

Maternal age and congenital anomalies: 11 years of the national registry of congenital anomalies



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BACKGROUND

Congenital anomalies can be defined as structural or functional anomalies that occur during pregnancy and can be identified prenatally, at birth or later in life.

In Portugal, since 1997 the Nacional Registry of Congenital Anomalies (RENAC), a population-based registry, is a strategic instrument in surveillance and improve knowledge in this field.

The aim of this study is to investigate whether maternal age is associated with congenital anomalies in the baby.

METHODS

A descriptive and retrospective study for the period 2000-2010, was carried out using the data from RENAC. Prevalence rates were calculated using the number of cases reported in newborns, stillbirths of at least 20 weeks gestation and in induced abortions related to congenital malformations. The statistical significance of the association was studied using the chi-square test with a 5% significance level.

Congenital Malformation ICD-10	Age of Mother					p value
	<20	20-29	30-34	35-39	>=40	
Nervous system	10,9	10,6	8,6	10,4	10,3	<0,001
Eye, Ear, Face and Neck	9,9	7,4	7,5	8,3	8,8	0,016
Circulatory system	28,7	34,5	35,2	40,6	52,4	<0,001
Respiratory system	1,6	2,1	1,5	2,1	2,6	0,395
Clef lip and Clef palate	7,6	5,5	4,9	4,6	4,4	<0,001
Digestive system	8,8	6,2	5,9	7,0	8,2	0,038
Genital organs	7,3	7,0	6,8	6,4	6,2	0,001
Urinary system	14,1	18,4	18,0	19,2	17,1	<0,001
Musculoskeletal system	33,0	27,6	24,9	30,3	35,3	<0,001
Other congenital malformation	5,8	5,4	4,3	5,7	5,9	0,046
Chromosomal abnormalities	5,2	6,8	10,1	28,4	83,6	<0,001

Rates per 10 000 births

Figure 1 – Congenital malformation rates by mother age, 2000 - 2010

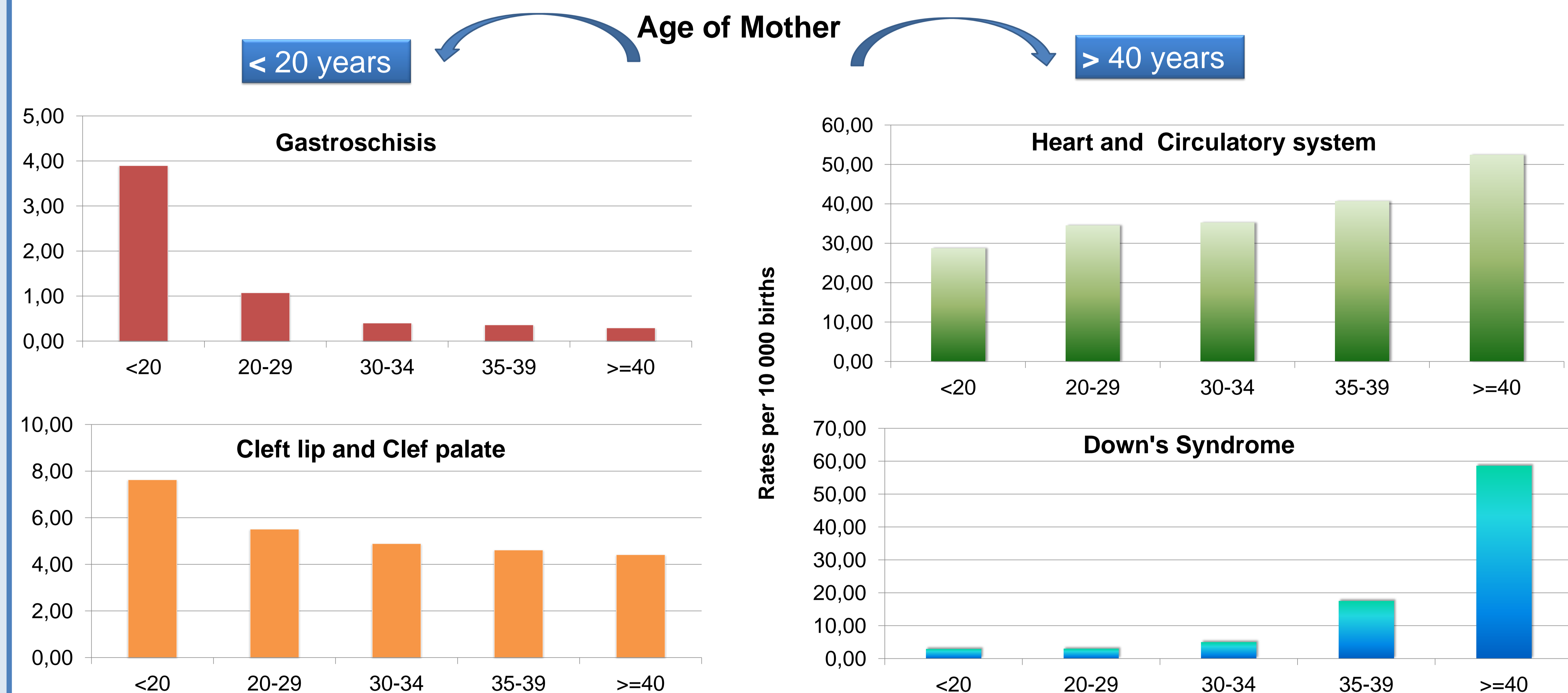


Figure 2– Selected congenital malformation by mother age, 2000 - 2010

Conclusions

- Clinical and public health interventions are needed to give special attention to young mothers and reduce risk factors of non-chromosomal anomalies.
- Given the increase in maternal age and its association to some subgroups of CA specific primary prevention programs should be developed.
- A surveillance system as RENAC is a strategic instrument in surveillance and improve knowledge in CA namely regarding information on risk factors.