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Abstract Title: Did COVID-19 affect PROMs following hip and knee replacement?

Background

COVID-19 has caused significant changes to the practice of Orthopedics, drastically reducing overall caseloads and increasing use of telehealth services. The pandemic has restricted physical activity and options for socializing, potentially worsening patient's physical and mental health. The effect of such physical and social restrictions on patient reported outcomes (PROs) following joint arthroplasty is unknown. Therefore, the purpose of this study was to compare PROs following joint arthroplasty both before and during the pandemic following the resumption of surgery in a community hospital.

Methods

These data were collected as part of an ongoing prospective study of patients undergoing total hip (THA), total knee (TKA), or unicompartmental knee (UKA) arthroplasties. Patients were included in data analysis if the patient completed the HOOS/KOOS Jr. and the PROMIS (Global Physical Health – GPH; Global Mental Health – GMH) both pre- and postoperatively. Data were collected from March 2019 to October 2019 (n=267) and March 2020 to October 2020 (n=162). No procedural or perioperative management changes of patients were made during both time periods. Joint-specific independent t-tests were performed for patient demographics and PROs before and during the pandemic. Chi-square tests were used for categorical variables and Pearson correlations were performed to determine trends over the course of the pandemic.

Results

Prior to surgery, TKA patients had higher KOOS Jr and GPH score during the pandemic compared to patients prior (p=0.004 and p=0.003, respectively). No other significant pre-operative differences were noted for UKA or THA groups. Post-operatively, no significant differences were present in six week PRO scores or in the change from pre- to six week post-operative scores for TKA, THA or UKA. However, post-operative GPH (r=-0.326, p=0.027) and GMH (r=-0.430, p=0.003) in UKA patients were negatively correlated with time (beyond restart) indicating a declining trend in post-operative overall health as the pandemic continued.

Conclusion

The higher pre-operative PROs in TKA patients during the pandemic could have indicated that healthier, more confident patients with higher function felt safe to undergo surgery. The pandemic did not appear to affect PRO scores following surgery for TKA and THA patients. However, the decline in post-operative GPH and GMH for UKA as the pandemic continued may reflect the negative impact mandated restrictions on physical and social activities have on patient's sense of wellbeing. Surgeons should be aware of the potential impact of pandemic restrictions on patient's sense of wellbeing.