^{6,7}; Marek Malý ^{6,8}; Jitka Jírová ⁹

- Institute of Biology and Medical Genetics, First Faculty of Medicine, Charles University, Prague, Czech Republic 1.
 - Department of Medical Genetics, Thomayer Hospital, Prague, Czech Republic, 2.
 - Department of Medical Genetics, Pronatal Sanatorium, Prague, Czech Republic,
 - Institute of Medical Genetics, 3rd Faculty of Medicine, Charles University, Prague, Czech Republic, 4.

5. GENNET, Prague, Czech Republic,

- 6. Institute of Computer Science of the Czech Academy of Sciences, Prague, Czech Republic,
- Institute of Biophysics and Informatics, First Faculty of Medicine, Charles University, Prague, Czech Republic, 7.
 - National Institute of Public Health, Prague, Czech Republic, 8.
 - Institute for Health Information and Statistics, Prague, Czech Republic. **9**.

Czech Republic - Surveillance

- 50+ years of history; the registry was founded in 1964.
- Population-wide coverage; reporting is compulsory.
- Data are stored in the State Institute of Health • Information and Statistics (ÚZIS ČR)

Methods

Data source: National registry of Reproductive Health of the Czech Republic

ICD-10 – Studied diangostic groups

Congenital malformations of the nervous system Q00-Q07 Q10-Q18

- Multiple sources (geneticists, neonatologists, • paediatricians, other specialists).
- Registry includes cases diagnosed in livebirths, stillbirths • and prenatally diagnosed cases.
- Termination of pregnancy legal (up to 24th GW) ۲
- Main classification system: ICD-10 (national) ۲

- Data: 2013 2017
- Congenital anomalies group: (Q00-Q99)
- Statistical analysis was performed by Pearson's chi-square test and by logistic regression analysis.
- *p* values lower than 0.05 were considered statistically significant
- Congenital malformations of eye, ear, face and neck Congenital malformations of the circulatory system Q20-Q28
- Congenital malformations of the respiratory system Q30-Q34
- Cleft lip and cleft palate Q35-Q37
- Q38-Q45 Other congenital malformations of the digestive system
- Q50-Q56 Congenital malformations of genital organs
- Congenital malformations of the urinary system Q60-Q64
- Congenital malformations and deformations of the musculoskeletal system Q65-Q79
- Q80-Q89 Other congenital malformations
- Chromosomal abnormalities, not elsewhere classified Q90-Q99

Frequency of congenital anomalies (in %) in IVF children and non-IVF children, Czech Republic, 2013-2017



0,5 **p=0.019** 0,08 0,04 Non-IVF IVF





Q50–Q56







Q80-Q89







http://www.vrozene-vady.cz/

Contact: antonin.sipek@lf1.cuni.cz



Disclosure:

- The study is based on the official data from the National Registry of Congenital Anomalies and
- National Registry of Assisted Reproduction of the Czech Republic.
- The study is Supported by Ministry of Health of the Czech Republic, RVO project: "Thomayerova 2. nemocnice - TN, 00064190".
- The results of this study were not yet published. 3.