References

1. Gusev A. V., Barsukov I. N., Martins Ch. T. Novye tekhnologii pri mekhanicheskoy zheltukhe dobrokachestvennogo geneza. *Annaly khirurgicheskoy gepatologii*. – *Annals of Surgical hepatology*. 2008;13(1):72-75.
2. Vetches P. C. Mekhanicheskaya zheltukha: prichiny i diagnosticheskiye podkhody. *Annaly khirurgicheskoy gepatologii*. – *Annals of Surgical hepatology*. 2011;3:50-57.
3. Galperin E. I., Vetches P. C. Guidelines for surgery of the biliary tract. M.; 2009:568.
4. Galperin E. I. Mekhanicheskaya zheltukha: sostoyaniye «mnimoy stabilnosti», posledstviya «vtorogo udara», printsipy lecheniya. *Annaly khirurgicheskoy gepatologii*. – *Annals of Surgical hepatology*. 2011;3:16-25.
5. Galperin E. I., Kotovsky A. E., Momunova O. N. Optimalnyy uroven bilirubinemii pered vypolneniyem operatsii u bolnykh mekhanicheskoy zheltukhoy opukholevoy etiologii opukholevoy etiologii. *Annaly khirurgicheskoy gepatologii*. – *Annals of Surgical hepatology*. 2012;2:45-52.
6. Pugaev A. V., Achkasov E. E. Assessment of nutritional status and identifying the need for nutritional support. M.; 2007:86.
7. Vetches P. C. Vozmozhnosti sovremennykh metodov diagnostiki i obosnovaniye lechebnoy taktiki pri mekhanicheskoy zheltukhe. *Vestnik khirurgicheskoy gastroenterologii*. – *Journal of Surgical Gastroenterology*. 2008; 2: 24-32.
8. Maystrenko N. A. Diagnostika i lecheniye sindroma mekhanicheskoy zheltukhi dobrokachestvennogo geneza. *Annaly khirurgicheskoy gepatologii*. – *Annals of Surgical hepatology*. 2011;3:26-34.
9. Patyutko Y. I., Kotelnikov A. G. Surgery and cancer of cholecystopancreatoduodenal region. Moscow; 2007. 448 p.
10. Galperin E. I. Klassifikatsiya tyazhesti mekhanicheskoy zheltukhi mekhanicheskoy zheltukhi. *Annaly khirurgicheskoy gepatologii*. – *Annals of Surgical hepatology*. 2012;2:26-33.
11. Galperin E. I., Momunov O. N. Klassifikatsiya tyazhesti mekhanicheskoy zheltukhi mekhanicheskoy zheltukhi. *Hirurgiya – Surgery*. 2014;1:5-9.
12. Attam R., Freeman M. L. Endoscopic papillary large balloon dilation for large common bile duct stones. *J. Hepato-Biliary-Pancreatic Surg.* 2009;16(5):618-623.
13. Boyer J. L. New perspectives for the treatment of cholestasis. *J. Hepatology*. 2007;46(3):365-371.
14. Kharbutli B., Velanovich V. Management of preoperatively suspected choledocholithiasis: a decision analysis. *J. Gastroint. Surg.* 2008;12(11):1973-1980.
15. Wagner M., Zollner G., Trauner M. New molecular insights into the mechanisms of cholestasis. *J. Hepatol.* 2009;51(3):565-580.

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ACTINOMYCOSIS IN COLOPROCTOLOGY

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АКТИНОМИКОЗ В КОЛОПРОКТОЛОГИИ

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Actinomycosis is a specific chronic infectious disease. Currently, actinomycosis common in about 6.0–7.5 % of patients with inflammatory diseases of pararectal and gluteal areas. There are only a few scientific articles describing the observations of visceral actinomycosis in clinical cases. Descriptions of sacrococcygeal and perianal

area actinomycosis are practically does not occur. The results of examination and treatment the 54 patients with actinomycosis of sacrococcygeal and perianal areas were analyzed. Complex of therapeutic measures for this patients allows for recovery in 95 % of cases and good functional results were taken. Also, we reduced the duration of patient stay in hospital.

Key words: actinomycosis, perianal area, sacrococcygeal region, treatment, immunotherapy

Актиномикоз является хроническим специфическим инфекционным заболеванием. В настоящее время актиномикоз составляет примерно 6,0–7,5 % среди больных с воспалительными заболеваниями параректальной и ягодичной областей. В настоящее время имеются лишь единичные сообщения с описанием отдельных клинических наблюдений актиномикоза с поражением внутренних органов. Исследования актиномикоза крестцово-копчиковой и перианальной областей практически не встречаются. Проведен анализ обследования и лечения 54 больных актиномикозом крестцово-копчиковой и перианальной областей. Разработанный комплекс лечебных мероприятий у данной группы больных позволяет добиться выздоровления в 95 % случаев, а также получить хорошие функциональные результаты и сокращает общее пребывание больного в стационаре.

Ключевые слова: актиномикоз, перианальная область, крестцово-копчиковая область, лечение, иммунотерапия

Actinomycosis is specific chronic infectious disease, caused by a heterogeneous group of bacteria Actinomyces, characterized by lesions in various organs and tissues with formation of dense infiltrates and fistulas [7, 10, 12]. It widely spreads in medical practice in various specialties.

Currently, Actinomycosis is about 6.0–7.5 % of patients with inflammatory diseases of perirectal and gluteal areas [4, 5, 8]. Most of chronically occurring lesions in sacrococcygeal and perianal regions are usually diagnosed as chronic pyococcus paraproctitis, tuberculosis or recurrent pilonidal cyst. Very often this disease goes with formation of rectum stricture, multiple fistulas formation and may be accompanied by fecal incontinence and malignancy [1, 3].

Despite the fact that actinomycosis as a disease has already more than a century history of studying, to reach a consensus in treatment of generalized actinomycosis and actinomycosis of sacrococcygeal and perianal areas is still impossible. The available literature describing the clinic, diagnosis and treatment of patients with actinomycosis, but does not represent all sites of the problem. Most of these studies and books were written and published before 1960–1980-ies, making them uninformative in the modern health care [2, 6].

In modern Russian and foreign literature there are only a few articles, that describe the clinical observations of visceral actinomycosis. There are no descriptions of the actinomycosis of sacro-coccygeal and perianal region both in Russian and foreign literature. In recent years there has been marked the growth in the number of patients with this pathology, and treatment out of specialized medical centers leads to almost 100 % recurrence [9, 11].

The above data indicate that the problem of diagnosing and treating patients with actinomycosis in general and particularly in proctology is not resolved. Therefore, new studies in this area are relevant and have a great practical value.

The aim of study was to improve the effect of complex treatment patients with Actinomycosis of sacrococcygeal and perianal region.

Material and Methods. During the period from 1996 to 2015 years in the regional coloproctological department of Stavropol Clinical City Hospital № 2, were treated 64 patients with actinomycosis of sacrococcygeal and perianal areas. Time to onset of the disease can vary from 5 to 20 years old and above. Actinomycosis occurs most frequently in working age people from 24 to 60 years old – about 90 % of patients. The average age of observed patients was 40–50 years. Co-relation between men and women was approximately 10: 1. Among all,

dominated patients from rural areas – according to our data 63 % of patients.

Depend by prevalence, the disease can be limited (within the same anatomic area) or advanced (two or more zones). In 76 % of observed patients had the local process with signs of infiltrative inflammation and multiple sinus tracts. In 24 % of patients inflammatory process spread to 2 or more zones.

Actinomycosis of sacrococcygeal and perianal areas has, as a rule, fairly bright and specific local clinical picture. First of all, it should be noted triad of symptoms, the most common for actinomycosis of these areas – a bluish coloration of the skin with a brownish tinge, wood density of infiltrates and scant discharge from fistulas the milky pink color (Fig. 1).

Fig. 1. Actinomycosis of sacrococcygeal and perianal areas

Despite such significant clinical picture, to confirm the diagnosis of actinomycosis by laboratory methods was difficult. According to our data, actinomycosis histologically confirmed only in above the 31 % of patients, bacteriologically – in 39 %, skin-allergic test with actinolysate was positive in 30 %. It also should be noted, that detection of actinomycetes drusen or mycelium not always possible, even in repeated trials.

In total there are 64 patients treated radically. All patients were divided into three groups. Patients in each group received different treatment. In group I included 20 patients, who underwent surgical treatment only. In the group II included 14 patients. Patients in this group obtain conservative treatment with Aktinolysat. Aktinolysat administered 3 ml intramuscularly 2 times a week. Treatment was obtain courses for 20–25 injection.

The interval between courses was 1 month. The number of courses was 1 to 3, depending on the type and severity of the disease. In group III 30 patients underwent the combination treatment, including immunotherapy with Azoximer bromide and radical surgery. The scheme of complex treatment was the following: preoperative chemotherapy (antibacterial, immunotherapy); radical surgery (removing all damaged tissue); postoperative chemotherapy (antibacterial, immunotherapy).

In preoperative period were taken samples from the sinustracts for the pathogen identification and susceptibility to antibiotics with targeted antibiotic therapy. In the case of purulent infiltrate formation, performed incision and drainage. In postoperative period (after incision) provided dressings with Iodinol solution. Another indispensable item of preoperative preparation was washing the sinus tracts with Iodinol solution or Betadine. Wound lavages were performed in the dressing-room 2–3 times a day for 7–10 days. For five patients with Actinomycosis, complicated by rectal stricture, was obligatory to bougienage the rectal stricture in preoperative period.

We used a non-specific immunomodulator – Azoximer bromide (Polyoxidonium) as immunotherapy. Azoximer bromide administered after the patient's admission in to hospital at a dose of 6 mg per day twice a week intramuscularly or intravenously. The course of treatment was 5–7 injections.

After preoperative preparation the discharge of pus from the sinus tract stopped or reduced, infiltrates were reduced in size and became more mobile, making it possible to perform radical surgery.

The method of operation depended on the location and spread of the inflammatory process, the presence or absence of connection with the rectal fistulas, presence or absence of rectal stricture. To patients with Actinomycosis of sacrococcygeal and perianal areas with pathological process that does not involve rectum, was performed the following operations: excision of sinus tracts and infiltrates with Limberg's skin plastic reconstruction, with a free skin grafting and excision of sinus tracts and infiltrates with suturing wound edges to the bottom.

To patients with actinomycosis of perianal and sacrococcygeal region, who had rectal fistula or rectovaginal fistula, were carried out following surgery: excision infiltrates and sinus tracts with Jad-Roble's surgery in clinics modification, excision of infiltrates with the closure of rectovaginal fistula in the Clinic's modification, excision of infiltrates and sinus tracts with Gabriel's operation.

To patients with perianal Actinomycosis, complicated by II–III degree rectal stricture, performed release of rectum from infiltration scars with skin plastic of perineum (Fig. 2).

In postoperative period antibiotic therapy and immunotherapy continued. From the first day after surgery was prescribed antibiotics based on the sensitivity of microflora for 5–7 days. It was especially important after major surgery with skin plasty. Azoximer bromide was administered at the same doses as that before the operation (3–4 injections).

Results. The complications in the early postoperative period occurred in 7 (35 %) patients of the first group. Early postoperative bleeding occurred in 2 (10 %) patients, and postoperative wound festering in 5 (25 %) patients. Most often abscess formed due to hematoma in the subcutaneous fat in the displaced flap after Limberg's skin plasty. In complicated wounds healing went by secondary intention and leads to formation of extensive scars, which often becomes the cause of pain or discomfort in the area of operation.

A

B

C

Fig. 2. Stages of surgical treatment:
A – actinomycosis of sacrococcygeal region;
B – excision of fistulas and infiltrates with removing of all affected tissues;
C – skin grafting with replaced flaps

Long-term results were followed up in 54 patients and were divided into good, satisfactory and unsatisfactory. With a good result, re-marked no relapse, no complaints on pain or discomfort, do not suffer the function of the anal sphincter. The result considered as satisfactory when was observed pain or discomfort due to the formation of excessive scars, failure of the anal sphincter, but there was no recurrence. The treatment results recognized as unsatisfactory if patients had a recurrence of the disease. Follow-up was of 6 months to 3 years.

The unsatisfactory results obtained in 3 (16.6 %) patients among the 18 patients in group I, who underwent only surgery. In 4 (22.2 %) patients, satisfactory results were obtained, three of them complained on discomfort due to formation of excessive scars in wound healing by secondary intention.

In 14 patients of group II after therapy with actinolysate observed a decrease in the size of infiltrates, a significant reduction in the amount of discharge from the sinus tract, but there was no scarring and recovery. As a result, all group II patients required surgery in the future.

Good results were obtained in 20 patients (90.9 %) from 22 in group III and satisfactory result was in

1 (4.5 %) case. One patient after excision of sinus tracts and infiltrates in Jad-Roble operation had relapsed of the disease in six months in form of acute abscess.

Conclusions. Using of Aktinolysat in Actinomycosis of perianal and sacrococcygeal region as an independent method of treatment is not enough effective, long-term and costly. But it is possible to use it as immunomodulator for preoperative preparation and it's use significantly improves the final result of treatment.

Exceptionally surgical treatment of perianal and sacrococcygeal Actinomycosis is not enough effective and lead to a large number of early postoperative complications and recurrence of the disease. The most effective treatment at any stage of the pathological process is the immunotherapy with Azoximer bromide in combination with radical surgery. The proposed treatment of patients with perianal and sacrococcygeal Actinomycosis allows the recovery in 95 % of cases, give good functional results. Also reduce the duration of in-hospital patients stay was reduced.

References

1. Burova S. A. Surgical treatment of actinomycosis. *Advances Medical Mycology*. 2004;10:246-247.
2. Kostinin I. D. Comprehensive treatment of actinomycosis of the maxillofacial region correction immunogenesis [dissertation]. M; 1985.
3. Mirzabalaeva A. K. Clinical variants of complicated. *Advances in medical mycology*. 2004;10:250-252.
4. Muraviev A. V. Kompleksnoye lecheniye aktinomikoza kresttsovo-kopchikovoy i perianalnoy oblastey. *Meditsinsky vestnik Severnogo Kavkaza. – Medical News of the North Caucasus*. 2012;1(25):35-38.
5. Muraviev A. V. Aktinomikoz kresttsovo-kopchikovoy i perianalnoy oblastey. *Koloproctologiya*. 2008;1(23):19-23.
6. Suteev G. O. Actinomycosis. 1951. 304 p.
7. Halin D. A. Actinomycosis of sacrococcygeal and perianal area [dissertation]. Stavropol; 2007.
8. Acevedo F., Baudrand R., Letelier L. M. Actinomycosis: a great pretender. Case reports of unusual presentations and a review of the literature *Int J. Infect Dis*. 2007;12:43-48.
9. Bauer P., Sultan S., Atienza P. Perianal actinomycosis: diagnostic and management considerations: a review of six cases. *Gastroenterol. Clin. Biol*. 2006;30:29-32.
10. Gayraud A., Grosieux-Dauger C., Durlach A. Cutaneous actinomycosis in the perianal area and buttocks. *Ann. Dermatol Venereol*. 2000;127:393-396.
11. Hall V. Actinomyces. *Gathering evidence of human colonization and infection. Anaerobe*. 2008;14(1):1-7.
12. Starska K., Lukomski M., Lewy-Trenda I. Palatine tonsils colonization with actinomyces species during chronic tonsillitis. *Otolaryngol. Pol*. 2006;60:829-833.

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