Cutaneous Manifestation of Decompression Sickness: Cutis Marmorata

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A 39-year-old female recreational diver, who developed cardiopulmonary arrest after diving, was transferred to our department 5 hours after the arrest by a helicopter emergency medical service. The diver performed two repetitive dives to a depth of 27 metres; 50 minutes bottom time for each dive. She had omitted the usual surface interval (resting near the surface) between the dives; the dive profile was otherwise unremarkable. On examination, she was in deep coma with dilative non-reactive pupil, hypotension supported by continuous infusion of catecholamine, apnea supporting by mechanical ventilation and a widespread marbling rash (cutis marmorata) on her body and extremities (Picture). Whole body computed tomography revealed marked diffuse brain swelling and bilateral severe lung edema without sign of gas. She was diagnosed as clinical brain death due to Type II Decompression Sickness and died on the same day.

Cutis marmorata is a distinct cutaneous manifestation of decompression sickness. It is easily recognized by its typical mottled, marbling violaceous appearance. It may start as an intense multifocal itching, followed by a generalized hyperaemia which in turn progresses to irregular dark violet or purple patches. The cutis marmorata is thought to be caused by vascular congestion triggered by vascular inflammation secondary to the development of intravascular gas bubbles. Cutis marmorata is usually transient and does not require any means of treatment. However, it is a warning sign of a more severe manifestation of decompression sickness so that careful follow-up is required.

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