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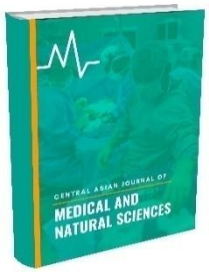

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Immunohistochemical Characterization of Urethral Polyps in Women

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Abstract: Urinary polyps are a relatively common safe tumor of the urogenital tube in women and affect the zinc status of women, altering the quality of lifestyle. Polyps are mostly localized in the region of the external urethral outlet, clinically causing pain, thirst on entering the urethra, causing pollicuria, stranguria, urethrorrhagia and urine opacity.

Key words: female, urethra, immunohistochemistry, polyps.

Introduction. The causes of urethral polyps are poorly understood and remain unclear.Most scientific studies Abstract.Urinary polyps are a relatively common safe tumor of the urogenital tube in women and affect the zinc status of women, altering the quality of lifestyle. Polyps are mostly localized in the region of the external urethral outlet, clinically causing pain, thirst on entering the urethra, causing pollicuria, stranguria, urethrorrhagia and urine opacity.Show that urethral polyps, in most cases not considered a safe tumor, are caused by a disruption of the interaction between mesenchymal tissues and epithelium in the wall of the urethra for unknown reasons, it is a hyperplastic process that is defined by an overgrowth of epithelium in the oven. As a cause of this process, dyshormonal changes in the urogenital epithelium and chronic infectious-inflammatory processes in women confirm their significance.The results of immunohistochemical study of anti-apoptosis protein in the enveloping epithelium in female urethral polyp, which helps to determine the morphogenesis and developmental cycles of the disease.

Objective of the study: Immunohistochemical characterization of urethral polyps in women.

Materials and Methods of Study. A total of 22 cases were isolated from our material for immunohistochemical testing, of which glandular polyp 6, fibrous polyp 4, inflammatory polyp 7 and angiomatous polyp 5. Histological sections of 2 μm thickness were made from paraffin briquettes that were deparaffinized, dehydrated, demasculinized and stained using Ki67, PanCK, p53, BCL2 antigens in a dedicated automated Ventana Benchmark XT system, Roche, Switzerland. Of these, Ki67 expression (proliferative index) was evaluated based on positive staining of both enveloped and glandular epithelial cells. PanCK marker was determined based on the presence or absence of positive epithelial cell membrane reactivity. p53 reactivity was assessed based on hyperexpression of the "mutant variant" or relatively low expression of the wild type. The BCL2-apoptosis index was calculated as a percentage ranging from 1-2% in some cases in both nucleus and cytoplasm of epithelial cells and 5-6% in others.

Results of the study and their discussion. Immunohistochemical testing for marker 4 was performed in each isolated case of variants categorized as type 4 based on morphologic features of urethral polyps in women. When we analyzed the glandular variant of the polyp, the Ki67 proliferative index obtained a higher score than the other variants. In this case, it was observed that the polyp also had a high degree of positive staining of multilayered squamous or multilayered variable epithelium in some cases at a relatively low level of 7-8%, in other cases 15-20% of the readings (Figure 1). It has been observed that the lining of the PanCK marker is multilayered squamous epithelium stained to the extent that the basal layer of the epithelial cell membrane becomes dark brown, indicating positive reactivity. A protein called R53 is considered a transcription factor and controls the cell cycle. R53 is a tumor suppressor gene that causes malignant tumors. The tumor suppressor gene R53 is expressed in all cells of the body. R53 is also passive if the genetic apparatus of the cell is intact, R53 is also activated if the DNA is damaged. Hence, r53 is activated when damaging factors accumulate in DNA. The cell cycle and apoptosis are terminated as a result of R53 activation. R53 is activated in diseases that have gotten a number of manifestations of cervical cancer. In cells that proliferate rapidly, the concentration of R53 protein is increased. The importance of the increased concentration of R53 is that it replicates rapidly with DNA and damages the gene apparatus, and this condition is a preparation of the cell for DNA damage. From the fact that urethral polyps are a chronic hyperplastic and inflammatory disease, it follows that the wild-type p53 marker is expressed at low levels. It has been observed that BCL2-apoptotic index is expressed in both the nucleus and cytoplasm of epithelial cells, in some cases by 1-2% and in others by 5-6% percent .

The fibromatous variant of urethral polyps in women was immunohistochemically tested in 4 cases from our material. The results of the examination showed that the fibromatous variant of the polyp demonstrated relatively low expression of the proliferative index Ki67 of the covering epithelial cells. It is known that in the fibromatous variant of polyp, it is observed that the covering multilayer squamous epithelium is relatively atrophied and thinned. In this atrophied epithelium, it was observed that the proliferative activity of the cells was at a much lower level, that is, the Ki67 proliferative index was 3-4. Based on this figure, it can be said that the proliferative activity of certain cells was found to be pronounced not only in the covering epithelium of the polyp, but also in the underlying fibrous tissue. The fibromatous variant of this polyp was found to contain invaginations even at low levels in the covering epithelium. In this fibromatous polyp variant, there is positive expression of the covering epithelium roll in the PANCA marker throughout the fundus (Figure 6).P53 marker suppressor genei majlumki organismning barcha xuzhayralarida expressionlanadi. This is due to the fact that the cell nucleus is intact and is not damaged by the DNA apparatus. If DNA is damaged, this gene is activated and the process of apoptosis stops. In our material, expression of this wild-type marker was observed due to the fact that urethral polyps were a chronic disease (Figure 7). This marker cell is a proteinaceous factor that belongs to the Bcl-2 family and controls and reduces apoptosis. It controls cell death, suppresses caspase release and prevents cytochrome release by controlling the permeability of the mitochondrial outer membrane. Bcl-2 is an intracellular membrane-bound protein that encodes a proto-oncogene that blocks apoptosis. This gene is also expressed in malignant tumor cells and non-tumor epithelium. There is no deficiency of Bcl-2 in endothelial cells. Decreased levels of Bcl-2 promote apoptosis.

The expression of Bcl-2 in precancerous states indicates an early stage of tumor development. It is observed that BCL2-apoptotic index is expressed by 35-40% both in the nucleus and in the cytoplasm of surrounding epithelial cells of fibromatous polyp. Immunohistochemical study was performed on 7 cases of inflammatory form of urethral polyps in women. They were found to have a relatively low cell proliferation index of about 10-12%. The cell proliferation index was observed in both enveloped epithelium and mesenchymal cells containing stroma. The P53 marker may be expressed in all cells as it is a gene that indicates the degree of tumorigenic transformation of tissue cells. The inflammatory

variant of this polyp was also found to have a low level of activity in the wild type ushub gene, which is expressed passively. This wild-type marker was found to be a low expression marker of the polyp in both enveloped epithelium and stromal cells (Figure 11). This marker Bcl-2, which is the next immunologic marker, is a cellular protein factor that controls apoptosis and induces degradation. In most cases, this marker controls ujaira death, suppresses caspase, and stops the release of cytochrome, which controls the permeability of the mitochondrial outer membrane. The marker Bcl-2 is an intracellular membrane-bound protein encoded by a proto-oncogene that blocks apoptosis. This gene can also be expressed in malignant epithelial tumor cells and non-tumor epithelium. Decreased levels of Bcl-2 promote apoptosis. Expression of Bcl-2 in precancerous states indicates an early stage of tumor development. BCL2-apoptotic index expression has been observed at relatively low levels, i.e. 1-2%, both in the nucleus and in the cytoplasm of surrounding epithelial cells of fibromatous polyp.

We consider a characteristic form of female polyps of the urethra, which is a carunculus, that is, a variant of angiomatosis, which occupies an extensive area, is light red, with a duller tone, the surface is rough, and is characterized by the appearance of rapid bleeding. The caruncle is actually a tumor developed from blood vessels, and it is found that the inflammatory process is also strongly developed in its tissue. This tumor most commonly occurs after inflammatory diseases of the urethra, the cause of which is dilatation of blood vessels in response to the inflammatory process, which is later replaced by an angiomatous process. Paraurethral glandular structures are found to be preserved in the tissue of this polyp, which occupy only 7.2% of the space. It is observed that coruncular tissue occupies 44.3% of the stromal area of the vascular polyp as a result of excess blood vessels and development of angiomatous process. Immunohistochemical study was performed in the 5th case of this form of polyp. This antigen is a specific protein that localizes in the nucleus of the tumor cell and activates cell proliferation. Ki-67 is observed in all processes that continue with cell proliferation. Detection of Ki-67 marker indicates that the risk of any tumor, even if safe, is circulating. Immunohistochemical study is performed after detection of dysregenerative changes in a polyp tumor that have deviated from the main in it because the tumor belongs to the juraiyongan group. When IGX examination detects Ki-67 in pathomorphologically altered tissue cells, these cells are evaluated as being at the level of active division, and these cells are counted and the proliferation index is calculated as a percentage. The method of IGX determination by Ki-67 helps, first of all, to predict the malformations of tumor tissue development, the activity of proliferating cells in it, the degree of tumor transformation, the prognosis of further tumor rejection, and the choice of an adequate type of treatment method. It was found that in the angiomatous form of urethral polyps in women this marker is expressed at a relatively low level in some cells of the basal floor and stroma of the covering epithelium. In this variant of angiomatous polyp, while the enveloping epithelium is atrophied and thinned, there is positive expression of the PanCK marker throughout its entire fundus (Figure 14). The marker suppressor gene R53 was found to be locally expressed in certain cells of the enveloping epithelium in all known cells in the body, angiomatous tissue of the polyp . It is observed that BCL2-apoptotic index is expressed in fibromatous polyp up to 7-8% of enveloped epithelial cells in both nucleus and cytoplasm.

Conclusions: Thus, it was confirmed that the glandular form of urethral polyps in women had a significantly higher cell proliferation index than other forms, and expression was observed at an average level of 15-20%. The PanCK marker was found to be positively expressed in the membranes of epithelial cells lining the polyp. a passively expressed wild-type p53 marker was identified. BCL2-apoptotic index was observed to be expressed in both the nucleus and cytoplasm of epithelial cells, in some cases by 1-2% and in others by 5-6% percent.

The fibromatous form of the polyp showed immunohistochemically as follows, i.e. by atrophy of the enveloping epithelium it was observed that Ki67 and PanCK markers were at low levels, wild type p53

marker was expressed only in the covering epithelium, BCL2 marker was highly expressed in the covering epithelium compared to other forms due to polyp.

The inflammatory polyp was found to have a relatively high cell proliferation index and positive expression in both the enveloping epithelium and some cells of its stroma with relatively low expression of apoptosis index.

Angiomatous polyps, i.e., caruncle cell proliferation index expressed at the basal level of the covering epithelium, p53 marker expressed at low levels in both the enveloping epithelium and some of its stroma cells, apoptotic inner covering epithelium and stroma cells up to 7-8% in both nucleus and cytoplasm

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