

determined the number of patients with predicted risks that exceeded recommended thresholds of procedural risks to perform CEA. **Results:** After screening 788 reports, 15 studies describing 17 prediction models were included. Nine were developed in populations including both asymptomatic and symptomatic patients, two in symptomatic, and five in asymptomatic populations. In the external validation cohort of 26 293 patients who underwent CEA, 717 (2.6%) developed a stroke or died within 30 days. C-statistics varied between 0.52 and 0.64 using all patients, between 0.51 and 0.59 using symptomatic patients, and between 0.49 to 0.58 using asymptomatic patients. The Ontario Carotid Endarterectomy Registry (OCER) model that included symptomatic status, diabetes mellitus, heart failure, and contralateral occlusion as predictors, showed fair discrimination and the best concordance between predicted and observed risks. This model identified 4.5% of symptomatic and 2.1% of asymptomatic patients with procedural risks that exceeded recommended thresholds.

**Conclusion:** Of the 17 externally validated prediction models, the OCER risk model had the most reliable predictions of procedural stroke or death after CEA and can inform patients about procedural hazards and help focus CEA toward patients who would benefit most from it.

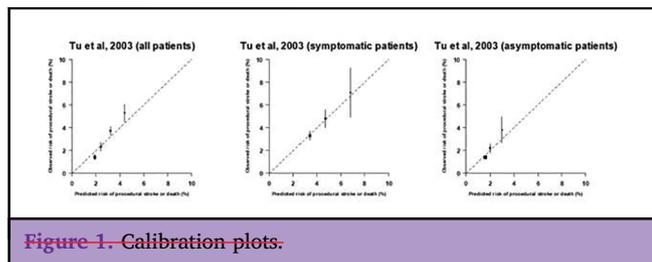


Figure 1. Calibration plots.

**O-023 COVID-19 Pandemic Lockdown: Uncovering the Hard Truth on Lower Limb Ischaemic Outcomes? A Single Centre Observational Study**

Matthew Joe Grima <sup>a,b,\*</sup>, Anthony Pio Dimech <sup>a</sup>, Darryl Pisani <sup>a</sup>, Francesca Chircop <sup>a</sup>, Eve Warrington <sup>a</sup>, Kevin Cassar <sup>a,b</sup>

<sup>a</sup> Department of Surgery, Section of Vascular Surgery, Mater Dei Hospital, L- iMsida, Malta

<sup>b</sup> Faculty of Medicine and Surgery, University of Malta, L-iMsida, Malta

**Introduction:** The COVID-19 pandemic disrupted hospital services worldwide and Malta was no exception. This was especially true for vascular surgery where societies issued recommendations on how to adjust their services during the first wave of the pandemic. Malta has one tertiary hospital, with a vascular unit that was established in 2007. Since then, all lower limb procedures have been registered in the Maltese vascular registry (MaltaVasc), which has been internationally validated. In Malta, COVID-positive patient zero was recorded on 7 March 2020. The closure of the only airport was carried out on 21 March and a partial intelligence lockdown was started on 27 March, whereby vulnerable patients were advised to stay home and avoid going to work. On 5 June 2020, the government of Malta and Public Health authorities eased the lockdown for vulnerable patients and on 1 July 2020 the airport was opened to 19 destinations, with a gradual opening to other countries. Despite the partial lockdown, patients with hospital appointments were advised to keep their appointments unless they were cancelled by medical staff. Elective lists were reduced and non-urgent surgeries postponed. During this time, it was noted that few patients were presenting to hospital with signs

and symptoms of chronic limb threatening ischaemia (CLTI). Furthermore, it was felt that patients with CLTI were presenting to hospital late, requiring either palliation or major amputation, and more patients required major amputation than in previous years. The primary aim of this study was to analyse the number of major and minor amputations, elective and/or urgent and emergency revascularisation procedures during the first wave of the COVID-19 pandemic. The secondary aims were to compare the number of lower limb procedures with the previous year and also to compare the rates of major amputations with the prevascular unit time period where few lower limb revascularisations were carried by the same authors (Fig. 1).

**Methods:** MaltaVasc was interrogated to gather data from 1 January 2019 to 31 July 2020. The number of lower limb procedures per calendar month described above were collected. The number and type of procedures carried out from 1 January 2019 to 31 July 2019 (prepandemic) were compared to those carried out from 1 January 2020 to 31 July 2020 (post-COVID-19 pandemic). Statistical analysis using the Student's *t* test were done in Microsoft Excel.

**Results:** In the pre-COVID period, 15 major amputations and 259 lower limb elective/urgent revascularisation procedures were carried out, while 29 patients required emergency revascularisation. During the COVID-19 pandemic period, 35 major amputations and 206 lower limb elective/urgent revascularisation procedures were done, and 30 patients required emergency revascularisation (Fig. 2). Over the whole of 2019, 21 major amputations ( $p < .05$ ) and significantly fewer lower limb revascularisations ( $p < .05$ ) were carried out during the COVID-19 period compared with the pre-COVID period. No significant difference in number of surgeries for acute ischaemia was noted between the two time periods.

**Conclusion:** Although the number of patients presenting with acute ischaemia was similar between the two time periods, there were significantly fewer lower limb revascularisation procedures during the COVID pandemic. During the first wave of the pandemic, significantly more major amputations were carried out than in the previous year. Similar trends were noted in the pre-vascular unit era, when few lower limb revascularisations and a high number of major amputations procedures were carried out. While the direct impact of COVID-19 has been rigorously reported, the indirect impacts, particularly on outcomes of vascular pathology, require evaluation. Such data should be instrumental in contingency planning and resource allocation for managing the ongoing pandemic.

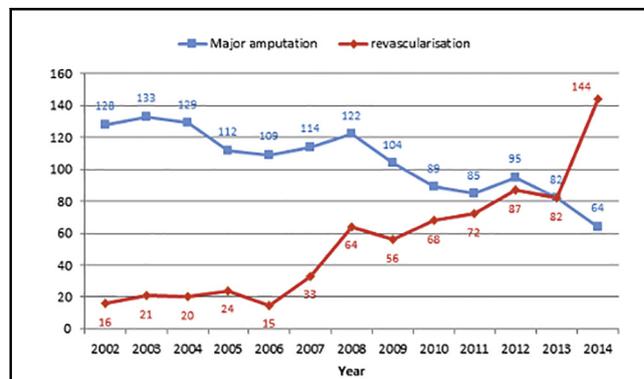


Figure 1. Number of major amputations and lower limb revascularisation procedures: from 2002 and 2007 (pre-vascular unit) and 2007+ (vascular unit service).