

MORPHOLOGICAL CHANGES IN THE ORAL MUCOUS MEMBRANE IN CHRONIC RECURRENT APHTOSIS STOMATITIS ON THE BACKGROUND OF CHRONIC CHOLECYSTITIS

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Abstract

Changes of the oral mucous membrane in chronic cholecystitis are characterized by various morphological elements, such as erosion, aphtha, ulcer, pathological processes - acanthosis, atrophy. The chronic inflammatory process that accompanies this process is a protective reaction of the body and is histologically manifested by the development of lymphohistiocytic or round cell infiltrates.

Chronic cholecystitis is an inflammatory disease of the gallbladder wall. It develops due to the formation of stones in the gallbladder, which leads to stagnation of bile. Periodically arising and passing inflammations lead to a change in the gallbladder wall with the development of chronic cholecystitis in it. Along with the general clinical signs of chronic cholecystitis, changes in the oral mucosa develop.

We selected 40 patients accompanied by damage to the oral mucosa, in particular the formation of aphthae, ulcerative and necrotic elements.

As a result of a morphological study of erosive-ulcerative lesions of the oral mucosa in chronic recurrent aphthous stomatitis on the background of chronic cholecystitis the most frequent manifestations of changes were characterized by the development of inflammation and ulceration of the epithelium, the formation of ulcerative defects, hyperplasia of the flat integumentary epithelium, and in some cases, atrophy and thinning of epithelium.

Keywords: erosion, aphtha, ulcer, atrophy, acanthosis, hyperplasia, dyskeratosis, dysplasia, infiltration.

Introduction

With pathologies of the gastrointestinal tract various changes occur on the mucous membrane of the oral cavity. There are many reactive changes in the oral mucosa with various etiology, but chronic with the course of lesions of the hepatobiliary system, characterized by dystrophy, hyperplasia, atrophy, dyskeratosis and dysplasia. These changes can occur individually or in combination with each other [1,2,3,4,5,6].

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In most cases with chronic cholecystitis on the oral mucosa, patients feel discomfort caused by swelling, the appearance of aphthae, erosion, ulceration and other changes. Given the above, in order to study changes in the oral mucosa (OM) in case of chronic recurrent aphthous stomatitis (CRAS), we consider it worthwhile to conduct a more in-depth study of morphological changes in patients who addressed to the dental clinic, in the anamnesis of which there was a background disease - chronic cholecystitis.

Purpose of the study: the morphological changes in the oral mucosa in chronic recurrent aphthous stomatitis on the background of chronic cholecystitis and to conduct a comparative analysis with clinical signs.

Materials And Methods

For conducting a histological study of a total of 114 patients with chronic recurrent aphthous stomatitis, we selected 40 patients accompanied by damage to the oral mucosa, in particular the formation of aphthae, ulcerative and necrotic elements. The material from the mucous membrane from the affected area for histological examination was placed in a 4% neutral formalin solution, then it was fixed in alcohol and bathed in paraffin according to the Lloyd method, then it was placed in a thermostat for 24 hours and paraffin blocks were prepared, sections were stained with hematoxylin and eosin. The cytological research method was carried out by the method of smear imprint of the oral mucosa.

Results And Discussion

Chronic recurrent aphthous stomatitis (CRAS) is a chronic disease of the oral mucosa characterized by periodic remissions and exacerbations with a rash of aphthae. According to WHO, this disease affects up to 20% of the population. When analyzing chronic cholecystitis by gender of patients with chronic recurrent aphthous stomatitis, pathology was identified equally often in both women and men. Of the total number of patients 114 with chronic calculous cholecystitis, chronic recurrent aphthous stomatitis was observed in 61 women (53.5%), in 53 men (46.4%). In terms of age chronic recurrent aphthous stomatitis was observed in patients aged 50 and more years (60.5%) more often than at a young age.

Patients with chronic recurrent aphthous stomatitis were divided into 3 representative groups by age and sex: with a mild, moderate to severe and severe course- the main (72) comparison group (42). The number of patients in all groups of patients was equivalent, i.e. in the main groups there were 24, in the comparison groups - 14 patients. The control group consisted of 20 healthy individuals.

Patients of the main group with a mild form of chronic recurrent aphthous stomatitis with chronic calculous cholecystitis complained of the presence of a few aphthous formations on OM, slight discomfort, redness and swelling, dry mouth. The general condition is not disturbed, pain and burning appeared when eating. When examining these patients for OM there are 1-3 aphthae, with a hyperemic rim around and slight swelling, the surface of the aphthous elements is covered with a thin fibrinous coating. The diameter of these aphthae ranges from 0.1 to 0.8 mm. The state of regional lymph nodes during palpation without changes. The number of relapses in them is observed 1-2 times a year, the duration of relapses from 7-10 days, the duration of remission was 6-7 months.

Patients of the main group, with an average degree of chronic recurrent aphthous stomatitis, mainly complained of a violation of the general condition of the body, which was expressed in moderate headaches. Pain and burning were manifested when eating ordinary food, and eating spicy foods was accompanied by discomfort. On examination of such patients, hyperemia and edema in the area of aphthous rash, covered with fibrinous plaque, were observed. The number of aphthae did not exceed 4-6, but the diameter increased and was in the range of 1.0-1.2 mm. When analyzing the state of the edges of erosion, inflammatory infiltrate is observed. The number of relapses in these patients was 2-3 times a year, the duration of relapses is 10-13 days, the duration of remission is 4-6 months.

Patients of the main group of people with severe chronic recurrent aphthous stomatitis complained of disorders of the general condition of the body which are most expressed by constant headache, severe pain and burning of the erosive surface, not associated with food intake. During examination of patients with severe chronic recurrent aphthous stomatitis, significant hyperemia and edema with inflammatory infiltrate were noted within the lesion elements - aphthae and erosion covered with fibro-necrotic plaque, regional lymph nodes were enlarged and painful. According to patients aphthae and erosion ulcerated, a putrid odor from the mouth appeared,

the healing of such elements took place within 2-3 weeks. The number of relapses in the severe course of chronic recurrent aphthous stomatitis was 4-5 times a year, the duration of remission was 2-3 months.

Patients with a mild course of chronic recurrent aphthous stomatitis of the comparison group without somatic pathology usually denied violations of the general condition of the body, only with spicy food they felt a slight burning sensation and pain. Appetite and sleep were not disturbed. During the examination, the mucous membrane of the mouth was pale pink, without hyperemia and edema.

Patients with an average degree of chronic recurrent aphthous stomatitis sometimes felt isolated aphthae on OM, the fast-passing pain and burning sensation that appeared during meals. On examination the mucous membrane of the mouth is of the usual color, with the exception of the location of the aphthae, where hyperemia and slight edema were observed, sometimes inflammatory infiltration.

Patients with a severe form of chronic recurrent aphthous stomatitis of the comparison group complained of the presence of several aphthous formations on OM, pain and burning when eating. During the examination hyperemia, edema and inflammatory infiltration at the site of aphthous-erosive formation, discomfort were noted. Regional lymph nodes are slightly enlarged and painful.

Table 1. Localization of CRAS on the oral mucosa

Localization of aphtha		Cheek, upper lip		Underlip		Sublingual region		Tip of the tongue	
Number of patients	of	a	%	a	%	a	%	a	%
		bs		bs		bs		bs	
		5	45,6	4	41,	8	7,0	7	6,1

As can be seen from table 1, the cheek and upper lip were affected in 45.6% of cases, the lower lip was 41.2%, the sublingual region was 7.0%, and the tip of the tongue was 6.1%. Other parts of the oral mucosa were rarely affected (hard palate, gums, transitional folds.

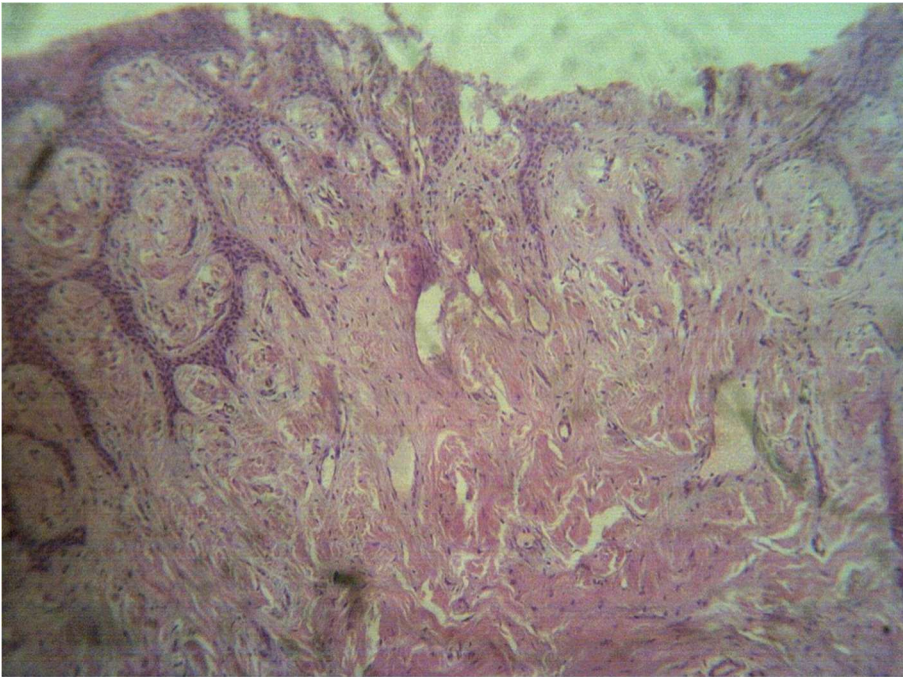


Figure 1. Thinning of the integumentary flat epithelium with areas of a peptic ulcer and ingrowth of the epithelial papillae of the basal layer into the deeper layers of the stroma of the mucous membrane of the lateral surface of the tongue. Hematoxylin and eosin colouring. V.incr. × 4.

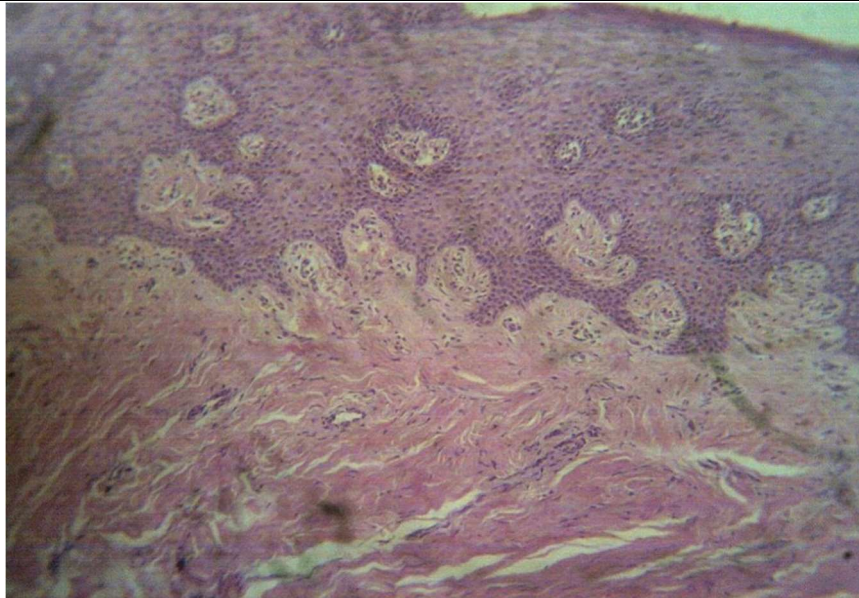


Figure 2. Hyperplasia of the multilayered flat epithelium of the sublingual mucosa, acanthosis with an uneven arrangement of the cells of the basal layer, the number of layers is increased, the penetration of the epithelial papillae to different depths of the connective tissue. Hematoxylin and eosin colouring. V.incr. $\times 10$.

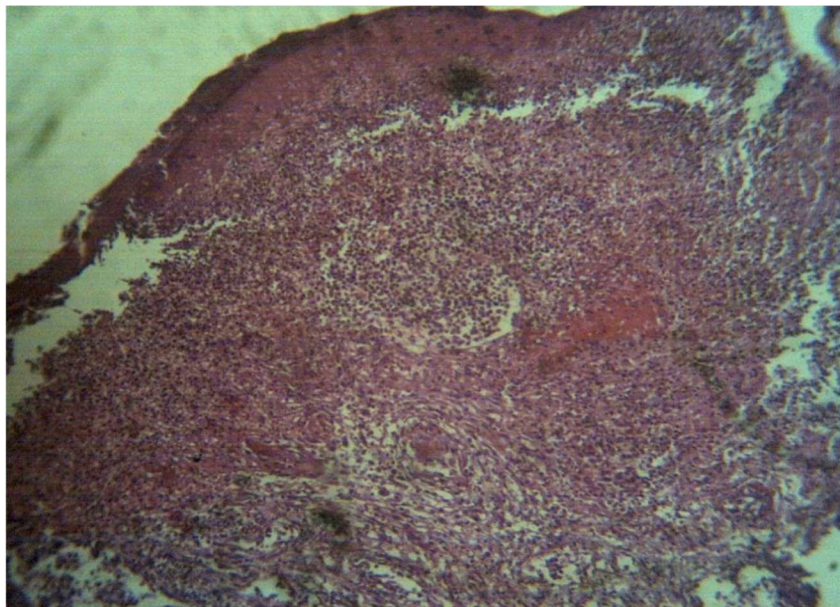


Figure 3. Thinning and atrophy of the multilayered flat epithelium of the mucosa of the buccal region on the right, the underlying connective tissue is densely infiltrated by inflammatory cells. Hematoxylin and eosin colouring. V.incr. $\times 10.0$



Figure 4. Subepithelial vesicle and focal squamous inflammatory infiltration of the stroma under an epithelial defect. Hematoxylin and eosin colouring. V.incr. $\times 4.0$

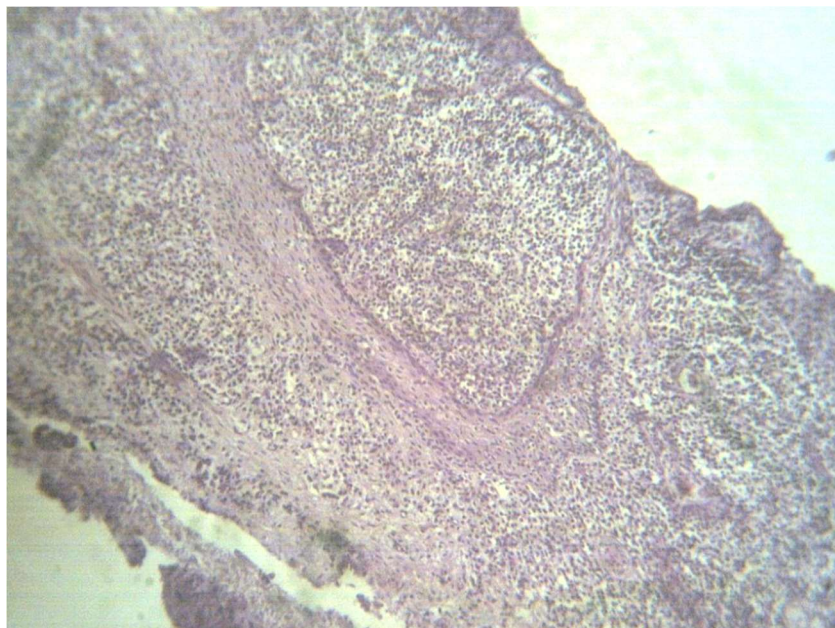


Figure. 5. Among the dense lymphohistiocytic inflammatory infiltration of the stroma, epithelial cords of the mucous membrane of the palate in the form of a collar are determined. Hematoxylin and eosin colouring. Incr. $\times 4.0$

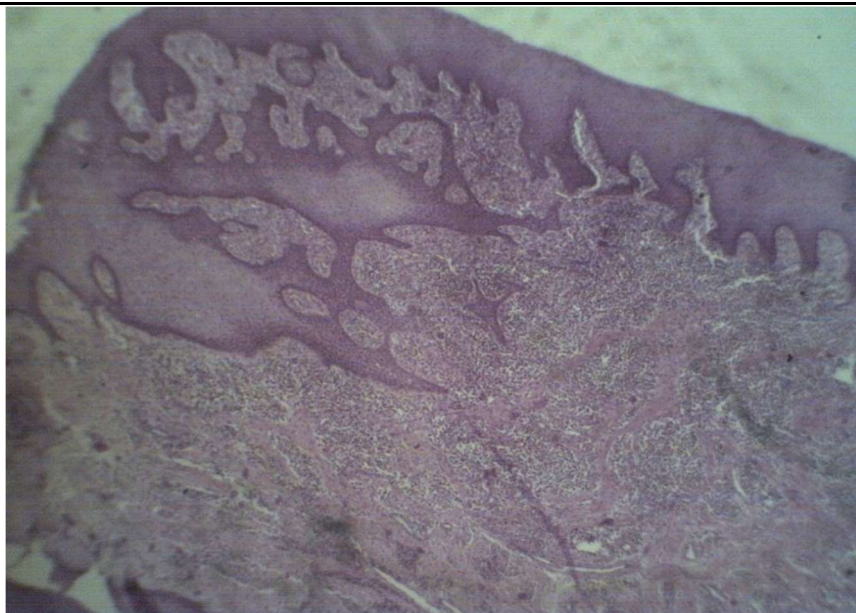


Figure. 6. Uneven thickening of the layers of the flat non-keratinized epithelium of the mucous membrane of the cheek, hypertrophy of the basal layer with the growth of epithelial outgrowths. Stroma with severe lymphocytic inflammatory cell infiltration. Hematoxylin and eosin colouring. Incr. $\times 4.0$

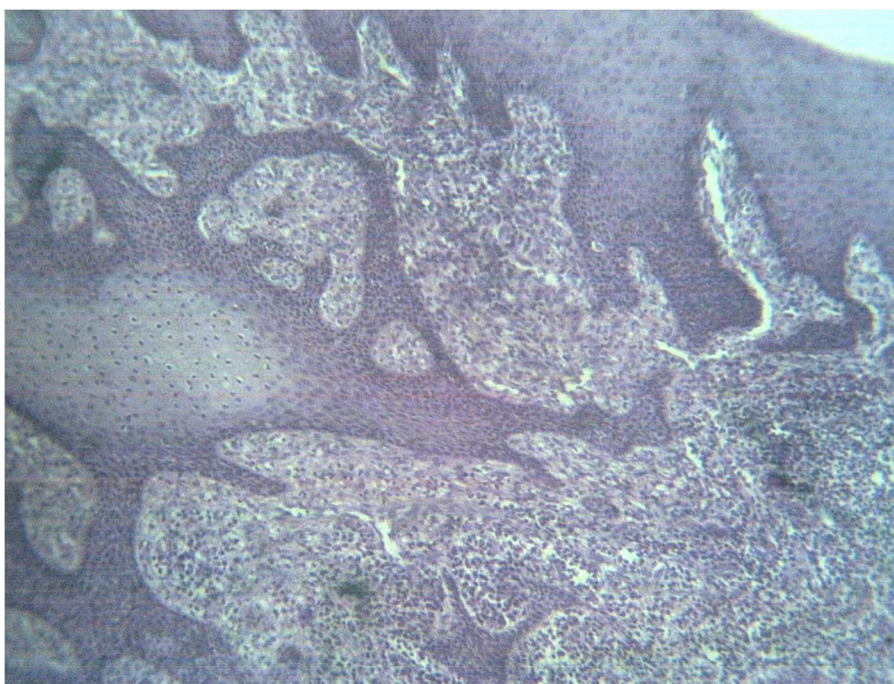


Figure. 7. Expressed acanthosis and flat epithelium dysplasia of mild degree and thick inflammatory stromal infiltration. (the same picture). Hematoxylin and eosin colouring. Incr. $\times 10.0$



Figure 8. Uneven hyperplasia of the basal layer of the integumentary flat epithelium of the mucous membrane, alternation of atrophy of the epithelium. In the stroma, an increase in the number of thin-walled and slit-like vessels. Hematoxylin and eosin colouring. Incr. $\times 4.0$.

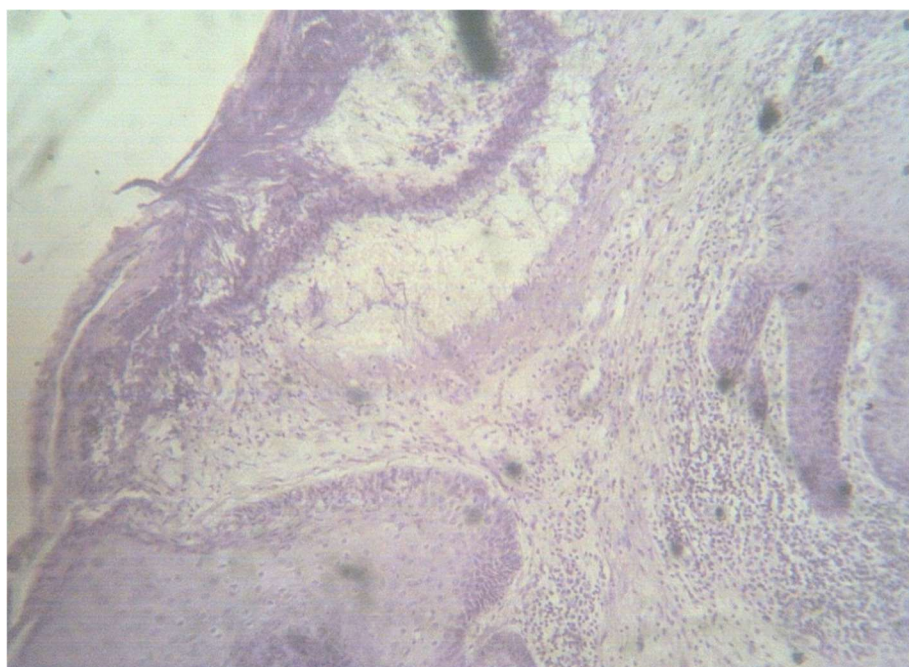


Figure 9. Desquamation of the integumentary epithelium with the formation of a large subepithelial vesicle with transparent contents, swelling of the surrounding tissue, diffuse lymphocytic infiltration and uneven hyperplasia of the flat epithelium of the mucous membrane of the sublingual region. Hematoxylin and eosin colouring. Incr. $\times 10$.

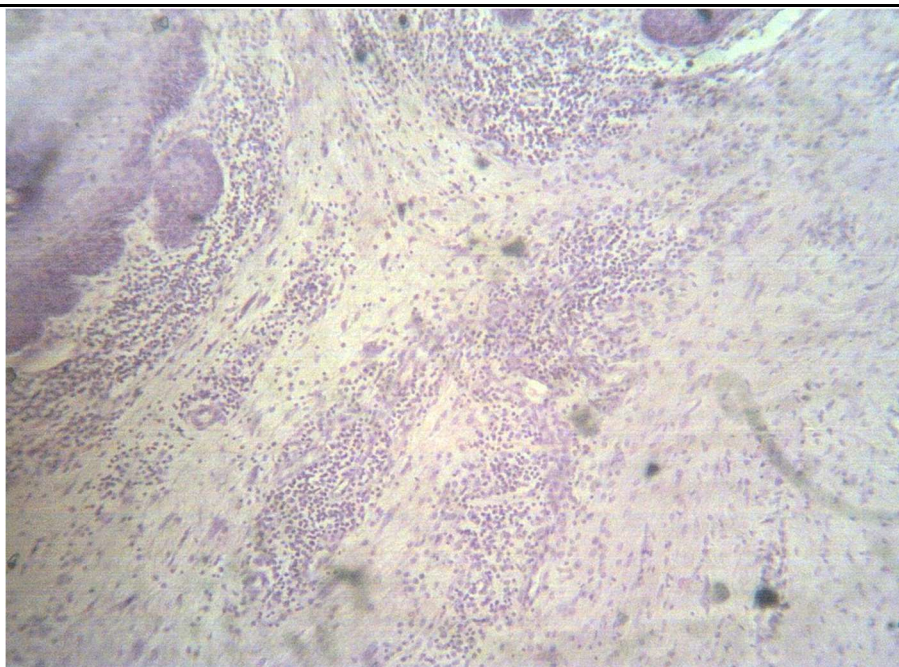


Figure 10. Focal round cell inflammatory infiltration of stroma in the area of damage to the epithelium of the inner surface of the gums. Hematoxylin and eosin colouring. Incr. $\times 4.0$.

During cytological studies of smears of typos from the affected surface of the oral mucosa the following changes were revealed, presented below in microphotographs.

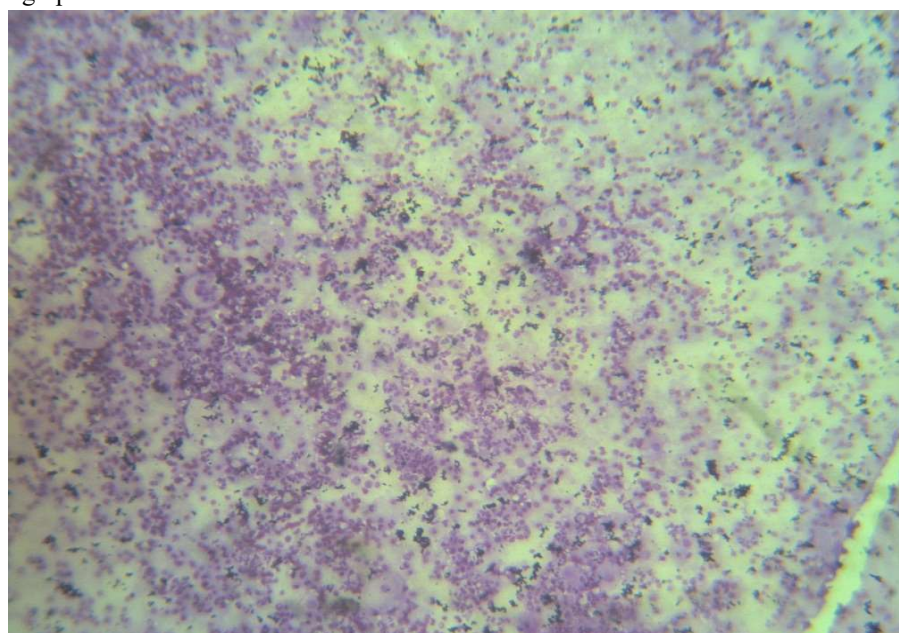


Figure 11. Diffuse inflammatory cell infiltration with epithelial cells and desquamated cells. Hematoxylin and eosin colouring. Incr. $\times 4.0$

Conclusion

As a result of a morphological study of erosive-ulcerative lesions of the oral mucosa in chronic recurrent aphthous stomatitis on the background of chronic cholecystitis the most frequent manifestations of changes were characterized by the development of inflammation and ulceration of the epithelium, the formation of ulcerative defects, hyperplasia of the flat integumentary epithelium, and in some cases, atrophy and thinning of epithelium. The above indicated morphological changes in the oral mucosa with chronic recurrent aphthous stomatitis correlate with the clinical data of patients with somatic pathology, namely in combination with chronic calculous cholecystitis.

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