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**Case report**

# Research and analysis for cancerous perianal disease

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***Abstract:*** **Objective**: To analyze cancerous perianal disease. This study summed up the effective measures for prevention and treatment of perianal cancer patients. **Methods**: Twelve perianal cancer patients were recruited from June 2011 to June 2016. Retrospective analysis was carried out for the 12 patients about the causes and effective treatment. **Results**: Hemorrhoids cancer was found in 6 cases: only two received proper treatment; one had metastasis and received chemotherapy; 1 had good prognosis after colon diversion; two were discharged from hospital and received conservative treatment, which were ineffective and worsened the condition. Fistula cancer was found in 2 cases: one received surgery and one gave up treatment. Anal cancer was found in 2 cases: both received surgery. Perianal skin squamous cell carcinoma was found in 1 case, which ended up with the transfer to another hospital. Perianal melanoma was found in 1 case: patient was hospitalized due to perianal neoplasm; then histopathology confirmed melanoma and patient gave up for treatment. **Conclusion:** Perianal cancer affects the quality of life and health of patients. The relevant medical institutions must actively take measures against the perianal cancer, which has significant improvement to the survival of patients.

***Keywords:*** Perianal **dise**ase; Cancer; Treatment; Prevention

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Evolution of cancerous perianal disease is very fast. Current clinical data shows that perianal cancer progression rates still relatively high, which is unfavorable to the survival of patients. Therefore, the relevant medical staff must actively take measures against the occurrence of the phenomenon of perianal cancer and reduces the chances of perianal cancer, which has significant effect to survival of patients.

## 1 Materials and Methods

### 1.1 Study Subjects

The study subjects who were admitted to Affiliated Hospital of North Sichuan Medical College from June 2011 to June 2016 for perianal cancer treatment were selected. Of all the 12 cases, 8 were male and 4 were female, ranging from 39 to 62 years old with a mean age of 54. All patients and their families had given their consent to participate in this study. Patients were excluded from obvious abnormalities in mental state. Age, course of disease and non-related factors to this study showed no statistically significance difference among them. Initially, 12 patients had hemorrhoids which were associated with common clinical manifestations and were accompanied with circumferential mixed hemorrhoids prolapse, rectal prolapse and bloody stool (red, alternately dark red or mixed color with defecation difficulty). These

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patients failed to receive treatment in time mainly because these symptoms did not sufficiently draw their attention. The reasons of their hospitalization were substantially similar: they all suffered from long-term and continuous appearance of blood in stool. Even after hospitalization, patients' willingness of cooperation was still low: most of them preferred to discharge from hospital when the symptoms were slightly improved. However, inadequate treatment is the very main cause of recurrence of perianal disease.

### 1.2 Treatment methods

After patients were diagnosed, medical staffs would decide the appropriate treatment based on the specific circumstances of each patients. Before treatment, lesions were checked with MRI and CT examination. Treatment for patients with perianal cancer included surgery, chemotherapy and adjuvant therapy. Patients received a series of preoperative routine examination such as blood routine, blood coagulation (PT, ACT, APTT, Fbg and TT), detection of hepatitis B (HBeAg, HBSAg, anti-HBS, anti-HBe and anti-HBc) and hepatitis C, liver and kidney function test, electrocardiogram, and urine test. In addition, carcinoembryonic antigen and associated tumor markers test, colonoscopy, and ultrasound were all carried out but the histopathology results remained the gold standard for diagnosis of perianal disease patients.

Prior to surgery, patients were in fasting and received skin preparation and enema. Atropine sulfate injection and pentobarbital sodium injection were provided to ease the tension. For those with a suspicious inguinal lymph node metastasis, an inguinal lymph node dissection was performed. Then patients received the Miles radical surgery. After the surgery, 8 patients with symptoms of adenocarcinoma received drug treatment and specific types of chemotherapy.

### 1.3 Statistical Analysis

SPSS v18.0 was used to analyze data in this study. Comparisons showing a P value $< 0.05$ were considered statistically different.

## 2 Results

Six patients were diagnosed with hemorrhoids cancer:

- Two received treatment previously;
- One had metastasis and received chemotherapy;
- One had good prognosis after colon diversion,
- Two received conservative treatment and were discharged from the hospital. However, their treatments were ineffective and the conditions worsened.

Two patients were diagnosed with anal fistula cancer:

- one received surgery;
- one gave up treatment.

Two patients were diagnosed with anal cancer and both received surgery.

One patient was diagnosed with perianal skin squamous cell carcinoma, who was later on transferred to another hospital.

One patient was initially hospitalized for perianal neoplasm, and then the histopathology test confirmed perianal melanoma. Patient gave up for treatment.


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## 3 Discussion

The prevalence of perianal cancer in recent years has been increasing at an alarming rate. According to previous report, the total incidence of anal diseases in China was 59.1% among 76692 people (155 units, 1957-1977). The total incidence of hemorrhoids was 46.3%, which was considered a high prevalence compared with the related diseases. The main reason of the high prevalence is the lack of awareness. Patients think that harm of perianal disease to the body is not particularly large and therefore underestimate how serious it can be. Patients prefer not to continue the treatment once the situation has improved, which in return makes perianal disease very likely to reoccur. Each reoccurrence deepens the disease progression and increases the probability of carcinogenesis. We would urge the medical institutions to pay more intention to this situation[1].

Even though awareness for colorectal cancer is rising, awareness for perianal benign disease is still not enough as patients think hemorrhoids are irrelevant from health and they fear of surgery. Outpatient clinics found that benign perianal disease is more prevalent, mostly due to the appearance of blood in the stool and other reasons. The preliminary investigation involved hemorrhoids, anal fissure, anal fistula and other common benign diseases. Many patients failed to comply with a throughout treatment due to financial issues, embarrassment with their private parts, lack of medical knowledge and psychological reasons. After discharged from hospital, patients suffer from recurrent bloody stool, but pay no further attention and refuse surgery. After at least one year, or as long as 3-4 years, the perianal disease deteriorates and develops to cancer. Therefore, diagnostic and treatment practices, medical knowledge and health utilities subsidy measures must be taken to prevent malignancy.

Anal fistula perianal disease is one of the common causes of carcinogenesis. Anal fistula is a long-term inflammation of the anus and will increase the chances of anal carcinogenesis[2]. Cancerous perianal disease has been emphasized since 1927. Previous study clearly pointed out that the presence of perianal inflammation might induce mucosa white phenomenon, and might induce anal cancer. However, there are still some controversial mechanisms and factors for the anal fistula cancer. The medical professions generally believe that the factor that causes anal fistula cancer is perianal gland where the cancer tissue is primarily generated. In other words, perianal gland infection causes cancerous perianal disease[3]. Fistula with a long time of onset and recurring can cause inflammation and proliferation of the tissue, and then leads to tissue dysplasia, which is a prerequisite of cancer. If perianal fistula and related diseases cannot get timely treatment, symptoms such as narrowing and twisted anal, and poor drainage will occur. Recurrent infections and proliferation of scar tissue will induce localized poor blood supply, and then induce repeated infections and proliferation of fibrous tissue in chronic suppurative foci, which provides favorable conditions for cancer tissue. In the long-term stimulation of inflammatory response, infected tissue in fistula will produce a series of changes, and these changes will gradually induce carcinogenesis[4].

Besides anal fistula, hemorrhoids play an important role in the whole process of cancerous perianal disease. Incidence of hemorrhoids as a starting point of perianal cancer has increased in recent years. Patients commonly do not treat hemorrhoid as a disease, thus they will not visit a doctor as long as the symptoms are yet to affect daily life. This concept indirectly increases the probability of other perianal disease and perianal cancer, which is extremely unfavorable for rehabilitation[5]. Therefore, patient should be more cautious of hemorrhoids and perianal diseases in order to avoid further deterioration.

MRI, CT and other detection instruments were used to diagnose perianal cancer. The perianal skin of cysts is obvious, which is different from other tumors. Appropriate measures should be taken to detect cancerous conditions timely[6]. Besides these advanced detection instruments, the traditional examination is important in the detection of patients with perianal disease. Anorectal disease can be detected by rectal examination to make a preliminary diagnosis. Fingers are more flexible in detecting small nodules, ulcers, area, hardness, location, and presence of mucus pus and

blood. Fingers can sometimes get more accurate results than endoscopy and X-ray and thus can be considered as one of the most effective examination methods for anorectal disease, especially for early detection of colorectal cancer. The right index finger coated with liquid paraffin, glycerin or soap is usually used for rectal examination. First, gently massage the anus of patient to avoid tension and touch the anus skin lumps, sinus cords and external hemorrhoids. Patient can take a deep breath to relax the abdominal and anal muscles. Then, put fingers gently into the rectum and anal canal, followed by checking the tightness of the anal sphincter and anorectal ring. During the inspections, use gentle movements as much as possible to reduce the harm to the patient.

In summary, incidence of perianal carcinogenesis is rapidly increasing. In order to reduce the cancerous perianal disease, patients with symptoms of perianal disease must ensure an early detection and early treatment. Relevant medical knowledge is important to prevent cancerous perianal disease. After treatment, patients should adjust their diet and lifestyle to reduce the risk of recurrence of perianal disease[7].

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