

MALIGNANT MELANOMA ON THE TOP OF NATIVE ARTERIO VENOUS FISTULA

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INTRODUCTION

The development of cancer results from the disruption of the balance factors promoting and inhibiting its development in a constitutionally predisposed patient. Chronic renal failure per se, its correction or not, represents a model where these factors are present. Herein, we present a case of hemodialyzed patient who developed three consecutive different types of cancer.

Patients and Methods

This patient of 80 years of Caucasian origin, recently admitted to hemodialysis due to evolution of his long standing hypertension. He has a history as a right nephrectomy in 2004 for renal cell carcinoma, hypertension and two courses of inguinal hernia. Cancer screening realized before creating an arterio venous fistula was negative except a doubtful thyroid uptake level (TAP scan, bone scan and thyroid, PET-CT). On physical examination the patient had light hair and red, with no nevi and ultrasound -Doppler of both upper limbs did not show evidence of discrepancies. A right radial AVF was created. Controlled imaging study realized one month later shows, a doubling of the draining vein with a segment drained into the basilic vein and the other is drained into the cephalic vein, and radial artery has a diameter of 5 mm presenting a moderate stenosis resulting in palpable swelling. Measured blood flow rate is also estimated at 1000 ml / min. A week after the start of hemodialysis; induration burgeoning on a background non erythematous area is noted between the two venous segments, while the patient is dialyzed through a single needle puncture at 3-4 cm above the anastomosis. Physical examination was unremarkable apart of the presence dyskeratosis of the forehead, ears and right temple, though he was free of satellite adenopathy or hepatosplenomegaly. Histology of the resected fragment shows that it is an unclassifiable melanoma, nodular type, Clark level IV and Breslow index to 4.2 in Sano. It has a high mitotic index, and a positive angiotropic and neurotropism pattern. Based on this result, the patient underwent a secondary surgical revision exceeding 2cm including the fascia, without sacrificing the fistula. Pathological examination of the new resected tissue showed no residual tumor tissue on all examined sections. A second staging was performed and the results were superimposable to above. The biological parameters feature of a dialysis patients without inflammation and having a negative serology profile for hepatitis B, C and HIV... His anemia is corrected with erythropoietin that was initiated before the stage of dialysis. Other biological parameters (S100 protein, antinuclear antibodies, thyroid, liver and martial, folic acid, B12, pre-albumin, 25 OH D3 and 1, 25 (OH) 2 D3, zinc, selenium, aluminum, and D-dimers, electrophoresis plasma proteins and protein profile) were within the normal permitted level except for one intact PTH = 196ng / l (15-65), beta 2 microglobulin = 9.25mg / l (1-2.2) and persistent microscopic hematuria. Six months later, when the patient was asymptomatic, appeared a firm swelling of the forehead with a resected histology showing that is a differentiated and keratinizing squamous cell carcinoma having a positive immuno staining for CK 5-6 only.

Discussion

long term complications of the creation of arterio venous fistula in hemodialysis are well documented. There are, however, little data on the development of cancer that are either benign or malignant, primary or secondary, related to anatomical structures of these sites. Our patient cited in the observation, was having predisposition factors to acquire malignancies. Among these factors, he has a history of renal cell carcinoma, advanced age leading to a possible increased risk of mutation of deoxyribonucleic acid, hypoxia during the creation of the fistula and thermal dysregulation associated with the change of tissue blood flow subsequently. He also, has a local impact of secondary metabolic consequences, without excluding a genetic predisposition. The acquisition of three types of cancer in the same patient at this stage of chronic renal failure advocates of these combined factors which are activated by uremic milieu. This latter is blamed for the earliness of presentation and speed of maturation. Our patient had no risk factors of environment, medical or occupational exposure, and having a melanoma excluded an inherited form of leiomyomatosis. The literature review reports other types of tumors (leiomyosarcoma, angiosarcoma, lymphoma and multiple myeloma) growing on native fistula added to the particularity of our observation.



Conclusion

We report a case of malignant melanoma developing on arterio-venous fistula recently created and a favorable outcome following surgery preserving the vascular access. Monitoring is advised in uremic patients with a history of cancer and / or carrying a particular complex keratosis.