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## MORPHOLOGICAL STUDY ON PIGMENTED NEVI IN CHILDREN

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The increasing incidence, occurring in childhood, of melanocytic nevi allows both performing statistical studies as well as morphological studies. In this context, statistical information gathers data on the incidence of melanocytic nevi in children by age, by sex and by area of residence. It is also possible, given their location, to make judgments on the incidence of melanocytic nevi, on the number and structural changes affecting them and the accompanying changes, those that are found in the surrounding skin, respectively.

*Key words:* melanocytic nevi, children, analysis, structure, studies

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The study of melanocytic nevi in children is a matter of interest, that grows in importance nowadays, given their increased incidence since young age [9, 10]. To this fact contribute race predisposing factors in conjunction with the environment and inadequate exposure to UV radiations [1, 8]. From this point of view we can make some correlations of structural data with statistical data. Through their conjunction, we can achieve an overall analysis on the incidence of melanocytic nevi in children [4, 7]. Referring to actual data on the occurrence of melanocytic nevi and their incidence in children, the formulation of assessments on incriminated determinants in the occurrence of these formations at young ages can be stated. In this context, the morphological analysis of melanocytic nevi in children, may refer to the integrity of these formations in the context of their benign nature [2, 3]. Furthermore, microscopic analysis of melanocytic nevi in children allows to estimate benignity. In this context, the microscopic analysis allows us to observe minimal structural changes as a result of trauma in the structure of the skin surrounding these formations. From this point of view, we must consider the possible malignant transformation of melanocytic nevi, accusing external traumatic factors combined with genetic and environmental agents [5, 6].

### MATERIALS AND METHODS

The present study was made possible by collating medical data from specialized services in Clinic Children Hospital of Brasov. The study was conducted in the first quarter of 2014, bringing together information on the morphological analysis of melanocytic nevi in children who have had nevi extirpation plastic surgery. The study included analysis of 50 cases. After removing melanocytic nevi formations, they were analyzed morphologically. From this point of view, the morphological observations were the primary

endpoint of this study. The study of melanocytic nevi was performed using Nikon optical microscope. The analysis was made using x10 objective, which allowed observation of the entire melanocytic nevi but x20 and x40 magnifying power objectives were also used, allowing the observation in detail of the melanocytic formations.

### RESULTS AND DISCUSSION

Among the investigated cases, our attention was focused more on patients who had multiple, with whole integrity melanocytic nevi, that were excised totally, as well as other melanocytic nevi presenting traumatic skin lesions accompanying these formations. Specifically interesting is the case of a male patient, 14 years of age, residing in urban areas, who had plastic surgery removal of two melanocytic nevi, the first one, traumatized, located in the right suprascapular region and the second one located paravertebral right. The size of the excised skin fragments were 25x15 mm and 15x20 mm. They showed a slightly prominent aspect, the first one being a spherical formation, the another one round. In this case, the morphological analysis allowed the observation and diagnosis of the excised formations, as being nevocelulari dermal nevi, the first one showing seborrheic keratosis, papillomatous, with hyperkeratosis. Figure 1 shows the structural aspects of melanocytic nevi in this case. In this context, the attendant skin of one of the excised nevi formation is being presented. The picture also shows the adipose tissue area, which resulted in the occurrence of seborrhea.

Structural analysis of the described patient, allowed the observation of areas with sweat and sebaceous glands, as well as of the accompanying skin of these regions, seen in figures 2 and 3.

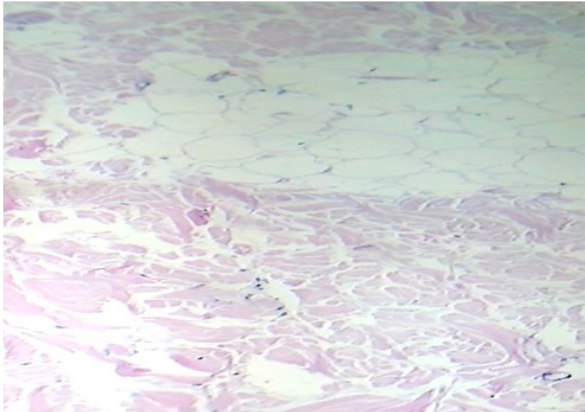


Figure 1 — Structural aspects observed by removal of a melanocytic nevus x10. Accompanying adipose tissue and skin formations

Another case referring to the removal of melanocytic nevi formations that we focused on, was of a 16 years old patient residing in rural areas, who came to the plastic surgery service in order to have two melanocytic nevi formations excised. These formations were situated one in the suprascapular area, from where it was removed, measuring 18x18 mm acrosopically presenting slightly pigmented aspect. The second excised melanocytic nevus was 20x20 mm in size, was actually a spherical lesion with 7 mm in diameter. The first skin lesion was composed of nests and cords of nevi cells without atypia, located in the papillary dermis. The second skin lesion consisted of nests and cords of nevi cells placed in the papillary dermis presenting frequently junctional nests. It was noted in context, the appearance of superficial hyperkeratosis. The final diagnosis of these lesions was nevocelular dermal nevus and nevocelular compound nevus with hyperkeratosis. Structural issues related to that described nevi formations can be observed in figures 4 and 5.

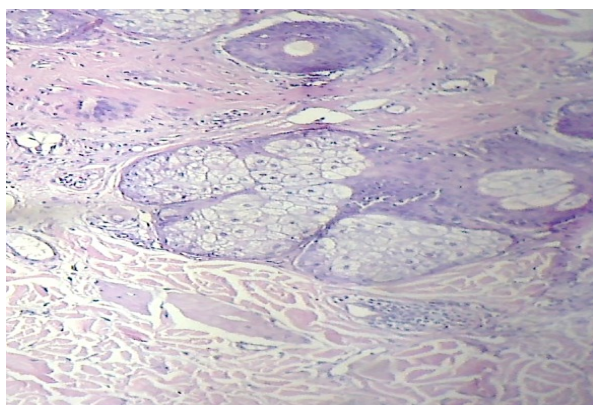


Figure 2 — Structural aspects observed by removal of a melanocytic nevus x10. Sebaceous gland and surrounding skin formations

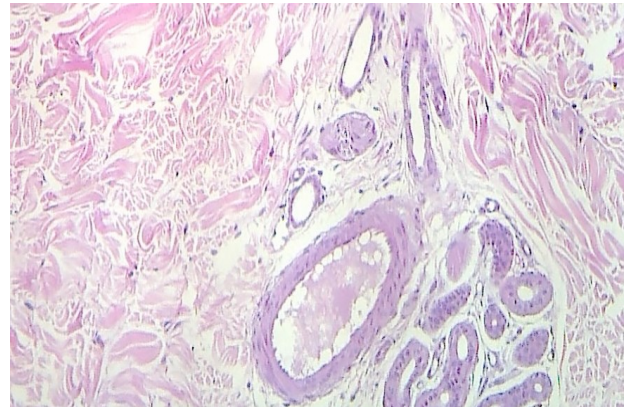


Figure 3 — Structural aspects observed by removal of a melanocytic nevus x10. Sweat glands, blood vessels and surrounding skin formations

Among the morphologically studied and investigated cases, the presented cases have drawn our attention. Considered standard cases, they also allowed the morphological analysis of excised melanocytic nevi. We presented only these two cases as we considered to be most representative for the investigated group in the entire study.

### CONCLUSIONS

The study of melanocytic nevi in children is a field of high interest at present, due to increased incidence of these formations in children. The presented study allowed structural analysis of melanocytic nevi in children, emphasizing the analysis and characterization of excised interested skin areas. Morphological analysis presented in this study can be corroborated with statistical data to provide complexity to the study. As this study only refers to structural observations, we considered a continuation of this research with statistical study augmentation.

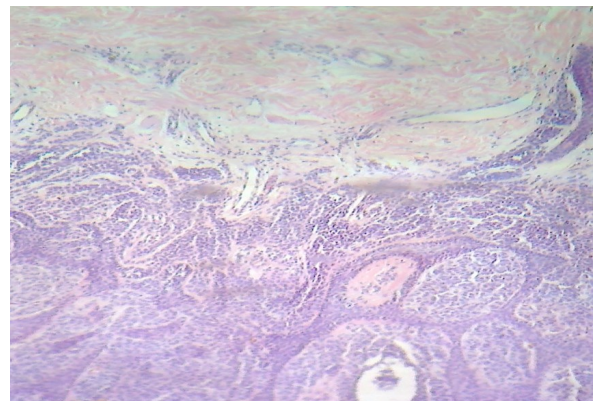


Figure 4 — Structural aspects observed by removal of a melanocytic nevus x10. Nevi cell nests and surrounding skin formations

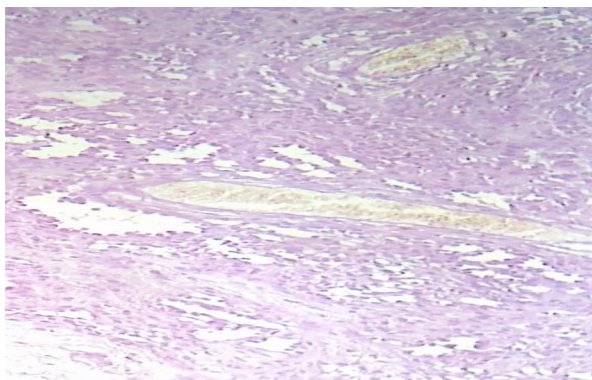


Figure 5 — Structural aspects observed by removal of a melanocytic nevus x10. Surrounding blood vessels and skin formations

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*БАЛАЛАРДАҒЫ ПИГМЕНТТІ НЕВУСТЫ МОРФОЛОГИЯЛЫҚ ЗЕРДЕЛЕУ*

Қазіргі уақытта балалар жасындағы пациенттерде меланоцитарлық невустардың анықталу жағдайлары санының артуы статистикалық және морфологиялық зерттеулерді орындауға мүмкіндік береді. Осы тұрғыдан алғанда статистикалық ақпаратқа балалар арасында меланоцитарлық невустармен ауыру, науқастарды жасы, жынысы және тұрғылықты жері бойынша бөлу туралы мәліметтер кіреді. Бұған қоса, олардың орналасуын ескере отырып, меланоцитарлық невустардың таралуы, олардың саны, құрылымдық өзгерістері, сол сияқты осы ауру кезінде теріде болатын өзгерістер туралы түйіндемелер жасауға болады.

*Кілт сөздер:* меланоцитарлы невус, балалар, анализ, құрылым, бақылау

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*МОРФОЛОГИЧЕСКИЕ ИССЛЕДОВАНИЯ ПИГМЕНТНОГО НЕВУСА У ДЕТЕЙ*

Увеличение количества случаев выявления меланоцитарных невусов у пациентов детского возраста в настоящий момент позволяет выполнять как статистические, так и морфологические исследования. В этом контексте статистическая информация включает в себя данные о заболеваемости меланоцитарными невусами у детей и распределение больных по возрасту, полу и месту жительства. Кроме того, учитывая их расположение, можно делать выводы о распространенности меланоцитарных невусов, их количестве, структурных изменениях, а также о изменениях окружающей кожи при этом заболевании.

*Ключевые слова:* меланоцитарный невус, дети, анализ, структура, наблюдения