Abdominal wall defects in the Czech Republic: Frequency and prenatal diagnostics

Antonín Šípek Sr[1,2,3], Vladimír Gregor[1,2], Antonín Šípek Jr[1,4,5], Jan Klaschka[6,7], Marek Malý[6,8], Jitka Jírová[9]

1) *Department of Medical Genetics, Thomayer Hospital, Prague, Czech Republic,*
2) *Department of Medical Genetics, Pronatal Sanatorium, Prague, Czech Republic,*
3) *GENNET, Prague, Czech Republic,*
4) *Institute of Biology and Medical Genetics, First Faculty of Medicine, Charles University, Prague, Czech Republic,*
5) *Institute of Medical Genetics, Third Faculty of Medicine, Charles University, Prague, Czech Republic,*
6) *Institute of Computer Science of the Czech Academy of Sciences, Prague, Czech Republic,*
7) *Institute of Biophysics and Informatics, First Faculty of Medicine, Charles University, Prague, Czech Republic,*
8) *National Institute of Public Health, Prague, Czech Republic,*
9) *Institute of Health Information and Statistics of the Czech Republic, Prague, Czech Republic.*

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Outline and Methodic of the study

Omphalocele and Gastroschisis are the most important anomalies from the group of Abdominal Wall Defects (AWD). The main goal of our study was to evaluate the changes in the frequency of these anomalies in the Czech Republic and the overall effectiveness of their prenatal diagnostics.

For this study, we have used data from the National Registry of Congenital Anomalies of the Czech Republic. We analyzed the numbers of omphalocele (Q792) and gastroschisis (Q793) cases in the newborns and prenatally diagnosed cases in the Czech Republic (1994-2018). We also evaluated the average week of gestation at the time of positive prenatal diagnosis.

About us

National Registry of Congenital Anomalies of the Czech Republic (NRCA)

- Unofficial monitoring in former Czechoslovakia started in **1961**
- Official monitoring started on 1st of January **1964**
- **First stage (1964 – 1974)** – only **36** selected diagnoses of congenital anomalies (CA) were registered
- **Second stage (1975 – 1993) – 60** diagnoses of CA registered
- **Third stage: (1994 – 2015) – all cases** in terminations of pregnancies (TOPs), stillbirths and live births are registered (age limit for reporting = **15 years**)
- **Fourth stage 2016 – now:** no age limit, additional diagnoses (rare diseases), electronic registration, OMIM and Orphanet codes

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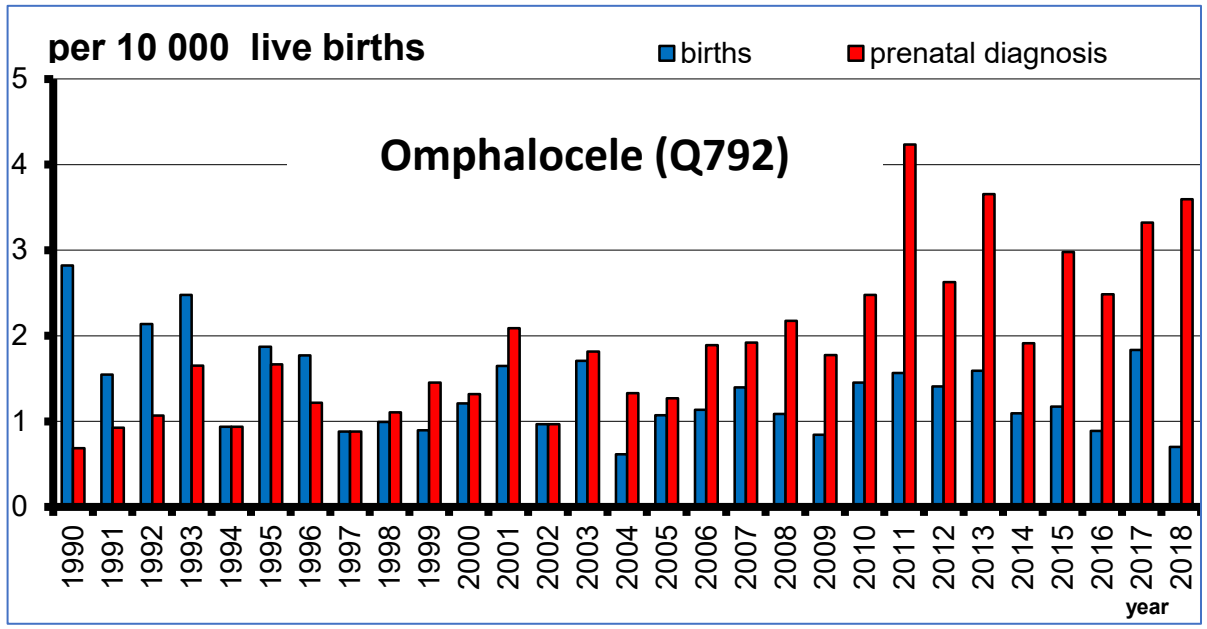
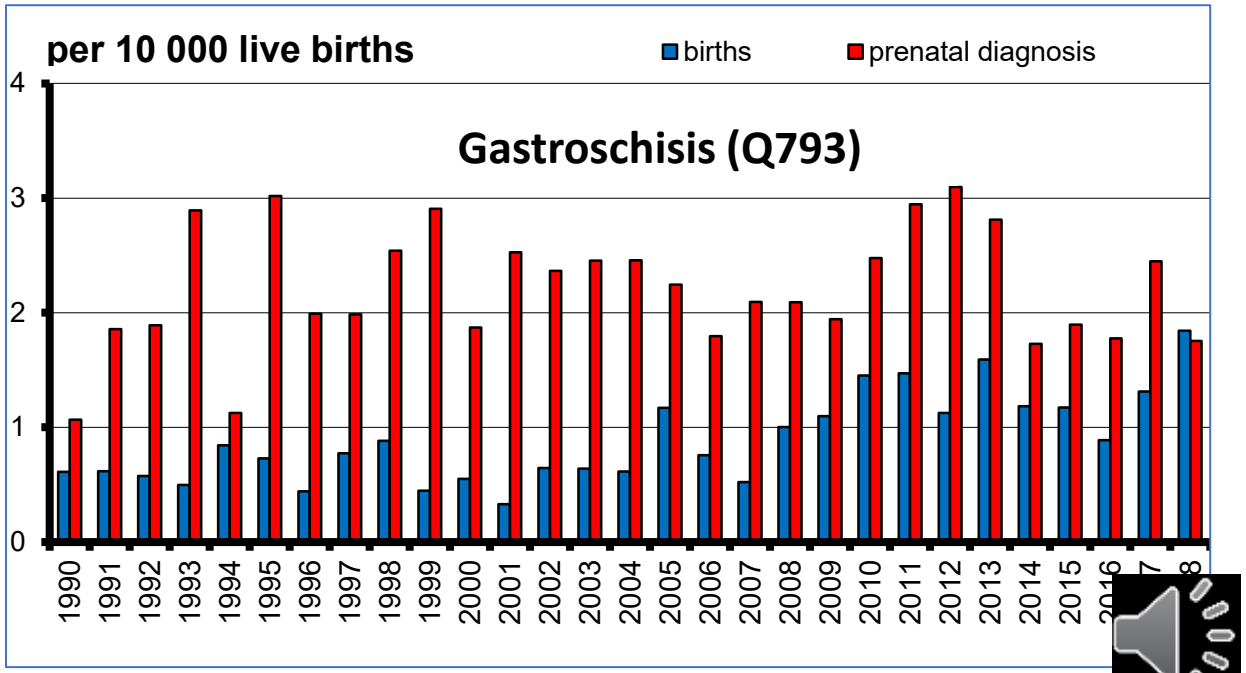
Incidence trends



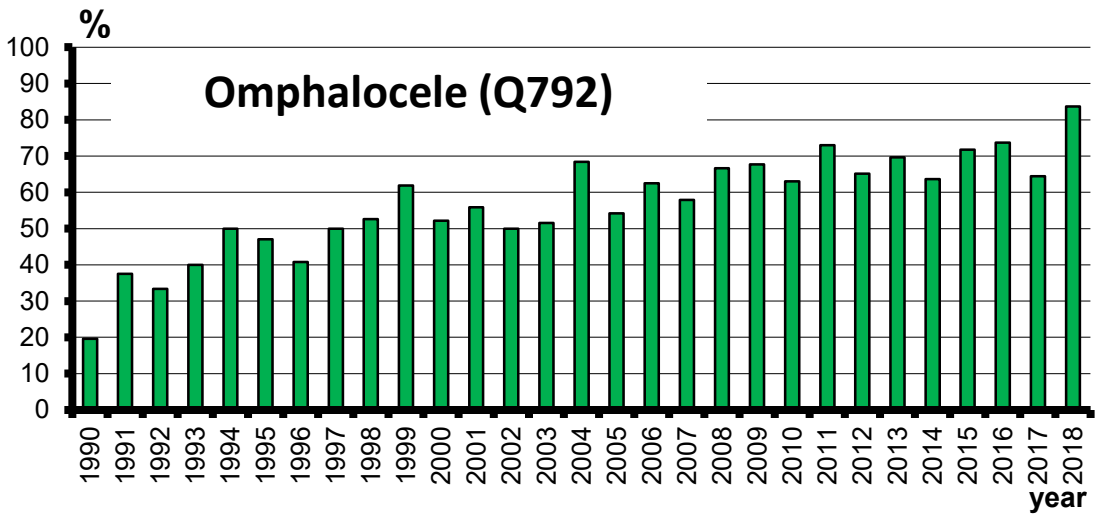
The improvement of ultrasound prenatal diagnostics enabled the successful detection of AWDs in earlier gestation weeks. The overall incidence of both anomalies is however increasing in the Czech Republic, as more and more mothers prefer surgical intervention over the termination of the pregnancy.

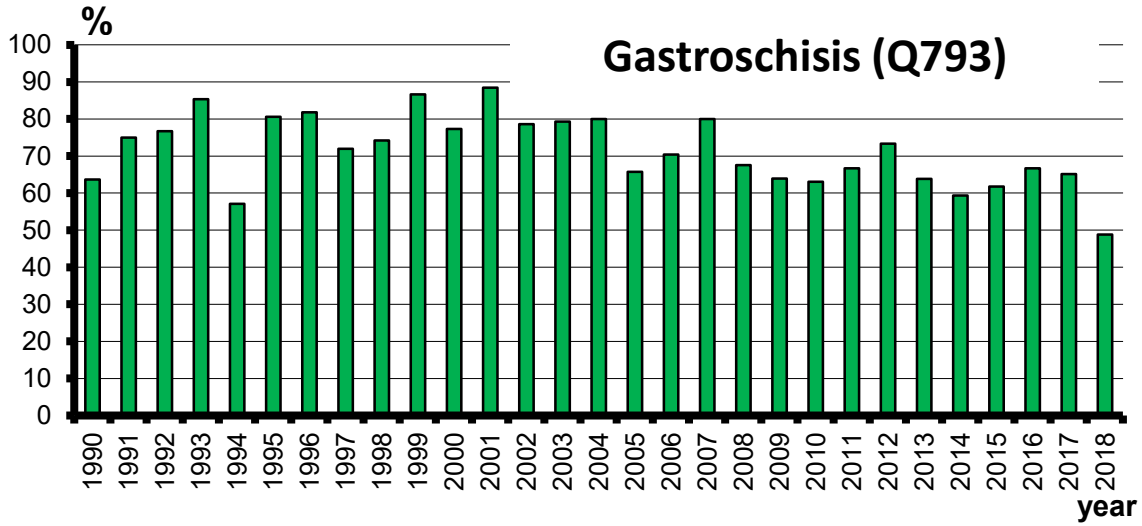
The total incidence of omphalocele was 3.32 per 10.000 live births (1.39 in births and 1.93 in prenatally diagnosed cases). For gastroschisis, the total incidence was 3.09 (0.90 in births and 2.19 in prenatally diagnosed cases). The total frequency of both anomalies increased during the selected period in the Czech Republic, the increase is statically significant ($p<0.05$).



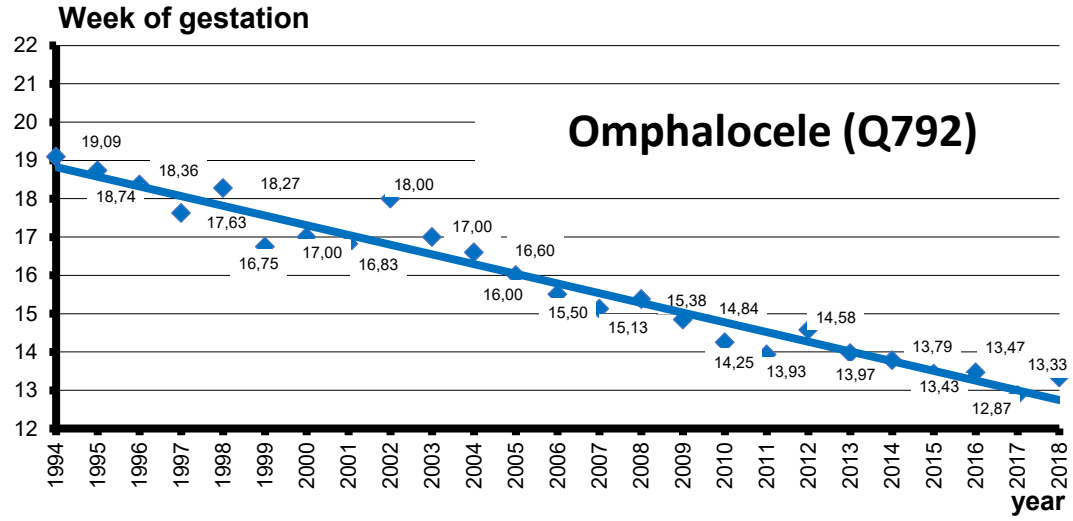
Prenatal diagnostics

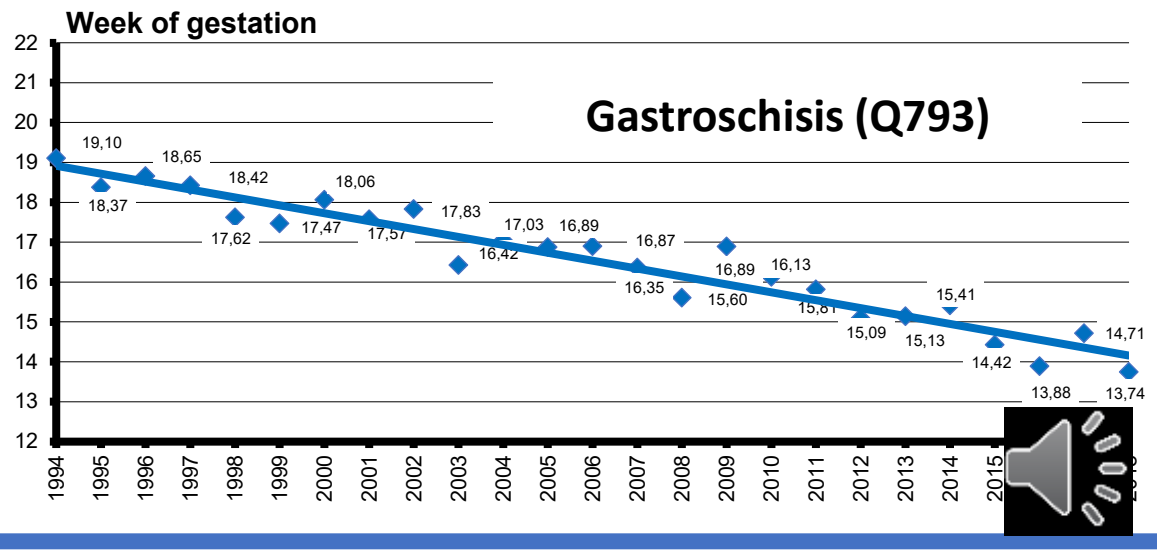
Percentage of terminated cases (ETOPFA) out of all diagnosed cases (prenatally + postnatally).





Average week of gestation at the time of positive prenatal diagnosis





Thank you

Thank you for attention.

Shall you have any questions or comments you may contact me on registrvvv@vrozene-vady.cz

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