

# A 16-Year Retrospective Review of Moyamoya Patient Demographics and Perioperative Encounters at a Tertiary Pediatric Hospital

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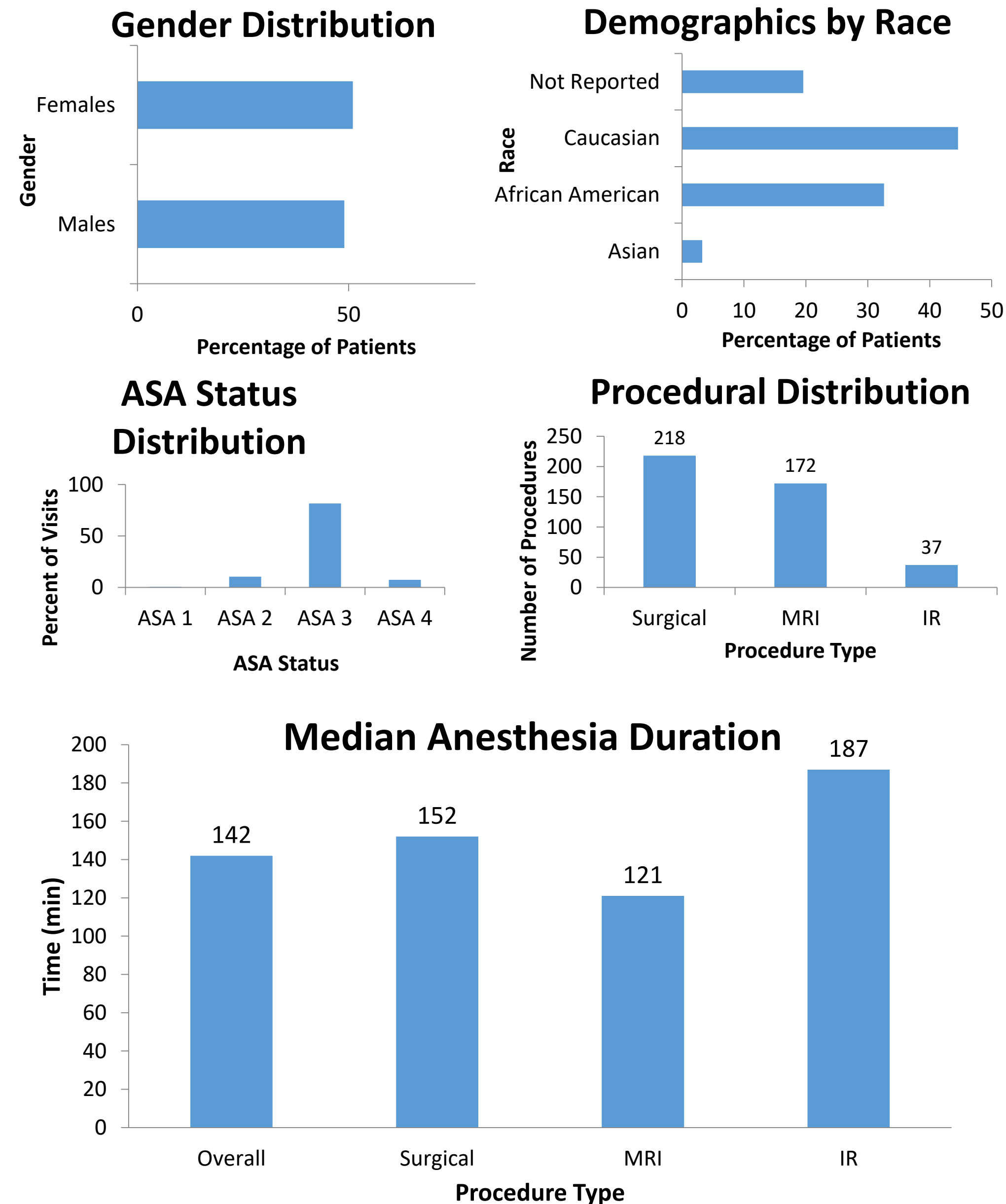
## Introduction

- Moyamoya disease is a chronic progressive cerebrovascular disorder resulting in occlusion of intracranial arteries
- Cause is unknown
  - 10% of cases are familial
  - Higher incidence in those of Japanese descent
- The brain creates anastomoses to compensate for decreased blood flow
  - Puff of smoke appearance
- Moyamoya patients are at increased risk for stroke
- Anesthetic management typically centers around maintaining normotensive blood pressure and cerebral perfusion
- There are few studies of Moyamoya perioperative data
- We aimed to analyze 16 years of perioperative data to investigate Moyamoya patient demographics, the procedures they undergo, and total anesthetic exposure times.

## Methods

We analyzed the demographic and perioperative data extracted from our hospital's anesthesia information management system and electronic health record system databases of Moyamoya patients from January 2001 to December 2016.

## Results



## Results (continued)

- Data were obtained on 477 anesthetics for 92 Moyamoya patients.
- At the first visit, the median age was 8.9 years old (interquartile range [IQR]: 3.8-14.0) and the median weight was 35.1 kg (IQR: 16.0, 52.2).
  - 47 females, 45 males
  - # of anesthetic exposures: 1-37
  - ASA 1 2
  - ASA 2 50
  - ASA 3 389
  - ASA 4 35
- The most common surgical procedure was craniotomy for pial synangiosis (30 cases, 13.8%), the most common MRI was of the brain (139, 80.8%), and the most common IR procedure was cerebral angiogram (26, 70.3%).
- The median overall anesthesia time for Moyamoya patients was 142 minutes (IQR: 85-185). More specifically, the median anesthesia time in the operating room was 152 minutes (IQR: 74-213), in MRI was 121 minutes (IQR: 90-134), and in IR was 187 minutes (IQR: 158-208).

## Discussion

- Anesthesia was given primarily for surgical procedures and radiological imaging
- Longest exposures to anesthesia occur in interventional radiology
- This review sets the foundation for future studies on this patient population