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ВИПАДКИ З ПРАКТИКИ

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A CASE OF LONG-TERM OBSERVATION OF DYNAMIC DERMOSCOPIC CHANGES IN A COMBINATION OF SPITZ AND SUTTON (HALO) NEVI IN AN ADOLESCENT

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Abstract. Currently, Spitz neoplasms remain an unresolved issue in dermatological oncology practice. Diagnosis of these neoplasms may be complicated by association with other lesions. They may appear against the background of a junctional or compound nevus, but their presence in the zone of an autoimmune reaction according to the type of halo nevus is rare.

The publication describes the case of a 15-year-old patient with a family history of metastatic melanoma. The adolescent was concerned about the development of white spots on his body which appeared in areas of existing pigmented nevi. On the right side of the torso, there was a nevus in the form of a nodule with heterogeneous colouring in the centre and loss of pigmentation at the periphery. Dermoscopically, a nodule is visible in the centre of the hypopigmented spot, focally containing pigment clods, isolated radial lines, and white structureless areas, diffuse pigment spots, isolated dot and curved vascular inclusions.

Given the complex structure of the lesion, signs of irritation, regression structures, and localisation in the hypopigmented zone, the patient was prescribed short-term observation. On day 41, the nevus showed rapid changes in structure, with the appearance of asymmetrically located peripheral clods-pseudopods, which due to the patient's age, were interpreted as signs of Spitz nevus. The patient's parents were advised to remove the neoplasm as it was nodular in nature and growing rapidly. However, consent was not given.

On day 69, the number of clods-pseudopods decreased significantly, although the overall size of the element remained unchanged. On day 164, isolated peripheral clods appeared again, as a probable sign of active proliferation. Parental consent was given to discontinue observation and perform an excisional biopsy. The neoplasm was excised within healthy tissue.

A pathohistological examination of the removed material was performed. Conclusion: The histological picture is most characteristic of a combined nevus – Spitz nevus and intradermal melanocytic nevus with areas of regression (fibrosis). An immunohistochemical examination was performed, confirming the previous conclusions.

Our patient's case demonstrates a pigmented lesion located in the achromic zone. Due to its spitz nature, the dermoscopic picture is represented by elements that may be signs of malignancy, in particular peripheral multilayered clods and pseudopods, radial lines, areas of pigment incontinence, and dot vessels predominating in the vascular pattern. There is a combination with an intradermal component, which probably delayed the involution of the neoplasm. The typical pattern of dynamic changes characteristic of Spitz nevi was also influenced by the superimposition of an autoimmune reaction, which manifested itself in the appearance of a halo. The appearance of connective tissue separating the nevus area from the surrounding skin is a consequence of an autoimmune reaction in the area of the combined lesion. Subsequently, it probably acted as a barrier, which led to the 'conservation of the nevus and slowed down the rate of its changes.

The behaviour of Spitz nevi is unpredictable, and their similarity to skin melanoma influences patient management tactics and often leads to their removal. Clinical manifestations of periods of progression and regression may be distorted by the combined nature of the neoplasms and require clarification through analysis of manifestations in broader clinical studies.

Keywords: Spitz nevi, halo nevi, melanoma, dermoscopy, diagnostic imaging, skin neoplasms, observation, neoplasm regression.

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Introduction. Currently, Spitz nevi remain an unresolved issue in dermatological oncology practice. Difficulties arise due to the variability of macro- and microscopic structures and the inconsistency of dermatopathological criteria for malignancy. For these reasons, a classification has been developed for benign Spitz nevi, grey zone formations – Spitz melanocytomas, and malignant neoplasms – Spitz melanomas [1].

Diagnosis of these neoplasms may be complicated by association with other lesions. They may appear against the background of junctional or compound nevi, but their presence in the zone of autoimmune reaction of the Setton nevus (halo nevus) type is a rare phenomenon, which at the same time causes even greater concern about malignancy. In the literature reviewed, we found several cases of isolated descriptions or mentions among a series of cases, but the patient we present is of additional diagnostic interest because of the available data from long-term dynamic observation and the combination with an intradermal nevus [2-4].

The aim of the study is to report a rare combination of Spitz and Sutton nevi, as well as to present and analyze data from long-term dermoscopic monitoring of the lesions' evolution. The discussion of this clinical case will be useful for specialists working in the field of dermato-oncology as an example of managing suspected malignant skin neoplasms in an adolescent.

Object and methods of research. Patient A is 15 years old. He is concerned about the appearance of white spots on his body, which appeared in areas of existing pigmented nevi. He has a family history of metastatic melanoma. During examination, multiple spots surrounded by hypopigmented areas were found, with some of them having only focal pigmentation in the central part of the neoplasms (multiple Sutton nevi). On the lateral surface of the trunk on the right, there is a nevus in the form of a nodule, with heterogeneous colouring in the centre and loss of pigmentation at the periphery (Fig. 1A).

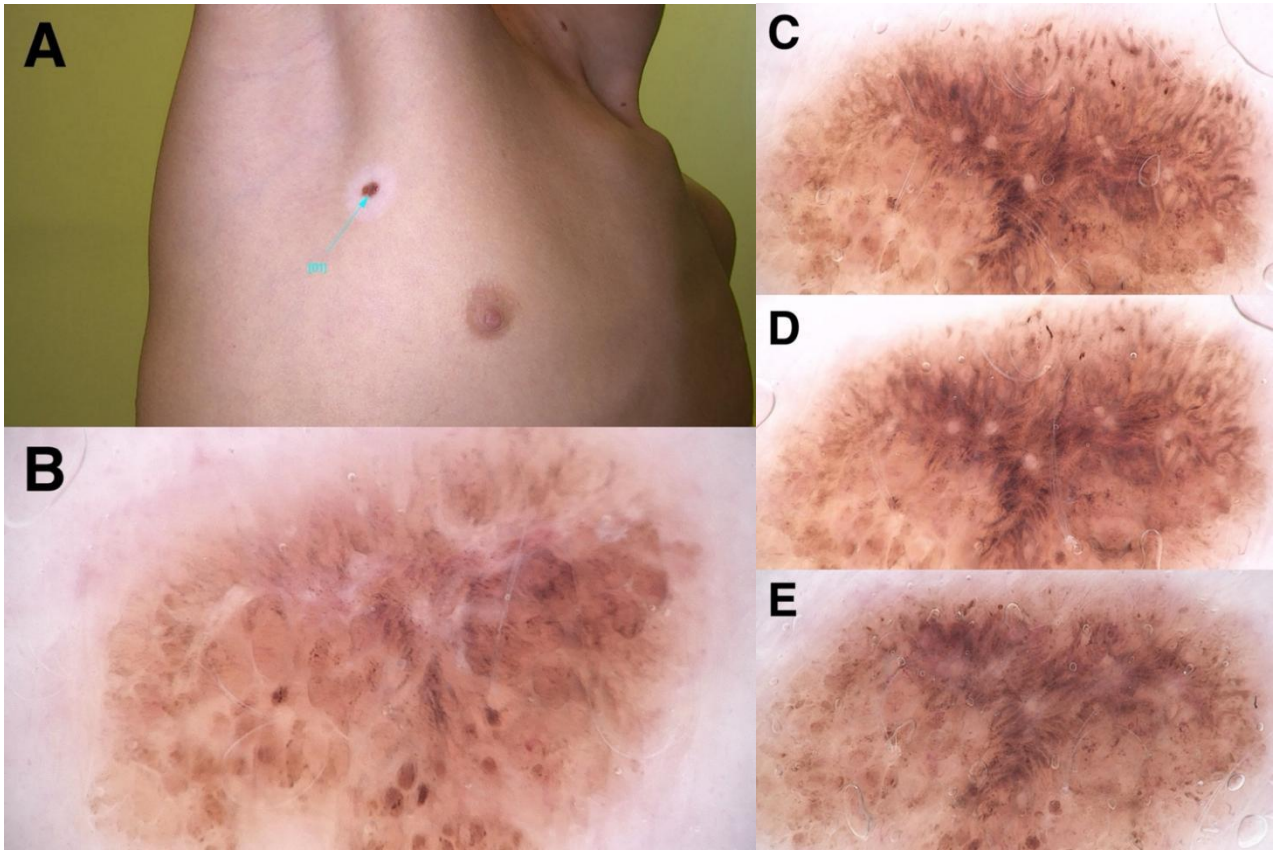

Fig. 1. Patient A, 15 years old, camera FotoFinder Medicam 1000s: A – Clinical photo. Nevus on the lateral surface of the torso on the right, B – Dermoscopy day 0th (Polarisation Mode + UTG, 50x), C – Dermoscopy day 41st (Polarisation Mode + UTG, 50x), D – Dermoscopy day 69th (Polarisation Mode + UTG, 50x), E – Dermoscopy day 164th (Polarisation Mode + UTG, 50x)

Dermoscopically. During the first visit on Day 0 (Fig. 1B). In the centre of the hypopigmented patch a nodule is identified, focally containing pigment clods, isolated radial lines, white structureless zones, diffuse pigment spots (pigment incontinence), isolated dot and curved vascular inclusions.

Given the complex structure of the neoplasm, signs of irritation, regression structures, and localisation in the hypopigmented area, the patient was prescribed short-term observation.

On day 41, the nevus showed rapid structural changes and the appearance of asymmetrically located peripheral clods-pseudopods, which, based on the patient's age, were interpreted as signs of Spitz nevus (Fig. 1C). The presence of such elements in the dermoscopic picture is a sign of intense proliferation. Benign complex melanocytic nevi may also show peripheral clods, but in our patient's

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case, the clods and pseudopods form a multi-row grouping, which is more characteristic of malignant neoplasms [5]. The patient's parents were advised to remove the lesion, as it is nodular in nature and growing rapidly, but they did not give their consent.

On day 69 of the visit, the number of clods-pseudopods decreased significantly, although the overall size of the element remained unchanged (Fig. 1D).

Visit on day 164. Isolated peripheral clods reappeared, as a probable sign of active proliferation (Fig. 1E). Parental consent was given to discontinue observation and perform an excisional biopsy. The neoplasm was excised within healthy tissue.

A pathological examination of the removed material was performed. Conclusion: The histological picture is most characteristic of a combined nevus (ICD-O coding 8720/0 Combined nevus) – Spitz nevus and intradermal melanocytic nevus with areas of regression (fibrosis) (Fig. 2A, 2B). Given the complicated medical history and the peculiarities of the dermoscopic picture, an immunohistochemical examination was additionally performed (p16, HMB-45, PRAME, KI-67). PRAME 1 – negative reaction in the cells of the neoplasm. p16-INK4 – in most cells, a preserved cytoplasmic/nuclear-cytoplasmic reaction is noted, part of the dermal population demonstrates loss of marker expression (Fig. 2C). HMB45 – pronounced cytoplasmic reaction in cells of the junctional population with complete loss of expression in the dermal population of formation cells (Fig. 2D). KI 67 – proliferation index within 1-2 % (mainly superficial layers of the dermis). Thus, the phenotype of the formation cells and the type of their distribution correspond to a benign formation from melanocytes – a combined nevus with focal Spitz morphology, growing against the background of a skin scar (probably partial regression of the formation or post-traumatic changes).

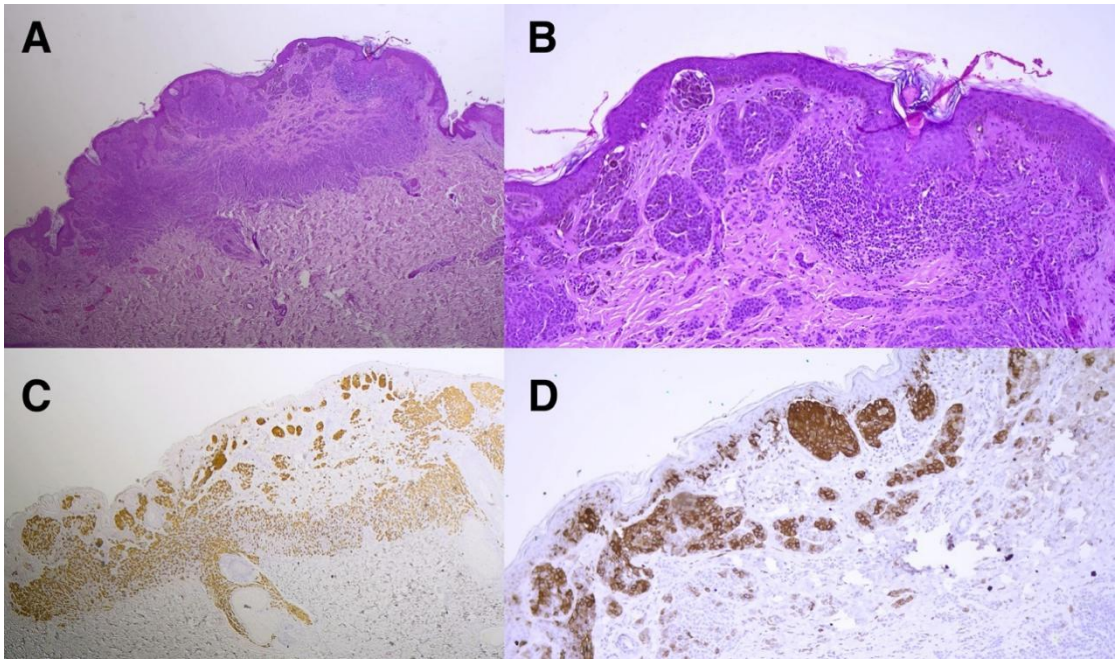

Fig. 2 Photographic documentation of the results of pathological histological examination of a 15-year-old patient: A – H&E 40x, B – H&E 100x, C – IGH p16-INK4, D – IGH HMB-45

Research results and their discussion. Spitz nevus is a benign melanocytic proliferation first described in 1948 by Sophie Spitz as childhood melanoma [6]. It was initially described as an erythematous papule, typically located on the face or extremities of children or adolescents. However, further studies have shown that in 71-92 % of cases, it manifests as a pigmented lesion. Spitz nevi have the ability to regress on their own [7]. During dermoscopic examination, they show an 'exploding star' pattern during growth and 'stardust' during involutive changes. Given the rapid growth and dermoscopic changes in the structure of the neoplasm, it causes concern and requires differential diagnosis with skin melanoma [8-10].

Melanoma is a malignant tumour prone to rapid, unpredictable growth and metastasis. A significant proportion of tumours (10 % to 58 %) show regression, manifested by areas of partial or complete pigment loss, the formation of inflammatory infiltrates and a certain degree of fibrosis [11, 12].

Similarly, Sutton nevi, which are benign lesions, are clinically characterised by a pigment-free halo surrounding the melanocytic nevus and also show a connection with the activation of local immune responses, in particular $CD8^+$ T lymphocytes [13, 14].

During the evolution of the halo, it may expand, and the pigmented formation located in the central part may partially or completely disappear. The non-pigmented areas that arise as a result of such dynamic changes remain on the skin for a long time. These processes may also occur with eczematization and the development of a reaction of the Meyerson nevus type [15].

Our patient's case demonstrates a pigmented lesion located in the achromic zone. Due to its spitzoid nature, the dermoscopic picture is represented by elements that may be signs of malignancy, in particular peripheral multilayered granules and pseudopods, radial lines, areas of pigment incontinence, and dot vessels predominating in the vascular pattern. There is a combination with an

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intradermal component, which probably delayed the involution of the lesion. The typical pattern of dynamic changes characteristic of Spitz nevus (symptoms of 'starburst' and 'stardust') was also influenced by the superimposition of an autoimmune reaction, which manifested itself in the appearance of a halo. The appearance of connective tissue separating the nevus area from the surrounding skin is a consequence of an autoimmune reaction in the area of the combined neoplasm. Subsequently, it probably acted as a barrier, which led to the 'conservation' of the nevus and slowed down the rate of its changes.

Conclusions. Spitz nevi are an unresolved issue in modern dermatological oncology. Their behaviour is unpredictable, and their similarity to skin melanoma influences patient management tactics and often leads to their removal. The clinical manifestations of periods of progression and regression may be distorted by the combined nature of the neoplasm and require clarification through analysis of manifestations in broader clinical studies.

Conflict of interest: absent.

Data Availability Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request

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ВИПАДОК ТРИВАЛОГО СПОСТЕРЕЖЕННЯ ДИНАМІЧНИХ ДЕРМОСКОПІЧНИХ ЗМІН КОМБІНАЦІЇ НЕВУСІВ ШПІЦА ТА СЕТТОНА У ПІДЛІТКА

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Резюме. На сьогодні Шпіцоїдні новоутворення залишаються однією з найбільш складних проблем дерматоонкології. Діагностика суттєво ускладнюється за умови поєднаної морфології.

У публікації описано випадок 15-річного пацієнта з обтяженим сімейний анамнезом щодо метастатичної меланоми. На боковій поверхні тулуба справа виявлено невус у вигляді вузлика, з неоднорідним забарвленням у центрі та втратою пігменації по периферії.

Дермоскопічна картина: на тлі гіпопігментної плями візуалізується визначається вузлик. У центрі утворення визначаються фокальні пігментні грудки, поодинокі розгалужені лінії та білі безструктурні зони. Також спостерігаються дифузноі пігментні точки, поодинокі точкові та вигнуті судинні включення.

Зважаючи на складну будову утворення, хворому призначено коротке спостереження. На 41-й день спостереження зафіксовано різку динаміку: деструктуризація невуса з появою ознак атипії, асиметрично розміщених периферичних глобул-псевдоподій. Запропоновано розглянути можливість видалення утворення, однак згода не була надана.

На 69-й день значно зменшилась кількість глобул-псевдоподій. На 164-й день знову з'явились поодинокі периферичні грудки, як ймовірна ознака активної проліферації. Надана згода на виконання ексцизійної біопсії. Утворення висічене в межах здорових тканин.

Виконано патогістологічне дослідження видаленого матеріалу. Висновок: гістологічна картина найбільш характерна для комбінованого невуса − Шпіц невуса та внутрішньодермального меланоцитарного невуса з ділянками регресу (фіброзу). Виконано імуногістохімічне дослідження, яке підтвердило попередні висновки.

Непередбачувана поведінка невусів Шпіца та їх подібність до меланоми впливають на тактику лікування хворих, що часто стає причиною для видалення. Клінічні прояви періодів прогресу та регресу можуть спотворюватися через комбіновану природу утворень. Вони потребують уточнень шляхом аналізу проявів у процесі ширших клінічних досліджень.

Ключові слова: Шпіц невуси, гало невуси, меланома, дермоскопія, діагностична візуалізація, новоутворення шкіри, спостереження, регресія новоутворення.

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