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NITROGLYCERIN-INDUCED CLUSTER HEADACHE: SUCCESSFUL TREATMENT WITH INTRANASAL LIDOCAINE AND COCAINE

Ennio Pucci, Grazia Sances, Alfredo Costa, Guido Broich*, Fabio Antonaci, Giuseppe Nappi.

Headache Centre, Institute of Neurology, University of Pavia, Italy;

* Institute of Otorhinolaryngology I, University of Milan, Italy

In most cluster headache (CH) sufferers, the vasoactive agent nitroglycerin (NG) is able to trigger spontaneous-like attacks. We have preliminarily reported that the local use of anesthetics in the area of the sphenopalatine fossa is effective at extinguishing NG-induced pain in such patients. Investigation was thus extended to 15 CH cases, diagnosed according to the IHS criteria (6 with episodic CH, mean \pm SD age 36.8 ± 5.6 yrs, and 9 with chronic CH, mean \pm SD age 37.8 ± 10.4 yrs). Patients were given 0.6 mg NG sublingually, and the intensity of pain scored using a visuo-analogue scale (range 0-10). Nine patients (2 with episodic CH and 7 with chronic CH) experienced a spontaneous-like attack within one hour. Whenever pain intensity reached 5 or more on the scale, a solution containing 1g cocaine hydrochloride (A), or 10% lidocaine (B), or saline (C) was applied under anterior rhinoscopy to the area corresponding to the sphenopalatine fossa of either the non-symptomatic or the symptomatic side, for 5 minutes. Patients received all treatments randomly, in separate sessions. The latency of any observed anesthetic effect and changes in neurovegetative signs/symptoms were recorded using a dedicated chart. Complete extinction of the attack occurred after a mean of 31.1 ± 13.2 mins for solution A, 37.1 ± 7.0 for solution B and 49.2 ± 12.4 for solution C, the latencies for solutions A and B being significantly lower than that of saline ($p < 0.01$ and $p < 0.05$, respectively).

These findings support the view that the sphenopalatine ganglion is involved in the mechanisms of CH attacks, and indicate further that intranasal administration of either type of local anesthetic agents may be equally useful in the abortive treatment of spontaneous CH attacks.