

Flare and hyperalgesia after intradermal capsaicin injection in human skin

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We investigated the neurovascular mechanisms that determine the flare response to intradermal capsaicin injection in humans and delineated the associated areas of mechanical and heat hyperalgesia. The flare response was monitored both visually and with infrared telethermography. The areas of mechanical and heat hyperalgesia were determined psychophysically. Thermography detected very large areas of flare. As an early event underlying the flare and before onset of the area of rubor of the skin, thermography detected the appearance of multifocal spots of increased temperature caused by dilatation of cutaneous arterioles. Repetition of capsaicin injection days apart into the same forearm induced multifocal spots of temperature elevation identical to the ones obtained in the first session, indicating dilatation of the same arterioles. Reactive hyperemia also consisted in the appearance of multifocal spots of increased temperature, which were identical to the ones reacting during the flare