

Introduction

Moyamoya disease is a progressive bilateral steno-occlusive disease of the terminal internal carotid arteries accompanied by development of collateral moyamoya vessels. It affects a younger population and thus, women in the reproductive years. We aim to define the practices, comorbidities and outcomes of pregnancies in women with moyamoya disease.

Methods

We conducted a retrospective review of 39 patients and 46 pregnancies at Stanford Health Care/Lucile Packard Children's Hospital from our institutional database by surveys and chart review.

Results

Thirty-nine women with moyamoya disease had a total of 46 successful pregnancies. There were 31 single pregnancies, of which 10 had single vaginal deliveries (VDs), 4 women had 2 each VDs and 1 woman had 4 VDs; 1 woman had a cesarean section. Twenty-one had unknown mode of deliveries and 2 were waiting to deliver. Their ages at diagnosis ranged 13 to 42 years. Twenty-four patients presented with stroke at the time of their moyamoya diagnosis, 22 with transient ischemic attacks, 21 with headaches, 6 with seizures and 2 with hemorrhage. Two pregnancies were complicated by hypertension and pre-eclampsia each. Pre-treatment mRS scores were 1 in 17, 2 in 7, 3 in 4, and 4 in 1 at the time of presentation with moyamoya disease, and post-treatment scores were 0 in 17, 1 in 9, and 3 in 1, which did not change after childbirth.

Conclusions

Our study shows that the trend in the USA is toward vaginal delivery in patients with moyamoya disease, as opposed to the studies based in Korea and Japan. We also show that both the patients and babies do well. The complication rate is minimal, including no strokes in the peripartum period, and we would advocate vaginal deliveries in the absence of any other contraindications.

Learning Objectives

By the conclusion of this session participants should be able to:

1. Identifying stroke risk in Moyamoya patients during pregnancy
2. Safe peripartum practices in patients with moyamoya disease