

Thermology and facial telethermography: Part II. Current and future clinical applications in dentistry.

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Selected clinical applications using thermal imaging as an aid in dentistry are reviewed. Facial skin temperature can easily be measured in a clinical setting, without direct skin contact, by monitoring the emitted infrared radiation. This is the basis of static area telethermography (SAT) and dynamic area telethermography (DAT). SAT has recently been shown to be of help to the dentist in (1) the diagnosis of chronic orofacial pain, (2) as a unique tool in assessment of TMJ disorders, (3) as an aid in assessment of inferior alveolar nerve deficit, and (4) as a promising research tool. DAT, recently made possible by advances in computing technology combined with advanced infrared sensor technology, extracts quantitative information about hemodynamic processes from hundreds to thousands of digital thermal images of the affected facial areas, measured and collected within less than 3 min. DAT has promise of offering a better insight into aberrations of the neuronal control of facial skin perfusion and aiding our understanding of the correlation between orofacial pain and facial thermal abnormalities. This promising new insight may help in the management of orofacial pain