Chilblains is not the canary in the COVID19 coal mine

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| Challenge | **Dermatologists noted a sharp increase in chilblains (pernio), in association with the 2020 COVID19 pandemic, causing concern among patients, parents, and physicians that it was caused by unrecognized COVID19 in the community.** |
| Existing Evidence | Chilblains is one of 5 major COVID19-related dermatoses in case series in Europe and the US. Parents and patients with chilblains feared they had COVID19 after media reports of “COVID Toes”, but testing was limited early on. 2020 studies lacked historic comparisons. |
| Target Population | All KPNC patients with chilblains from January 2016 to August 2020 |
| Intervention or Exposure | Compare chilblains before and during pandemic for demographic shifts, COVID19 test positivity results, and trends/rates by month and geographic location. |
| **Outcomes/Key Findings** | **The incidence of chilblains increased starting in March 2020 (26.6/100,000 compared with 11.5/100,000 in prior years), with largest increases among younger patients, men, and white and Asian-American patients. Chilblains correlated with temperature (colder first two months; Spearman coefficient 0.57, p<.0001**) **but not with COVID-19 active infection rates over the 6 months studied (Spearman correlation -0.21, p=0.01).** Among 581 chilblains patients, 236 had COVID19 tests with 7 positives for active infection; 4 of 236 were positive within 6 weeks of chilblains symptoms (3 after COVID19 illness, 1 before). Higher rates of toe involvement, lack of shoe wear at home, and demographic shifts due to work from home changes and increased care seeking may partially explain increased chilblains; these results do not exclude chilblains as a late (post-infectious) manifestation of COVID19. |
| **Resulting Action/Change** | **Patients with chilblains are unlikely to have an active COVID19 infection.**  **These results do not recommend testing for active COVID19 infection for isolated chilblains.** |
| Additional recommendations | Updating regional dermatology dotphrases on chilblains to reflect these data  Communication to adult and family medicine, pediatric colleagues |
| Implementation Tools | N/A |
| Implementation Measurement | Testing for acute COVID19 infection among patients with isolated chilblains. |
| Reference | Incidence rates of chilblains (per 100,000 person-years) before and during the pandemic,a and COVID-19 (per 1,000 person-years)during the pandemic |