Serotonin has been shown to play a significant role in diseases related to vascular dysregulation like Raynaud’s phenomenon (Hollenberg, 1988), erythromelalgia (Rudikoff and Jaffe, 1997), migraine (Bonvento et al., 1991) and perimenopausal hot flushes (Berendsen, 2000). In recent years there have been several reports on the efficacy of the selective serotonin reuptake inhibitors (SSRIs) fluoxetine (Coleiro et al., 2001; Jaffe, 1995; Rey et al., 2003) and sertraline (Rey et al., 2003) in the treatment of Raynaud’s phenomenon. Whereas erythromelalgia too has been reported to respond to SSRIs and to the serotonergic effect of venlafaxine (Rudikoff and Jaffe, 1997), it can also occur as a complication of the treatment of Raynaud’s phenomenon with fluoxetine and sertraline (Rey et al., 2003).

These few reports show that there is consistent evidence for SSRIs having effects on vascular responses of the extremities but that there is, at the same time, an important variability of the effects of each substance.

We report what we believe to be the first case of treatment of Raynaud’s phenomenon with escitalopram.

Case report

Mrs A, a 31-year-old otherwise healthy woman has suffered from Raynaud’s phenomenon since the age of 15 years. She regularly takes part in outdoor sports in the Alps and experienced a prompt and marked vasoconstrictor reaction of both hands at almost every exposure to cold. As her general practitioner considered the utilization of an SSRI in order to diminish the risk of frostbite, and she had heard from a friend, who is a psychiatrist, that escitalopram had recently been introduced and was well tolerated, she insisted on receiving this substance. Therefore, a daily treatment of 10 mg escitalopram was prescribed. Approximately 30 minutes after taking the first dose the patient had an important body sensation of warmth, which was even more accentuated in the fingers and toes. The sensation of warmth was experienced throughout 4–5 hours and then diminished slowly. While being active in skiing and climbing in all weather conditions Raynaud’s phenomenon did not reoccur when her hands and feet were insulated against the cold by normal sports clothing. When she forgot to take the drug she again experienced the same sensitivity to the cold with Raynaud’s phenomenon as previously, but as soon as she retook the medication the sensitivity decreased markedly. As a side-effect of the treatment the patient noted a marked increase of headache episodes occurring when weather and atmospheric pressure changed rapidly as well as tendency to sweat during sleep.

Discussion

This is, to our knowledge, the first treatment report of Raynaud’s phenomenon with escitalopram. As the treatment response showed characteristics of an ‘on-off’ phenomenon, the correlation with escitalopram intake seems probable. The patient experienced a markedly improved blood circulation in her hands and feet as well as a whole body sensation of warmth which occurred shortly after the administration of the drug and which regressed within one day after discontinuation. Our observation is similar to those in reports concerning other SSRIs (Coleiro et al., 2001; Jaffe, 1995; Rey et al., 2003) or venlafaxine (Rudikoff and Jaffe, 1997). The erythromelalgia described as previously occurring during SSRI treatment of Raynaud’s phenomenon (Rey et al., 2003) was not observed. The reported side-effects of sweating and subjective feeling of warmth are well known effects of SSRIs. Serotonin has, among others, been reported to modulate physiological mechanisms involved in temperature regulation at several different levels. There is evidence that serotonin is involved in the temperature regulation in the central nervous system (Sugimoto et al., 2001). Moreover, the crucial role of serotonin in the regulation of the vascular tonus in several distinct areas of the body, thus contributing to the pathophysiological changes in Raynaud’s phenomenon, has been well known for many years (Hollenberg, 1988).

In conclusion, the present case and the previously published data on antidepressants in the treatment of
Raynaud’s phenomenon suggest a therapeutic class effect of serotonin reuptake inhibiting drugs.

Acknowledgements
None.

Statement of Interest
Daniele Zullino is stock shareholder of the following pharmaceutical, biotechnical and health-care provider companies: Cobalt Corp., US Oncoly Inc. He is (co)author of projects receiving grants from the following companies: Organon, Wyeth–Ayerst, Sanofi-Synthelabo, Aventis and Astra Zeneca. He is member of the Swiss Advisory Board of Wyeth.

References

Ansgar Buecking, Estelle Rougemont, Daniele Fabio Zullino
University Department for Adult Psychiatry, Prilly – Lausanne, Switzerland