Sneddon’s syndrome: Livedo racemosa and cerebrovascular disease

Sarath N Bodapati, Lauren Kunde, Gregory Butler and Daniel James
Royal Brisbane and Women’s Hospital, Australia

Introduction: Sneddon’s syndrome (SS) is a rare non-inflammatory thrombotic vasculopathy characterized by the combination of cerebrovascular disease with livedo racemosa (LRC). The cerebrovascular manifestations of SS are most often due to ischemia, including transient ischemic attacks and cerebrovascular accidents (CVA).

Case: A 39-year-old women presented for routine follow-up of a net-like cyanotic discoloration over her posterior thighs and lower back. The rash had been present for 15+ years and had previously been diagnosed as idiopathic livedo reticularis (LR). On further questioning, it was revealed that the patient had a CVA at the age of 17, assumed to be secondary to amphetamine use. As such, repeat biopsies were performed and a diagnosis of LRC was confirmed; this lead to an eventual diagnosis of idiopathic SS.

Discussion: The distinction between LRC and LR is relatively new concept. LR is a benign, primary disorder that affects young to middle-aged females while LRC is a secondary disorder. LRC is similar to LR in appearance but it differs in its location (more generalized and widespread), its shape (irregular, broken, circular segments) and persistence despite warmth.

Conclusion: Pathophysiology of SS is not completely understood. SS likely stems from a number of acquired or congenital hemostatic abnormalities which preferentially involve cerebral and cutaneous vascular beds. Any patient suspected of SS should undergo various blood tests (e.g., thrombotic screen), skin biopsy and thorough cardiovascular evaluation (e.g., MRI head).

Molecular mechanisms accounting for the anti-melanoma action of Quercetin

Zhi-Ling Yu, Ting Li, Hui-Hui Cao, Xiu-Qiong Fu, Hui Guo, Pei-Li Zhu, Ya-Xi Li and Tao Su
Hong Kong Baptist University, Hong Kong

Melanoma is the leading cause of skin cancer-related death. It is notorious for its propensity to metastasize. Constitutively activated signal transducer and activator of transcription 3 (STAT3) plays a critical role in melanoma development. c-Met is a receptor tyrosine kinase that plays a key role in the growth, metastasis and angiogenesis of melanoma cells. HGF (hepatocyte growth factor) is the solely known ligand of c-Met. Epithelial-mesenchymal transition (EMT) is proposed to be a crucial mechanism regulating the initial steps in metastatic progression and TGF-β is the best-studied inducer of EMT. The dietary flavonoid quercetin is a bioactive compound that possesses low toxicity and anticancer activities. Our results showed that quercetin was able to suppress the growth of human A375 melanoma tumor xenografts and lung metastasis of murine B16F10 cells in mouse models. In cultured melanoma cells, quercetin could induce apoptosis and inhibit proliferation, migration and invasion. These observations were associated with the inhibition of the STAT3, HGF/c-Met and TGF-β signaling pathways. Moreover, overexpression of a constitutively active variant of STAT3 (STAT3C) reduced the anti-proliferative effect of quercetin and overexpression of FAK or PAK significantly diminished the inhibitory effect of quercetin on melanoma cell migration. Quercetin also inhibited TGF-β1-induced EMT. These findings suggest that suppression of STAT3, HGF/c-Met and TGF-β signaling contribute to the anti-melanoma effects of quercetin and provide further pharmacological basis for developing quercetin as a melanoma chemopreventive/chemotherapeutic agent.

zlyu@hkb.edu.hk