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Complication Rates in Resident Cataract Surgery after elective operating room shutdown during the COVID-19 pandemic

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Purpose: To assess the types of cataract surgeries being performed at one large eye institute from before and after the COVID-19 induced shutdown of elective surgeries in Spring 2020.

Methods: This is a retrospective chart review study of operative reports from resident performed cataract surgeries from January 1st, 2020 through July 31st, 2020. Cataract surgeries were categorized into Pre-COVID (Jan – Mar 2020) if they occurred prior to operating room (OR) shutdown on March 18th, 2020 and Post COVID for all cases which occurred after the shutdown orders were lifted (May – July 2020). A resident survey was also used to gather data regarding resident case numbers and resident concern performing cataract upon re-opening of the operating room for elective surgeries.

Results: A total of 480 cases (n=306 Pre-COVID and n=174 Post-COVID) were analyzed. Our study shows a higher frequency of complex cataract surgeries being boarded after the COVID-19 pandemic induced shutdown of elective surgeries in Michigan (P<0.0001). However, the incidence rate of complications in resident performed cataract surgeries was not significantly higher immediately following the government induced shutdown. Complications analyzed included anterior rent or capsulorrhexis, wound burn, placement of iris dilator, posterior capsular rupture, anterior vitrectomy, and capsular ring tension. Survey results showed that phacoemulsification was the step of cataract surgery which residents were most concerned about when returning to the OR after their hiatus from operating.

Conclusion: Significantly more complex cataract surgeries were performed immediately after opening of the OR which is likely due to combination of factors including: a slow ramp up to maximum volume in the OR, initial higher threshold for what surgeries could be boarded, hesitance of patients to come back to the clinic, and patients needing COVID testing prior to surgery, adding a level of difficulty to organizing care. However, there was no significant increase in resident complications in performing cataract surgery.