Bacterial etiology of soft tissue infections

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Dear Editors,

It was very interesting to read the historical perspective on St. John's cause of death, being "soft tissue infection secondary to cellulitis" [1].

However, some points may need some clarification. First, cellulitis is a soft tissue infection, so the title is somewhat misleading. Secondary, as the etiology of the soft tissue infection is discussed, the authors state that "such infections are usually polymicrobial..." and continue to mention several bacterial causes of soft tissue infections. I would like to clarify that there are two types of soft tissue infections: monobacterial or polymicrobial. The first ones are most commonly caused by either *Streptococcus pyogenes* (group A streptococci) or *Staphylococcus aureus*. Soft tissue infection due to *S. pyogenes* are usually fulminant ("flesh eating bacteria", *Fasciitis necroticans*) and the cause of St. John's infection likes too protracted for that diagnosis.

Furthermore, pus production is rather limited. *S. aureus* infections can show a more protracted course and certainly produce huge amounts of pus.

The latter infections, polymicrobial infections, contain mostly anaerobic bacteria and sometimes also enterobacteriaceae (Gram negative, aerobic rods), which smell very putrid and rather awful. No smell was described in St. John's infection. *Enterococci* almost never are a cause of soft tissue infections.

In conclusion, the cause of St John's death may be most likely *S. aureus* related, with most certainly a subsequent bacteremia, which causes death in a high percentage of patients, certainly without antibiotic treatment.

Reference

1. Bianucci R, Appenzeller O, Evans P, et al. Infection. 2018;46:267. <https://doi.org/10.1007/s15010-017-1089-x>.

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