Use of AED in Cardiac Arrests in the Prague city between 2012 and 2018

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INTRODUCTION

Registry of the cardiac arrests in the Prague city is recording cases from the year 2003. AED was used and recorded for the first time in the year 2012. We had analysed data of all cardiac arrest when the AED was used and compared them to the place of onset and outcome.

METHODOLOGY

Retrospective analysis of the registry of the cardiac arrests in the capital city of the Czech Republic which were dealt with by Prague EMS from the year 2012 to 2018. The data in the registry is collected in the scope and structure that corresponds to the Utstein Protocol, valid at the time of data collection. We used a Pearson chi square test to compare the groups.

RESULTS

Prague EMS dealt with 4043 cardiac arrest in the period 2012 to 2018 but the AED was used only in 89 cases (2.2%). The number of cases where the AED was used is increasing from the 2012 to 2018 (n=1/5/13/10/13/14/33).

	Place of onset					
	AED	At home	Elsewhere	Work	Public place	Healthcare
	In total	10	4	1	64	10
Used	89	2264	309	18	1142	221
Not used	3954					

There are statistically significant differences in the AED use between the groups ($p < 0.01$). The AED is used more often on a public places than at home (OR 12.6879, CI 95% 6.4908 to 24.8016, $p < 0.0001$) and also more often in a healthcare facility than at home (OR 10.2443, CI 95% 4.2180 to 24.8804 $p < 0.0001$).

Place of onset	Cerebral Performance Category (n)				Exitus on site
	1	3	4	5	
Home	1	1	1	3	4
Public	24	1	0	17	27
Healthcare	0	0	0	3	6

We did not find any differences in the outcome associated with the use of an AED both at home or on public places ($p = 0.367$).

CONCLUSION

The use of AEDs in the city of Prague is increasing every year. One of the factors that might influencing it is improving cooperation between Prague Emergency Medical Services and first responders (Police and Fire Brigade). The AED is more often used on a public places, which supports the projects of public access defibrillators. We need to collect more cases of cardiac arrests with the use of defibrillator to find out the impact on outcome.

ABSTRACT

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