

Interventional methods in pediatric cardiology in a 20-year period

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Development of interventional cardiology in treating heart diseases in children in the Reference Centre for Pediatric Cardiology¹ in the last 20 years (1996 - 2015) is presented.

Constant growth in the number of heart catheterizations (from 160 to 241) is followed by a relatively higher growth in the number of interventional catheterizations (from 12.5% to 38.1%). While the number of catheterizations (**Table 1**) has increased by 50% (160 to 241 =1,5), the number of interventional catheterizations has increased by more than 200% (12.5 – 38.1% > 3). In our conditions these data point to an absolute increase of interventional treatment when compared to the diagnostic heart catheterization itself, despite the fact that the latest diagnostic methods are still not applied sufficiently (MSCT, MRI,

TABLE 1. Development of invasive diagnostics and of interventional heart catheterization in the last 20 years (1996-2015) in the Reference Centre for Pediatric Cardiology University Hospital Centre Zagreb.

Year	Number of heart catheterization	Number of interventions	percentage of interventions in the overall number of catheterizations	estimated number of interventions based on the number of interventions in the previous year
1996	160	20	12,5%	-
1997	91	17	18,9%	11
1998	90	24	26,8%	17
1999	168	16	9,5%	45
2000	186	21	11,3%	18
2001	186	41	22,0%	21
2002	176	27	15,3%	39
2003	161	25	15,5%	25
2004	190	48	25,4%	30
2005	170	32	18,8%	43
2006	194	52	26,8%	37
2007	182	60	33,0%	49
2008	201	65	32,3%	66
2009	224	70	31,3%	72
2010	206	68	33,0%	66
2011	230	78	33,9%	76
2012	210	72	34,3%	71
2013	194	62	31,6%	67
2014	235	83	35,3%	75
2015	241	92	38,1%	85
Overall	3695	973	26,33%	

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3D ECHO and other). Providing we decrease the number of diagnostic catheterizations by applying the mentioned new diagnostic methods, and based on the expected number of interventional catheterizations curve, the 50% level may be expected in about 5 years. All age groups from newborns, including prematures, to the age of 18 are represented. That implies a tremendous body mass span, with the lowest birth mass being 2000 grams at the time of diagnostic catheterization, and 2400 grams at the time of interventional catheterization. In the last twenty years 3695 heart catheterizations have been performed, 937 of which were interventional (averagely 26%).

In interventional procedures we employed 12 different surgical procedures, thus equaling the developed pediatric cardiology centers in Europe. Cardiac surgeons and anesthesiologists also participate in the work of pediatric cardiologists. Along with statistic data we are also presenting various interventional skills in pediatric cardiology, from balloon atrioseptostomy to stent implantation.

LITERATURE 

1. Malčić I, Kniewald H, Sarić D, Gjergja Z, Dasović-Buljević A, Anić D, et al. [The development of interventional catheterisation in the referral centre for pediatric cardiology of the Republic of Croatia--a retrospective study 1996-2009]. *Lijec Vjesn.* 2011;133(7-8):241-9. **PubMed:** <http://www.ncbi.nlm.nih.gov/pubmed/22165190>