



Is Histopathological Examination Necessary After Sacrococcygeal Pilonidal Sinus Excision?

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Abstract

A pilonidal sinus is a common disease that usually occurs in the natal cleft in the sacrococcygeal region. Many conservative and surgical treatment methods are available. Malignancy is rarely detected; therefore, a routine histopathological examination is controversial. This study aimed to evaluate the pathology results of patients who underwent sacrococcygeal pilonidal sinus excision in our clinic. The records of patients who underwent pilonidal sinus excision at Istanbul Sultanbeyli State Hospital between January 2016 and October 2021 were reviewed retrospectively. The following parameters were evaluated: age, gender, location of disease, and histopathological examination outcome. During the study period, 2,091 patients underwent surgery for pilonidal sinus disease at our general surgery clinic. The data of 2,068 patients were analyzed after excluding 23 patients who underwent excision for disease outside the sacrococcygeal region or had missing data. The age of the patients ranged from 13 to 72, with a female-to-male ratio of 535:1533. The mean age was 24.7±8.2 years. Pilonidal sinus specimen pathologies excised from the sacrococcygeal region were examined, and no malignancies were detected. Routine histopathological examination of pilonidal sinus specimens may be unnecessary if there are no risk factors such as atypical presentation and appearance, relapse, long-term disease, and advanced age.

Keywords: Pilonidal sinus, Sacrococcygeal region, Pathology

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Introduction

A pilonidal sinus is a common disease that usually occurs in the natal cleft in the sacrococcygeal region. It can cause an abscess, cellulitis, or recurrent sinus infections. Hairy body structure, male gender, poor hygiene, obesity, and prolonged sitting are among the risk factors. It is most common between 15 and 30 years of age. Many conservative and surgical methods are available for its treatment (1-4).

Malignancy is rarely detected in pilonidal sinus specimens; therefore, a routine pathological examination is controversial. Studies suggest a histopathological evaluation should be considered if risk factors such as atypical presentation and appearance, older age, long-term disease, and recurrent disease are present (1-3).

This study aimed to evaluate the pathology results of patients who underwent sacrococcygeal pilonidal sinus excision at our clinic.

Table 1: Demographic characteristics of the study population

Parameter		Gender		Total n=2,068 (100%)	P value
		Male n=1,533 (74.1%)	Female n=5,35 (25.9%)		
Age (years)	Mean (Standard deviation)	26.2 (8.5)	20.5 (5.3)	24.7 (8.2)	< 0.001
	Minimum–Maximum	13-72	13-53	13-72	

Material and Methods

The records of patients who underwent pilonidal sinus excision at Istanbul Sultanbeyli State Hospital between January 2016 and October 2021 were reviewed retrospectively. The following parameters were evaluated: age, gender, location of disease, and histopathological examination outcome.

Results

During the study period, 2,091 patients underwent surgery for pilonidal sinus disease at our general surgery clinic. The data of 2,068 patients were analyzed after excluding 23 patients who underwent excision for disease outside the sacrococcygeal region or had missing data. The ages of the patients ranged from 13 to 72, with a female-to-male ratio of 535:1533. The mean age was 24.7 ± 8.2 years (Table 1). Pilonidal sinus specimen pathologies excised from the sacrococcygeal region were examined, and no malignancies were detected.

Discussion

Our findings regarding the absence of malignancy in the samples sent for histopathological analysis are consistent with similar studies in the literature (2, 3, 5). Carcinomatous degeneration of pilonidal cysts is rare and is triggered by the chronic inflammatory process. The occurrence of this condition is estimated at 0.1% (6). No carcinoma was reported in 86,333 cases of pilonidal sinus disease treated during World War II. However, these patients were usually young and had undergone surgery for acute inflammatory disease (1).

Patients with pilonidal disease associated with malignancy reported in the literature are mostly presented as case reports. In a study of 91 patients, squamous cell carcinoma (SCC) was the most common tumor type. Especially in patients over 50 years of age and with pilonidal disease for more than 20 years, the risk of developing malignancy increases. The resulting tumors tend to be locally aggressive (3). Malignant changes are very rarely observed in young patients and patients with short disease durations (3).

Phenol application, fibrin glue application, and video-assisted ablation of the pilonidal sinus tract are common treatment options with minimally invasive intervention and no pathology sample taken. This raises the question of whether malignant cases associated with pilonidal disease are missed

after these procedures. Therefore, although we did not encounter malignancy in most patients, some studies suggest a histopathological examination of all pilonidal disease specimens surgically resected to rule out malignancy (3). However, there are also studies reporting that histopathological analysis will not provide additional benefit if there are no risk factors such as any atypical aspect in the presentation or appearance, long-term disease development duration, or patient age over 50 years (2, 5, 7).

This study had some limitations. It was a retrospective and single-center study. Malignant transformation is usually defined in long-term disease, but our study did not have data on disease duration, recurrence status, or postoperative follow-up. These missing data may have affected our results.

Conclusion

In the literature, malignancy is reported at a meager rate in pilonidal sinus specimens. In addition, pathology samples are not taken in minimally invasive procedures. In light of our results and the related literature, routine histopathological examination of pilonidal sinus specimens may be unnecessary if there are no risk factors such as atypical presentation and appearance, disease relapse, long-term disease, or advanced age.

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Availability of Data and Material

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Authors' Contribution

M.E. Conception and design, acquisition of data, analysis and interpretation of data; Drafting the article and revising it critically for important intellectual content. The author read and approve the version to be published and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated.

Ethics Approval

This study was performed in line with the principles of the Declaration of Helsinki. This study was approved by the Istanbul Kartal Dr. Lutfi Kırdar City Hospital Clinical Research Ethics Committee (Number: 2021.514.212.11).

Conflict of interest: None declared.

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