



ORIGINAL ARTICLE

# Prevalence of sacrococcygeal pilonidal disease in Turkey



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Turkish population

**Summary** *Background:* Pilonidal sinus disease is frequently observed in the producing population; despite it not being a malignant disease, attention of clinicians to this disease has increased. Studies on this disease have not clearly revealed its prevalence. We aimed to detect its dispersion characteristics in our country.

*Materials and methods:* Our study was designed as a descriptive study involving a large number of patients. A total of 19,013 candidates, aged between 17 years and 28 years and coming from different regions of the country, who applied to be students or officials of the state's schools and institutions, were enrolled in the study. Examination was performed including the perineal region, the presence of any comorbid diseases was noted, and clinical types of pilonidal sinus disease were detected according to Tezel's classification and recorded.

*Results:* Pilonidal sinus was detected in a total of 1258 (6.6%) candidates, of whom 72 (0.37%) were female and 1186 (6.23%) male. Our clinical experience showed that pilonidal cysts had a higher incidence in the Turkish population than in other populations, and it was especially increased in individuals of military age.

*Conclusion:* We believe that soldiers coming from different regions of Turkey and candidates applying for auxiliary staff positions provide a small sample group resembling a representation of the whole of Turkey.

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Conflicts of interest: None.

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## 1. Introduction

Pilonidal sinus disease is a chronic and inflammatory disease concerning skin and adnexa, which frequently develops in the sacrococcygeal region and is generally observed in puberty and young adult period (producing young population). The disease sometimes manifests itself as infected and abscess drained through the mouth or spread to the perineum, and sometimes as a running fistula mouth anastomosed to the skin.<sup>1</sup> This disease was frequently encountered by jeep riders during the Second World War; and was referred to as "jeep disease".<sup>2</sup> During that time, 79,000 soldiers of the American Army were operated on following a diagnosis of pilonidal sinus. It is also understood from the records, that 2000 soldiers were operated on following a diagnosis of pilonidal sinus every year during the Vietnamese War.<sup>3</sup> The facts that it is frequently observed, impairs quality of life, and is frequently observed in the producing population, despite not being a malignant disease, have increased the attention of clinicians to the disease; many treatment modalities have been suggested and discussed in the literature. However, the prevalence of the disease has not been clearly revealed. Thus, we observed that there are few studies estimating the prevalence of sacrococcygeal pilonidal sinus cases. We aimed to detect its dispersion characteristics in Turkey. Our study is one of the studies comprising a large number of cases that have been observed in the literature to date.

## 2. Materials and methods

Approval for the study was obtained from the Local Institutional Ethics Committee of Firat University Faculty of Medicine, Elazig, Turkey (date: 11.26.2015; number: 118202). Our study was designed as a descriptive study involving a large number of patients. Medical examination and checkups were conducted, and a short questionnaire was given to 19,013 candidates aged 17–28 years and coming from different regions of the country, who applied to the state's schools and institutions between March 2012 and October 2014 as students or officials. Demographic data, family histories, allergy condition, and comorbid diseases of all the candidates were recorded using a questionnaire before the examination, and then a detailed physical examination was performed by a dermatologist such that all regions of the skin were included. Examination was performed including the perineal region, the presence of any comorbid diseases was noted, and clinical types of pilonidal sinus disease were detected according to Tezel's<sup>4</sup> classification and recorded (Table 1). The identification number of the data, and percentage, average, minimum, and maximum values were used.

## 3. Results

A total of 19,013 young official and student candidates (18,292 males and 721 females) between the ages of 17 years and 28 years (the age range in which sacrococcygeal pilonidal sinus disease is most frequently seen) were

**Table 1** Clinical types of study patients.

Clinical type	Explanation	N
Type 1	Asymptomatic pit(s) without a history of abscess and/or drainage	924
Type 2	Acute pilonidal abscess	45
Type 3	Pit(s) within the navicular area with a abscess or previous drainage	289
Type 4	Extensive disease, with one or more sinus opening lying outside the navicular area	—
Type 5	Recurrent pilonidal sinus following any surgical treatment	—

examined. The average age of the candidates for both sexes was calculated as  $20.8 \pm 2.6$  years (range: 17–28 years), with  $19.3 \pm 1.87$  years (range: 17–28 years) in males, and  $21.6 \pm 3.4$  years (range: 17–28 years) in females (Tables 2 and 3). Pilonidal sinus was detected in a total of 1258 (6.6%) people, 72 (0.37%) of whom were female and 1186 (6.23%) male candidates.

All patients were white. The mean body mass index (BMI) was slightly higher in candidates with pilonidal sinus. It was  $22.8 \pm 2.6$  (range: 20.8–29) in the patient group and  $20.2 \pm 2.4$  (range: 20–28) in others ( $p < 0.001$ ). The most popular jobs were described for candidates. The most commonly reported occupations were students (70.1%), irregular workers (13.3%), teachers (11.3%), accountants (3.4%), and engineers (1.9%). The percentage of mildly hairy and hairy persons was significantly higher in the patient group than in other groups (53.1% and 40.1% compared with 42.1% and 13.9%, respectively;  $p < 0.001$ ).

Pilonidal sinus disease was seen to be accompanied by acne conglobata and acne vulgaris in 81 (0.4%) patients and by hidradenitis in 62 (0.32%) patients. It is understood from the questionnaire that first-degree relatives of 327 (1.7%)

**Table 2** Male patients' age dispersion.

Age (y)	N	%
17–18	398	33.55
19–20	568	47.89
21–22	165	13.91
23–25	35	2.95
26–28	20	1.68
Total	1186	100

**Table 3** Female patients' age dispersion.

Age (y)	N	%
17–18	9	12.5
19–20	33	45.83
21–22	7	9.72
23–25	6	8.33
26–28	17	23.61
Total	72	100

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