Unilateral Raynaud's phenomenon in a hemodialysis patient

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Background: Raynaud's phenomenon is an acrosyndrome characterized by a triphasic vasospastic discoloration of the skin, touching the capillaries of extremities, nose, ears and nipples. It could be primary or secondary. Herein we report a case of unilateral Raynaud's phenomenon occurring twenty years later after creating an arterio venous fistula with a termino –lateral anastomosis.

Case presentation: 64 year old patient is well known to have gravid nephropathy evolving to end stage renal failure (ESRF). She was having signs and symptoms of advanced CKD whenever she accepted to initiate renal replacement therapy on1982 through a right radio –cephalic vascular access. Her medical history includes hepatitis C infection, 02 episodes of chronic graft rejection leading to detransplantationon 1987 and 1988. Habit history was not significant. Thereafter, she became anuric having persisting intractable musculo skeletal and joint pain attributed to severe secondary hyperparathyroidism with abnormal phosphocalcic product and high intact parathyroid hormone level (iPTH=1280 pg/ml). She was having low vitamin D3 level and increased aluminum level (80 ug/l), phosphatase alkaline and beta 2 microglobulin (55 mg/l). On 1996, she underwent a total parathyroidectomy that resulted in a dramatic improvement of her pain eventually; she was initially operated for bilateral carpal tunnel syndrome and left Achilles tendon rupture on 2006. Post-operative histology was contributive by showing the existence of dialysis related systemic amyloidosis. By the end of 2002, she started complaining of painful Raynaud's phenomenon of the right side upper extremity mandating the closure of the access after the maturation of left side native arterio venous fistula. By the opposite of the previous access, anastomosis was side to side. Patient noted an improvement of her subjective complain despite the persisting of the triphasic change of the skin coloration mainly observed in the morning and triggered by cold. Physical examination and laboratory data were consisting of chronic hepatitis C infection with negative immunological profile and cryoglobulins. On 2006 and according to her hematologist, after liver biopsy; she was put under Peginteferon alfa 2b (Viraferon 50 ug/week) and Ribavirin200 mg daily for 48 weeks. Clinical and laboratory tolerability was marked by hair loss and non-hemolytic anemia mandating erythropoietin increment. On July 2012 she was put under triple regimen therapy including Peginteferon alfa 2a (PEGASYS) 180 ug weekly + RIBAVIRIN 200 mg daily (COPEGAS) and Telaprivir (INCIVO) 375 mg x2 TID. Three months later, viral load was undetectable and the sole side effect noted by the patient is intractable pruritus. No relapse was observed

thereafter and she did not report worsening of her Raynaud's phenomenon of the right hand.

Discussion: Raynaud's phenomenon has been observed with rheumatic diseases, occlusive vascular diseases, hematologic disorders, drug induced and associated malignance. Our patient was not having these predisposing factors in the absence of distal hypoperfusion ischemic syndrome or steal syndrome related signs. Usually before creation a distal arterio venous fistula, physical examination and combining the modified Allen's test and pulse oxymetry evaluating the patency of both ulnar and radial collateral circulation could be useful to avoid subsequent Steal syndrome and thereafter Raynaud's phenomenon. The hallmark of Raynaud's phenomenon is ischemia of the digits in response to cold which produce characteristic triphasic color pattern as well as numbness. Our patient developed such observation after twenty years of dialysis. Moreover, the closure of the access was not accompanied by any improvement of such phenomenon. She was under high flex hemodialysis with blood flow rate of 300 ml/min not precipitating this event and she was not having any bone lesions apart dialysis related secondary amyloidosis that has been described presenting of such complication.

Conclusion :late occurrence of Raynaud's phenomenon in long term hemodialysis patient could arise either from vasospatic capillaries or related to chronic osteo articular diseases or both.