Frequency of different types of stroke in pregnancy and puerperium: case studies from Moscow hospitals in 2017

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Background and Aim

Pregnancy and puerperium period are associated with an increased risk of stroke. Due to the various possible causes of cerebrovascular complications in women related and unrelated to pregnancy their diagnostic become challenging problem for neurologists and obstetricians. In this study we evaluated frequency, risk factors and causes of strokes in 3 obstetric hospitals in Moscow in 2017.

Materials and Methods

Prospective analysis (etiology, risk factors, treatment and outcome) of ischemic (IS) and hemorrhagic (HT) stroke, transient ischemic attack (TIA), cerebral venous thrombosis (CVT) cases in women (n=16177) during pregnancy and postpartum period in 3 Moscow obstetric hospitals in 2017 was conducted.

Results

The frequency of ischemic stroke was 2 per 16177 deliveries (0.012%): 1 case in patient with sever preeclampsia with PRES and 1 due to amniotic fluid embolism. For hemorrhagic stroke – 1 patient with arteriovenous malformation per 16177 (0.006%). For CVT – 3 per 16177 (0.019%) and all patients had hereditary thrombophilia and onset in first trimester of pregnancy. Evaluation of TIA was carried out only in one hospital and observed in 3 patients with different risk factors for young stroke per 2715 (0.110%).

	Hospital 1	Hospital 2	Hospital 3	Total			TIA	IS	HT	CVT
Total number of birth in 2017	6427	7035	2715	16177	Pregnancy-related risk factors	Preeclampsia/Eclampsia	-	1	-	-
TIA	No data	No data	3	3		Amniotic fluid embolism	-	1	-	-
Ischemic stroke	1	1	0	2	Other risk factors of stroke in young adults	Recurrent miscarriage/Antiphospholipid syndrome	1	-	-	-
Hemorrhagic stroke	0	0	1	1		Arterial hypertension	-	-	1	-
Cerebral venous thrombosis	1	1	1	3		Inherited thrombophilia	3	-	-	3
Total number of cerebrovascular disorders	2	2	5	9		Patent foramen ovale	1	-	-	-
						Arteriovenous malformation	-	-	1	-

Conclusion

Observed cases of ischemic stroke were associated with pregnancy-related complications, while TIA, hemorrhage and CVT were associated other risk factors of young stroke (hematological disorders and vascular abnormalities).