Original Article

Knowledge about and determinants for diagnosing hidradenitis suppurativa by ministry of health primary healthcare physicians in Jeddah city 2019: An analytical cross-sectional study

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Abstract

Context: Hidradenitis suppurativa is a noncontagious, inflammatory, chronic and recurrent disease. The prevalence of HS is estimated to be between less than 1 and 4%. It is more common in females than males at a 2:1 ratio. Many cases of HS are either misdiagnosed or remain undiagnosed. **Aims:** To assess knowledge of diagnosing hidradenitis suppurativa by Ministry of Health primary health care physicians in Jeddah city, 2019 and to identify the determinants and knowledge of diagnosing hidradenitis suppurativa. **Settings and Design:** An analytical cross-sectional study conducted in Jeddah city, 2019, among primary health care physicians of the MOH. **Methods and Material:** Estimated sample size was 114. The required primary health care centers were 38 centers. The centers were chosen by a simple random sampling technique. A reliable self-administered questionnaire was used. Ethical approval was obtained. **Statistical Analysis Used:** Descriptive statistics consisted of means, standard deviations, frequency tables, cross tabulation and charts). Categorical variables were compared using the chi–square test to determine significant relationships between variables. **Results:** 65.4% (68) diagnosed the disease correctly. Most of their knowledge came from clinical practice (39.4%). There was a significant relationship with current job title and medical degree (*P*-value < 0.0005). **Conclusion:** The present study showed good knowledge about and ability to diagnose HS. A more advanced medical degree and more years of clinical experience was positively associated with the ability to diagnose HS.

Keywords: Hidradenitis suppurativa, nodules, primary health care, pustules, skin lesions

Introduction

Hidradenitis suppurativa (HS) is an inflammatory and chronic disease.[1,2] It is estimated to be 1%–4% worldwide.[3,4]

HS presents as a painful nodule or pustule that can eventually progress to sinus formation or scarring.[5] The diagnosis of HS is a clinical diagnosis.[6] HS can take up to 10 years to be diagnosed correctly.[7,8]

Family physicians have an important role in early recognition of HS, as early diagnosis will prevent the progression and its burden.[2,9,10] One study showed insufficient knowledge about HS among primary care physicians.[11] It has a burden on patient quality of life and increases morbidity in secondary care centers.[1,3,12-15]

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Subjects and Methods

This was an analytical cross-sectional study conducted in Jeddah city in 2019 among primary healthcare physicians of the MOH. The duration of the study was eleven Months, from January 1, 2019 to November 31, 2019.

Jeddah city is divided into five sectors (north, east, west, south, and center) and the total number of primary healthcare centers found in these sectors is 47. The approximate number of estimated primary care physicians in Jeddah city is 141.

The number of physicians working in primary healthcare centers was divided by the number primary healthcare centers in Jeddah city in 2019, yielding an estimated average of three physicians in each primary healthcare center.

By using the Raosoft, the required estimated sample size was 104. The researchers added 10% to the estimated sample size, resulting in a required sample size of 114. This value was divided by the estimated number of physicians in each primary healthcare center, which, as calculated above, is approximately 3. The end result was that 38 primary healthcare centers were selected randomly and covered in this study. The researchers contacted each primary healthcare center, and all of the eligible available physicians in those centers were recruited. The centers were chosen by a simple random sampling technique.

A reliable self-administered questionnaire was used, which had been validated based on another published study after permission was obtained from the principal investigator.[16,17]

Minor modifications were made to make it more applicable to our study, after which it was validated by four consultants.

The questionnaire consisted of three parts in English. The first part collected information about demographic data from the candidate (age, gender, medical degree, nationality, and clinical experience). The second part consisted of general knowledge about all aspects of HS. In this part, the researchers provided each candidate with a high-resolution picture of HS in different stages with case scenarios to assess whether they could reach the correct diagnosis of HS from a given list of choices. Then, the researchers asked if they had ever heard about HS and their source of information about the disease, then if they had ever diagnosed HS and, if so, the number of cases. The third part of the questionnaire consisted of two tables. One of these tables had six questions with (yes, no or I don't know) responses regarding the features of HS. The other table had five questions testing the candidate's knowledge about who should take care of and follow up with HS patients (dermatology, family medicine, general surgery, plastic surgery, I don't know).

Consent for participation was taken from each participant.

Data entry and statistical analysis was applied using "IBM SPSS statistics ver. 20.0" to evaluate and test the hypothesis. A reliability test was used to tests the consistency of the scale, Cronbach's alpha, and interitem correlations. Descriptive statistics consisted of means, standard deviations, frequency tables, cross tabulation, and charts). Categorical variables between groups were compared using the chi–square test to determine significant relationships between variables. A probability (P) <0.05 was considered statistically significant.

Cronbach's alpha was calculated for the section "HS features." As seen from the following table, the section showed excellent consistency as a measuring tool, with a Cronbach's alpha of 0.919 (95% CI [0.893–0.941]) and a mean interitem correlation of 0.670 see Table 1.

George and Mallery (2003) provide the following rules of thumb: ">.9 – Excellent, >.8 – Good, >.7 – Acceptable, >.6 – Questionable, >.5 – Poor, and <.5 – Unacceptable" (p. 231).

Ethical approval was obtained from the research committee of the Ministry of Health Directorate of Health Affairs, Jeddah city (research number: 01047).

Results

After data collection, 104 participants were selected for analysis. The response rate was 90%, indicating 10% nonresponders. The sample population was 23.1% (24) males and 76.9% (80) females. The mean age of the participants was 37 ± 7.06 years. The medical degree of the majority of participants was a

Table 1: Reliability statistics

Cronbach's alpha	Cronbach's alpha based on standardized items	Number of items
0.919	0.924	6

Table 2: Sociodemographic data of the participants included in this study

Sociodemographic	*n*=104 (%)
Gender	
Male	24 (23.1)
Female	80 (76.9)
Nationality	
Saudi	88 (84.6)
Non-Saudi	16 (15.4)
Medical degree	
Board of family medicine	36 (35)
Diploma of family medicine	15 (14.6)
Master's degree	3 (2.9)
Bachelor's degree	49 (47.6)
Current job title	
Family medicine consultant	19 (18.3)
Family medicine specialist	30 (28.8)
Family medicine resident	10 (9.6)
General practitioner	45 (43.3)

bachelor's degree 47.6% (49). Most of them were general practitioners 43.3% (45). The mean clinical years of experience was 10 years (6.67). Table 2 presents the sociodemographic details of the participants.

Based on the given clinical scenario and picture from the questionnaire, 65.4% (68) of participants diagnosed the disease correctly. The next highest answer was (I don't know) with a percentage of 8.7%, followed by furunculosis and abscess with the same percentage of 7.7%. Seventy-four (71.2%) of participants knew about HS, and of those participants, their sources of knowledge were the following: clinical practice (39.4%), medical school (21.2%), colleague (11.5%), a previously diagnosed patient (5.8%), and other sources (9.6%), which included scientific meetings, social media and lectures. Of all respondents, 39.6% (40) had diagnosed HS in their practice, and 90% (36) of them correctly answered the first question, which regarded spot diagnosis (the given case scenario in the picture), with a significant correlation (P value < 0.0005). The mean number of diagnosed cases by the participants was 4.32. Figure 1 shows the answers to the question regarding the participant's knowledge of HS in percentages. The responses to the third part of the questionnaire, regarding which specialty is involved in diagnosis, therapy, and follow-up from the participants' point of view, is illustrated in Figure 2.

No significant relationship was found between participants' ability to diagnose HS from the given case scenario in the reference picture and age, gender or nationality. In contrast, there was a significant relationship between the diagnostic ability and current job title (P value < 0.0005) and medical degree (P value < 0.0005).

Discussion

HS and primary healthcare physicians

As a primary healthcare physician has the first contact with the patient, the researchers were concerned about misdiagnosing HS, as they have faced similar cases with the disease either mis- or undiagnosed, causing the patient to shop for a doctor and seek a certain diagnosis and treatment. Therefore, this study aimed to identify knowledge about diagnosing hidradenitis suppurativa among Ministry of Health primary healthcare physicians. The results of the current study may help to improve knowledge of HS and decrease its burden.

Family physicians have an important role in early recognition of HS, as early diagnosis and intervention will prevent the progression of mental and physical stress.[2] there was a study conducted in 2019 in Portugal showed insufficient knowledge

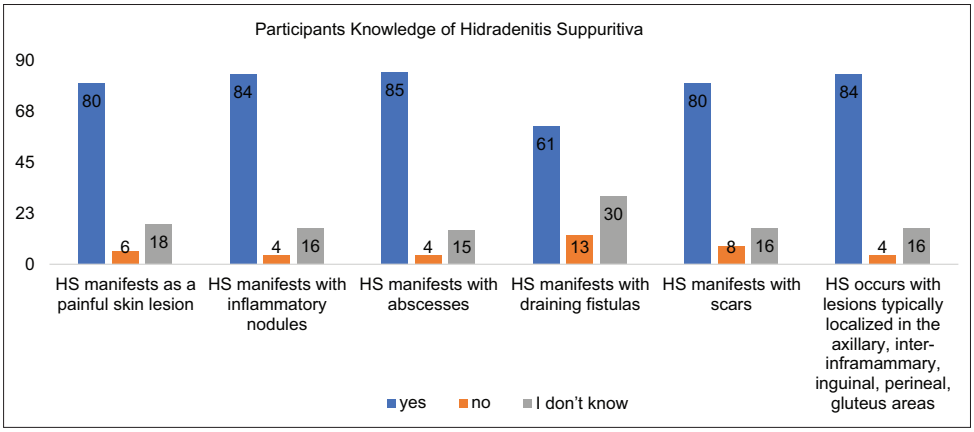

Figure 1: Participants knowledge of hidradenitis suppuritiva

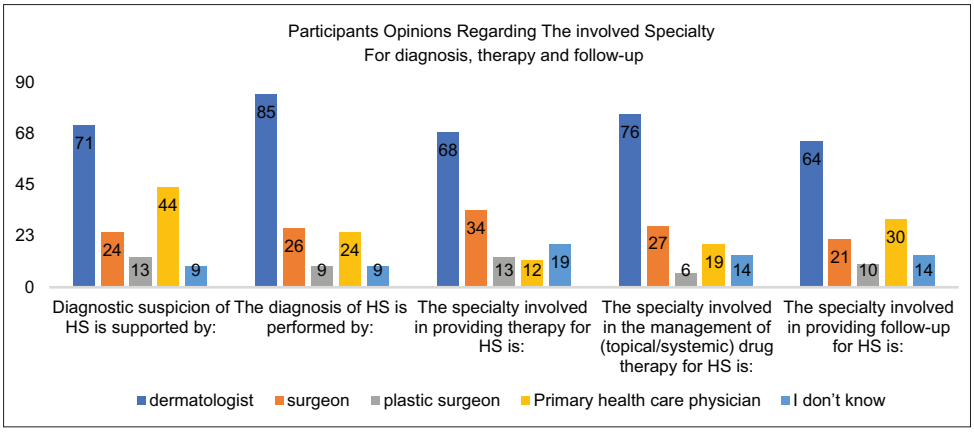

Figure 2: Participants opinions regarding the involved specialty for diagnosis, therapy and follow-up

about HS among primary healthcare physicians.[11] Primary healthcare doctors have an important role in distinguishing HS from the other different similar dermatological conditions that can mislead to the diagnosis.[9,18] A high index of suspicion is needed once the patient has recurrent nodules, abscesses or furunculosis. Early recognition and early referral are crucial as this can delay the worse prognosis among patients with HS.[19]

There are few studies in Saudi Arabia on this disease.[20,21]

In this study, we found that 65.4% of the included physicians could diagnosed the disease correctly from the given picture and case scenario. This is considered a good percentage that reflects that most of the physicians have good knowledge about the disease. In contrast, a study of general practitioners in Belgium and Denmark showed that 86.4% of Belgian and 84.3% of Danish general practitioners could correctly diagnosed the disease from the same given picture and scenario. This difference could be explained by the increased prevalence of HS in the European region, but given that as there have been no studies performed in Saudi Arabia on the prevalence of HS, this difference could also be explained by the difference in the population and methods of the European study.

In assessing the determinants for diagnosing hidradenitis suppurativa, we found that there was a significant relationship between diagnosing HS and current job title and medical degree, while the associations with age, gender, and nationality were not significant.

Diagnosing HS and current job title

In this study, there was a significant relationship between knowledge about and ability to diagnose HS with current job title (P value < 0.0005). Family medicine specialists and consultants had a higher percentage of recognizing HS from the given case scenario and picture, while resident doctors and general practitioners had a lower percentage [Figure 3].

Diagnosing HS and medical degree

This study showed that there was a significant relationship between knowledge about and ability to diagnose HS with medical degree (P value < 0.0005). Figure 4 shows that doctors who had graduated from a certified board of family medicine were more knowledgeable about the disease, while doctors with a bachelor's degree who practiced medicine in PHC centers as general practitioners were not capable of diagnosing the disease compared to the other practitioners.

Finally, the ability to diagnose HS was significantly associated with whether the practitioner had ever previously diagnosed the disease (P value < 0.0005) [Figure 5].

Limitations

One limitation of this study is that there are few studies in Saudi Arabia on HS with which the present results could be compared.

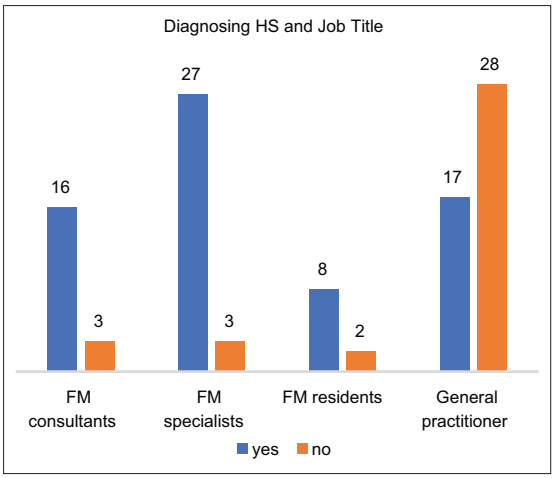

Figure 3: Diagnosing HS and job title

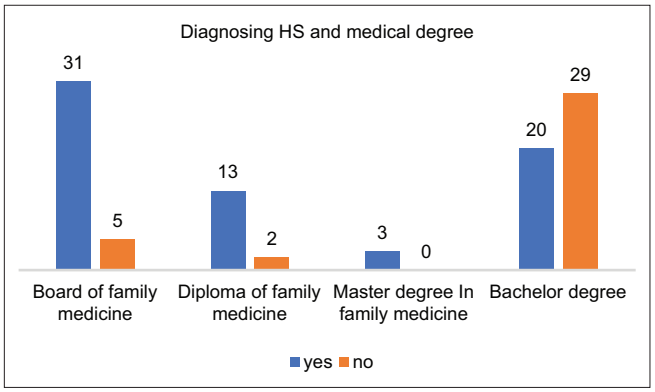

Figure 4: Diagnosing HS and medical degree

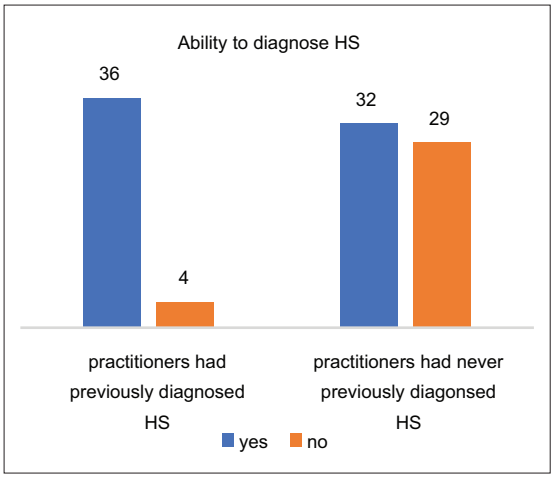

Figure 5: Ability to diagnose HS

Another limitation is that the study was conducted only among physicians in primary healthcare centers. Additionally, the sample size may have been affected as many practitioners were on vacation leave at the time of the study.

Conclusion

This study showed good knowledge and ability to diagnose HS among primary healthcare center physicians. A more advanced medical degree and more years of clinical experience were positively related with the ability to diagnose HS.

Declaration of patient consent

The authors certify that they have obtained all appropriate participant consent forms. In the form the participant(s) has/have given his/her/ their consent for his/her/their clinical information to be reported in the journal. The participants understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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