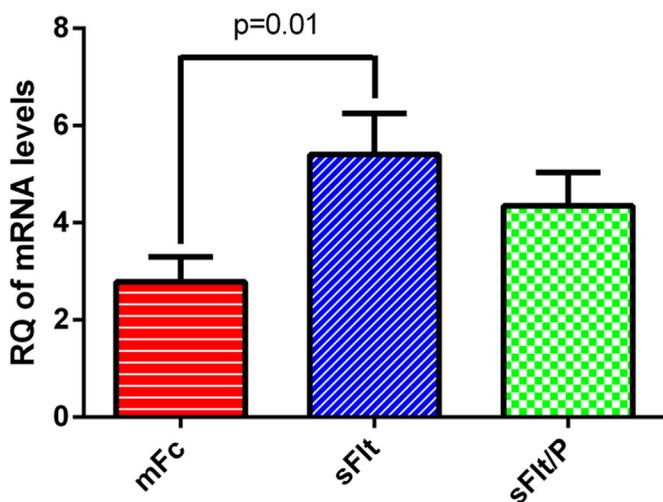


observed in this animal model of fetal programming. These findings support a role for LOX-1 in the fetal programming of adult diseases induced by preeclampsia, and of its involvement, at least partially, in the beneficial effects of maternal treatment with pravastatin.

LOX-1 Expression at 6 Months



77 Thrombotic thrombocytopenic purpura: risks of pregnancy following recovery

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OBJECTIVE: Thrombotic thrombocytopenic purpura (TTP) is a rare, acute disorder of systemic microvascular thrombosis (incidence: 2cases/10⁶/year). Most patients are women, many of reproductive age. Pregnancy is a recognized risk factor for triggering acute episodes. However pregnancy outcomes following recovery have been described in only six case reports. Therefore, we aimed to determine maternal and perinatal outcomes following recovery from TTP.

STUDY DESIGN: The Oklahoma TTP Registry is a prospective, population based inception cohort. Diagnosis of TTP was confirmed by severe ADAMTS13 deficiency (activity <10%). Pregnancy outcomes following recovery from TTP were documented by face-to-face interviews and medical records. Major complications were defined as TTP recurrence, pre-viable fetal loss, delivery <34 weeks, severe pre-eclampsia, other serious maternal medical complications, and NICU admission.

RESULTS: 74 patients had severe acquired ADAMTS13 deficiency, 1995-2013; 57 (77%) were women; 46 (81%) survived their initial episode; 10 have had 15 subsequent pregnancies (Table). 12 (80%) pregnancies resulted in live born infants who have become healthy children. 5 women had major complications in 6 pregnancies; none died or had significant sequelae. The major complications were: 2 women (2 pregnancies) had recurrent TTP post-partum; 1 woman also had severe preeclampsia; both recovered with appropriate treatment. 1 woman developed severe pre-eclampsia in both of her pregnancies. 1 woman had a 20 week fetal loss. 1 woman had a severe lupus flare. 3 infants (25%) required NICU admission; 2 were related to the timing of elective delivery, not to a pregnancy complication.

CONCLUSION: Pregnancy following recovery from TTP may have increased risk for complications, including recurrent TTP. However these risks are manageable and 80% of pregnancies resulted in healthy children. We conclude that these women should not be discouraged from future pregnancies.

Patients and pregnancies after TTP recovery

Woman	Maternal Complication	Neonatal Complication
1	Mild pre-eclampsia	None
	Mild pre-eclampsia, TTP recurrence	None
2	Severe pre-eclampsia, TTP recurrence	None
3	20 week fetal loss	None
4	9 week spontaneous abortion	None
	9 week spontaneous abortion	None
5	Severe pre-eclampsia, 33 week delivery	NICU admission
	Severe pre-eclampsia	None
6	Lupus flare at 23weeks	NICU admission
7	None	None
	None	None
8	None	NICU admission
	None	None
9	None	None
10	None	None

78 Maternal smoke during pregnancy programs for bone disturbance in offspring

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OBJECTIVE: Epidemiological studies have focused on the deleterious effects of smoking on human health. Of particular the number of epidemiological studies reported that cigarette smoke decreases bone mineral density (BMD) and increases the risk of bone fracture and is a risk factor for osteoporosis. Maternal smoking during pregnancy results in a variety of adverse developmental outcomes with intrauterine growth restriction. Moreover, maternal smoking is associated with future onset of attention deficit hyperactivity disorder, cardiovascular diseases and obesity in offspring. However, little is known about the effect of maternal smoke during pregnancy on bone mineral density in offspring.

STUDY DESIGN: Pregnant CD-1 mice were exposed to cigarette smoke (2 cigarettes/day, 5 days/week) (Exposed group) or sham exposed (Non-exposed group) throughout the pregnancy. After delivery, nursing dams and offspring were kept together in individual cages for 28 days, which corresponds to the lactation period. At 4 and 8 weeks, the fourth lumbar vertebral body from each of offspring was scanned with micro-CT apparatus. Trabecular parameters including bone volume fraction (BV/TV, %), thickness (mm), separation (mm), and number (1/mm) were evaluated. The BMD was also measured.

RESULTS: At 4weeks, trabecular bone volume fraction, thickness, and number, and the BMD were significantly lower, but trabecular separation was higher in offspring from 2 cigarettes smoke dams compared with offspring from control dams. At 8 weeks, similarly, trabecular bone volume fraction, thickness, and the BMD were significantly lower in offspring from 2 cigarettes smoke dams compared with offspring from control dams, but no difference in trabecular separation and number were found between two groups.

CONCLUSION: In this study, maternal smoking during pregnancy decreased the bone mineral density and disturbed the micro-architecture of bone in offspring. These results will provide a great source to inform the importance of quitting smoking during pregnancy.