Metachronous skin cancers in kidney recipient as a posttransplant solid tumor indicators

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The case presents a 66-year-old female smoker, with terminal kidney failure since August 2014 in the course of polycystic kidney disease, 4 years after kidney transplantation (May 2015), receiving triple drug immunosuppression (Tac + GS + MMF), with 5 metachronous skin cancers and concomitant primary pulmonary adenocarcinoma. One year after transplant surgery the patient developed a skin lesion on her right lower leg (irregular, beige-white, of a 1.5 cm diameter) that was excised in July 2016. Histopathological (HP) examination confirmed intraepidermal squamous cell carcinoma (CSCC). Other equivocal skin lesions appeared at the following time points: August 2017 (on the right forearm, 2.4 cm x 1.5 cm); July-August 2018 (on the left elbow, Figure 1, and on the right hand, 1.1 cm x 0.9 cm). All these lesions were excised with free margins and HP results
confirmed the following: basocellular carcinoma (BCC), SCC in situ and G1 CSCC, respectively. All these changes were located in places exposed to UV radiation. In September 2018, another skin change appeared in this patient, in the left shoulder area. The tumor grew rapidly and in February 2019 it achieved a size of 10 cm x 10 cm x 5 cm. It was surgically removed and HP examination revealed a keratoacanthoma (Figure 1 A-D). During the observation period the patient presented good general health. Due to triple drug immunosuppression, oncological monitoring was performed and no other proliferative lesions were found. At the beginning of April 2019 she developed bronchitis followed by bronchopneumonia. As there was no improvement of pneumonia, lung CT scan was performed that revealed very numerous coin lesions in both lungs. Due to the advanced stage of the process, diagnostic procedures were limited to cytology of pleural fluid and talc pleurodesis. HP examination revealed lung adenocarcinoma with p40(-), TTF-1(+++) pattern. 2 weeks later the patient died due to respiratory insufficiency.

BCC, CSCC and keratoacanthoma are common non-melanoma skin cancers. Several studies confirmed that immunosuppressive agents used after organ transplantation devitalize anti-tumor action of immune cells thus increasing the risk of skin cancer development, as compared to the healthy population [1]. It is worth mentioning that the symptom of spontaneous or touch pain which is not very characteristic in the general population, is a significant indicator of the development of the invasive form of squamous cell carcinoma (SCC) [2, 3]. In this case a primary pulmonary adenocarcinoma developed in the patient with a smoking history 4 years after transplantation. Appearance of keratoacanthoma in transplant recipients should arouse physicians to conduct prompt and insightful oncological screening, because such phenomenon is connected with higher risk of posttransplant malignancy and death [4, 5].

Conflict of Interests:

The authors declare that there is no conflict of interest regarding the publication of this paper.

References:


Figure 1 A – Keratoacanthoma; crater-like growth pattern may be noticed (arrow); hematoxylin and eosin staining, magnification 100x
Figure 1 B– Keratoacanthoma; Endophytic proliferation of squamous epithelium accompanied by fibrosis and chronic inflammatory infiltrate; hematoxylin and eosin staining, magnification 400x
Figure 1 C – Keratoacanthoma; Very well differentiated squamous keratinizing epithelium (arrows) with mild nuclear atypia; hematoxylin and eosin staining, magnification 200x
Figure 1 D - Keratoacanthoma; original photo of the lesion, elevated borders and depressed center filled with keratin may be noticed