BENIGN AND MALIGNANT MESENCHYMAL TUMORS

Hamroyev M.S
Tashkent State Medical University, Faculty of Medical Pedagogy and Treatment, General Medicine, Group 207
Shag’iyazova L.M
Scientific advisor: Assistant of the Department of Anatomy, Histology and Pathological Anatomy, Tashkent State Medical University

Relevance.Mesenchymal tumors have diverse origins and are characterized by significant morphological variability, which often complicates their diagnosis. Accurate differentiation between benign and malignant forms is of great importance in clinical practice, as their biological behavior differs substantially. Modern pathological anatomy methods, particularly histological and immunohistochemical examinations, play a key role in determining the degree of tumor differentiation and establishing an accurate diagnosis. Therefore, in-depth study of mesenchymal tumors is essential for early diagnosis, appropriate treatment, and improved prognosis.

Objective. The aim of this study is to comprehensively investigate the etiology and pathogenesis of benign and malignant tumors of mesenchymal origin, as well as to analyze their morphological, histological, and clinical characteristics. In addition, the study focuses on identifying the main distinguishing criteria between these tumors by evaluating their growth rate, invasiveness, metastatic potential, and overall impact on the organism.

Materials and Methods. Tumors are studied within the field of oncology and are generally classified as benign (well-differentiated) and malignant (poorly differentiated). Benign tumors typically displace, compress, or push surrounding tissues without destroying them. In contrast, malignant tumors grow rapidly, invade surrounding tissues, and cause their destruction, often damaging blood vessels. Tumor cells that enter the bloodstream or lymphatic system due to vascular wall destruction can spread to distant organs and tissues, forming secondary tumor nodules known as metastases.

If tumors are not completely removed, they may recur. Benign tumors do not metastasize; however, depending on their location (e.g., in the brain or within respiratory or digestive tracts), they may still pose a life-threatening risk by compressing vital structures. They may also regrow if partially excised. The metastatic potential and rate of tumor spread depend, in part, on the immunobiological status of the organism.

Tumor development begins with the emergence of a small group of altered cells capable of uncontrolled division. This process progresses through several stages:

1.uneven proliferation of tumor cells (hyperplasia);

2.focal proliferation and tissue growth;

3.formation of benign tumors;

4.eventual malignant transformation (malignization).

Lesions that precede malignant tumors and have the potential to transform into cancer are referred to as precancerous conditions, while early tissue changes are considered precancerous processes. Tumor progression thus occurs step by step, eventually leading to malignancy. Tumor-associated bleeding may result in anemia, while tumor necrosis and metabolic disturbances can lead to systemic intoxication.

Conclusion. Mesenchymal tumors are classified into benign and malignant types based on their origin, structure, and clinical behavior. Benign tumors usually grow slowly, do not invade surrounding tissues, and do not metastasize, resulting in a relatively favorable prognosis. In contrast, malignant mesenchymal tumors are characterized by rapid growth, invasiveness, and the ability to metastasize, posing a serious threat to patient life.

Timely detection using morphological, histological, and modern diagnostic methods is crucial. Accurate diagnosis allows for the selection of optimal treatment strategies, ultimately improving patient quality of life and prognosis.