

COVID-19 Leads to Increased Amputations

Message from William J. Ennis, DO, Chief Medical Officer

The COVID-19 pandemic provides direct evidence of why wound care is an essential service. Along with many other service lines, wound care has seen a decline in visits despite being designated as an essential service and the adoption of telemedical options. There have been several recently published articles that report significant increases in major limb amputations during the pandemic compared with matched time frames from pre-COVID-19 data. I will briefly describe the findings and compare them to my own University's data, with the goal of ensuring patients are scheduled and evaluated during these complicated times.

The first paper is a report from Italy. Caruso and colleagues published a 2020 report in *Diabetes Care* that was the first to raise the concern that COVID-19 was leading to increases in amputation for patients with diabetic foot ulcers.¹ In this paper, there was a major amputation rate of 60% vs. 18% from a similar timeframe in 2019. The paper ends with the following quote: "the higher risk of amputation observed during COVID-19 lockdown confirms the need for proper and timely management of diabetic foot ulcer patients to prevent dramatic outcomes responsible for a reduction of quality of life and increased morbidity and mortality."

A letter to the editor in the journal of vascular surgery in August 2020 followed, which described a 50% increase in amputations comparing equal time frames 2020 vs. 2019 although the numbers were small.²

The University of California San Francisco group then published a paper that described reduced limb salvage clinic visits along with an increased number in amputations year-over-year, as well as a statistically significant shift from minor to major amputations.³

In November, a group from Belgium described an increase in major amputations from 15% in 2019 to 42% in 2020.⁴

Most recently, in December, another group from Italy described the dramatic increase in thrombotic induced acute limb ischemia.⁵ All of the patients in this study (20) had COVID pneumonia. The traditional success rates for revascularization were not realized and this group aggressively used anticoagulation and thrombolysis.

Lastly, I am sad to report that my own University data confirms all the above published reports. From March 1 to November 1, 2020 the amputation rate over these two timeframes is up 38% at the University and all but one of the recent amputations has been either below the knee or above the knee. The clots being removed are not normal in appearance. I have participated in autopsy procedures on the amputated limbs and have found profound soft tissue, muscle, and skin necrosis. Our group is collating the data and histology now for publication.

In summary, we are in a pandemic. Patients are afraid to come in. Providers are concerned but patients are suffering. It's critical to proactively call patients to ensure they come for visits and at the very least have telemedicine visits to supplement the in-person visits when appropriate. We simply cannot allow these numbers to continue, our patient's lives and limbs depend on it.

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