

Cerebral veins thrombosis in oral contraceptive (OCP) users

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BACKGROUND

Cerebral venous thrombosis (CVT) presents a dangerous disease with a difficult diagnosis. The diagnosis is made difficult because of its nonspecific and nonsensitive subacute presentation and broad differential diagnosis. Thrombosis of superficial and deep cerebral veins along with the venous sinuses appears to be the only thrombosis at this unusual site that has a strong sex predilection, with a ratio 3:1 favouring woman. Oral contraceptives have been linked to an increased incidence of thromboembolic events and recent studies have suggested that there is an increased risk of CVT in OCPs users and during the postpartum period.

The aim of the study was to analyze the cases of CVT according to age, sex, hormonal status and thrombophilia.

MATERIAL AND METHODS

We present 8 cases of cerebral venous thrombosis in young women (with ages between 18.7-39.3, mean 28.1 years old) who were hospitalised between april 2004 to october 2005. All patients underwent CT/MRI and DSA venography. Three patient underwent subsequent treatment by Actilyse® (rt-PA), five were treated only by low-molecular weight heparins and warfarin. All medical records were reviewed, patients (according to their health status) were interviewed and a detailed history was taken. None of the patients were smokers, 7 patients used third generation oral contraceptives with gestagens, one used a gestagen only pill. The presence of factor V Leiden, prothrombin G20210A, PAI-1 and MTHFR C677T as well as the level of protein C,S, antithrombin III, factor II and VIII was evaluated.

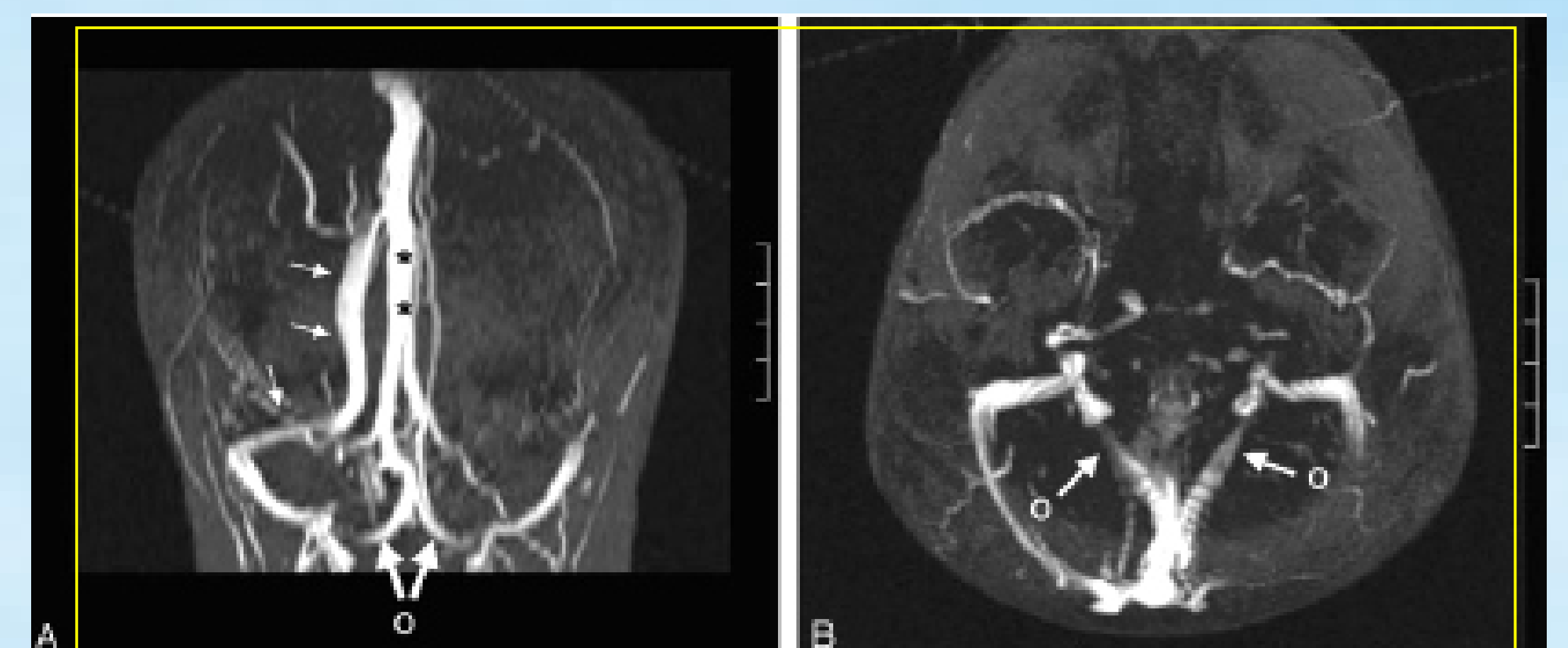
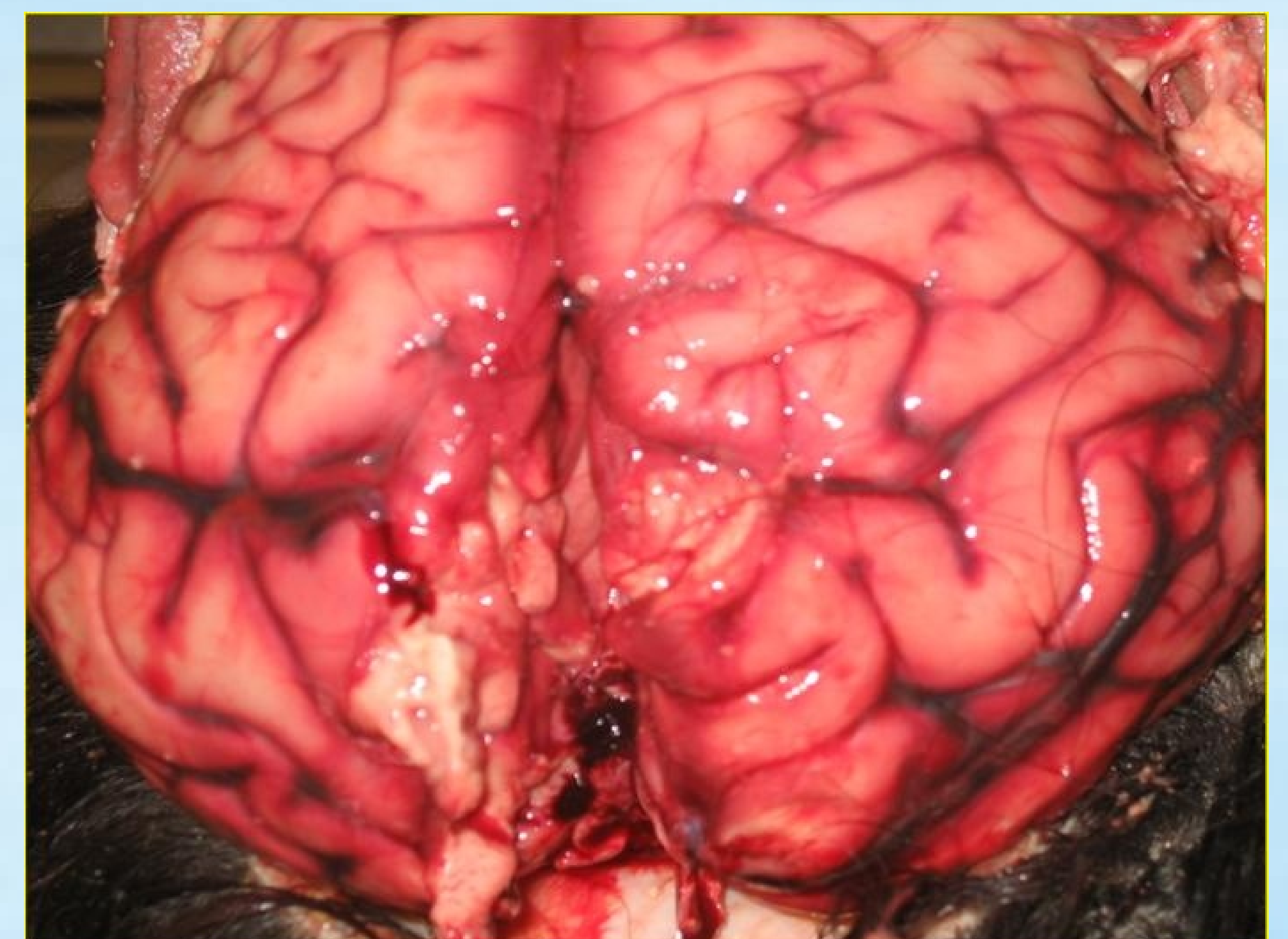
RESULTS

The most common symptoms of CVT include headache (100%), vertigo (87.5%), left paresis (50%). CT and MRI showed different types of parenchymal lesions (infarction 50%, right hemisphere lesion 37.5% and haemorrhage 25%). DSA venography confirmed the site of occlusion in

superior sagittal sinus (62.5%), right lateral sinus (62.5%), and cortical veins (62.5%), other (left lateral sinus, deep venous sinus, jugular and cerebular veins). The result of treatment was favourable in 7 cases resulting in complete recovery. One patient died inspite of an emergency thrombolysis. We found 3 cases of homozygous form of MTHFR and 4 cases of heterozygous form of this mutation. Two patients had PAI-1 homozygous mutation. Four patients had an elevated level of factor VIII.

CONCLUSION

Cerebral venous thrombosis presents as a serious complication of oral contraception. Coexisting risk factors are usually involved in the onset of CVT. Severe clinical decits can occur as a result of cerebral venous thrombosis, early application of anticoagulation or direct endovascular thrombolytic therapy improve the clinical outcome.



Occluded sinus/vein	H.A.	K.I.	K.K.	K.M.	L.J.	M.Z.	Za.L.	Zu.L.	Mean
Superior sagittal sinus	+		+	+	+		+		62.5
Lateral sinus left	+				+	+			37.5
Lateral sinus right	+		+	+	+		+		62.5
Straight sinus			+	+	+				37.5
Deep venous system			+		+	+			37.5
Cortical veins		+	+	+	+	+			62.5
Jugular veins	+		+					+	37.5
Cerebral veins						+			12.5