

# A Dermatological Questionnaire for General Practitioners with a Focus on Hidradenitis Suppurativa

Claudio Marasca<sup>1\*</sup>, Maria Carmela Annunziata<sup>1</sup>, Sara Cacciapuoti<sup>1</sup>, Mariateresa Cantelli<sup>1</sup>, Fabrizio Martora<sup>1</sup>, Silvestro Scotti<sup>2</sup>, Luigi Sparano<sup>2</sup>, Gabriella Fabbrocini<sup>1</sup>

<sup>1</sup>*Department of Clinical Medicine and Surgery, Section of Dermatology and Venereology, University of Naples Federico II, Via Pansini 5, Naples, Italy;* <sup>2</sup>*Board of the Italian Federation of General Practitioners, Italy*

**Citation:** Marasca C, Annunziata MC, Cacciapuoti S, Cantelli M, Martora F, Scotti S, Sparano L, Fabbrocini G. A Dermatological Questionnaire for General Practitioners with a Focus on Hidradenitis Suppurativa. Open Access Maced J Med Sci. 2018 Oct 25; 6(10):1902-1905. <https://doi.org/10.3889/oamjms.2018.358>

**Keywords:** Hidradenitis suppurativa; General practitioners; Acne inversa; Survey; Questionnaire

**\*Correspondence:** Claudio Marasca, Department of Clinical Medicine and Surgery, Section of Dermatology and Venereology, University of Naples Federico II, Via Pansini 5, Naples, Italy. E-mail: [claudio.marasca@gmail.com](mailto:claudio.marasca@gmail.com)

**Received:** 04-Apr-2018; **Revised:** 28-May-2018; **Accepted:** 10-Aug-2018; **Online first:** 03-Oct-2018

**Copyright:** © 2018 Claudio Marasca, Maria Carmela Annunziata, Sara Cacciapuoti, Mariateresa Cantelli, Fabrizio Martora, Silvestro Scotti, Luigi Sparano, Gabriella Fabbrocini. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0)

**Funding:** This research did not receive any financial support

**Competing Interests:** The authors have declared that no competing interests exist

**BACKGROUND:** Hidradenitis suppurativa (HS) is a skin chronic inflammatory disease typically located in several areas such as perianal, inguinal and axillary regions. In 40% to 70% of cases, general practitioners (GPs) are the first health care professionals consulted by patients suffering from HS. The role of GPs in HS management could be more substantial than it has been in the past.

**AIM:** We developed a questionnaire to assess the knowledge of HS by GPs and to evaluate if in their perception the dermatologist is the reference medical doctor for pathology above.

**METHODS:** The data were processed by a univariate descriptive statistical analysis.

**RESULTS:** Our study showed GPs could recognise patients affected by HS. They have proven to know the main features of HS. Nevertheless, the second part of the questionnaire has highlighted the considerable confusion of GPs about who the reference figure is.

**CONCLUSION:** The data registered regarding therapy and follow up too, only show a mild preponderance of dermatologist compared to other professional figures, such as a surgeon, GPs and plastic surgeon.

## Abstract

### Introduction

Hidradenitis suppurativa (HS) is a chronic inflammatory disease, commonly characterised by painful, deep dermal abscesses and chronic, draining sinus tracts. Lesions are typically located in several skin areas such as perianal, inguinal and axillary regions [1] [2]. The prevalence rate is not finally defined yet: it varies between 0.0003% and 4% depending on the study population [3] [4]. Estimates from insurance databases suggest a prevalence of < 0.1% [5] [6].

This variation strongly suggests a significant selection bias or misclassification, and it may be

speculated that not all patients ask any healthcare consultation. Also, diagnosis of HS may usually be delayed for years, and even when diagnosed, is challenging to treat [7].

The healthcare system identifies the general practitioners (GPs) as the first reference figures for the citizen in the health care. The situation does not change for HS.

In 40% to 70% of cases, GPs are the first health care professionals consulted by patients suffering from HS [8]. The role of GPs in HS management could be more substantial than it has been in the past. Moreover, GPs are still the primary

caregivers for 15% of patients after an HS diagnosis is received [7].

The main goal of the study is to assess the knowledge of HS by GPs and to evaluate if in their perception the dermatologist is the reference medical doctor for pathology above.

## Methods

At the Department of Clinical Medicine and Surgery, Section of Dermatology of University Hospital Federico II of Naples, we developed a questionnaire (Table 1) on HS, structured as follows:

- 6 knowledge questions about the pathology;
- 5 related questions to HS diagnosis, therapies and follow up.

The paper mentioned above questionnaire was filled by 150 GPs from Campania, Italy.

The results were expressed as a percentage.

**Table 1: Six knowledge questions about HS (first part of the questionnaire) and five questions about HS diagnosis, therapies and follow up (second part of the questionnaire)**

QUESTIONNAIRE (first part)
HS manifest with painful skin lesions
HS manifest with inflammatory nodules
HS manifests with abscesses
HS manifests with draining fistulas
HS manifests with scars
HS occurs with lesions typically localised in the following regions: axillary, inter-inframammary, inguinal, perineal, gluteus
Options: I do not agree – I do not know – I partially agree - I fully agree
QUESTIONNAIRE (second part)
The diagnostic suspicion is supported by
In the diagnosis of HS, the reference figure is
In the HS therapy setting, the reference figure is
In the management of drug therapy (topical/systemic), the reference figure is
In the follow up of HS patients, the reference figure is
Options: Dermatologist – Surgeon – General Practitioner – Plastic surgeon

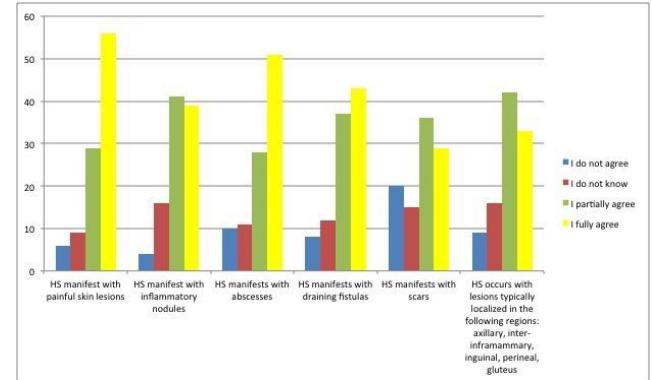
## Results

The first part of the questionnaire consists of 6 general questions about HS. The collected responses showed a good knowledge of the disease by GPs. More than 80% (partially agree + fully agree) showed to know that HS manifests with painful skin lesions, with inflammatory nodules, abscesses and draining fistulas.

A smaller percentage of respondents (75% = partially + fully agree) proved to be aware of the anatomic sites involved by the disease and that HS is also characterised by scarring (Figure 1).

In the second part of the survey, according to GPs involved in the study, diagnostic suspicion is

supported by a dermatologist (24%), surgeon (26%), GP (38%), plastic surgeon (12%).



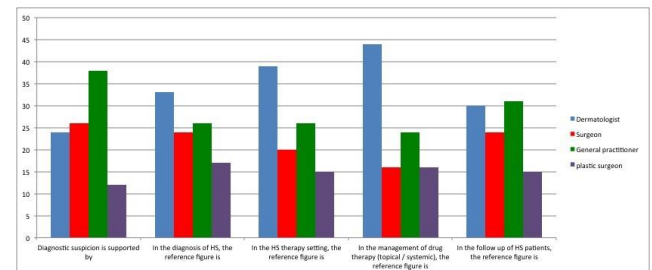
**Figure 1: Results of 6 knowledge questions about HS (first part of the questionnaire). The collected responses showed a good knowledge of the disease by GPs. More than 80% showed to know that HS manifests with painful skin lesions, with inflammatory nodules, abscesses and draining fistulas even though GPs were not aware that HS is also characterised by scarring**

In the diagnosis of HS, dermatologists are slightly most involved (33%) compare to the surgeon (24%), GP (26%) and plastic surgeon (17%).

In the HS therapy setting the reference figure is dermatologist (39%), surgeon (20%), GP (26%), plastic surgeon (15%).

In the management of drug therapy (topical / systemic) the reference figures are as follow: dermatologist (44%), surgeon (16%), GP (24%), plastic surgeon (16%).

In the follow up of the HS the reference figures are as follow dermatologist (30%), surgeon (24%), GP (31%), plastic surgeon (15%) (Figure 2).



**Figure 2: Results of 5 questions about HS diagnosis, therapies and follow up (second part of the questionnaire). This part of the questionnaire has highlighted the considerable confusion of GPs about who the reference figure is for HS**

## Discussion

The diagnosis of HS is based on the presence of recurrent painful or suppurating lesions more than twice in 6 months in the considered 'typical' areas of

the body, including axilla, genital area, perineum, gluteal area and, in women, infra-mammary area. Long delays in diagnosis are common since HS is frequently misdiagnosed as a simple infection [9].

Our study showed that GPs could recognise patients affected by HS. They have proven to know the main features of HS. However, initial or mildly severe clinical frameworks can easily be confused with other pathologies whose overall management is different. This data affects the problem of delayed diagnosis and contributes to determining worsening conditions [10].

The second part of the questionnaire has highlighted the considerable confusion of GPs about who the reference figure is.

The data registered regarding therapy and follow up too, only show a mild preponderance of dermatologist compared to other professional figures, such as a surgeon, GP and plastic surgeon. Inadequate management is more frequently associated with a wrong diagnosis. The consequence is the worsening of clinical manifestations with an increase of severity degree.

It is well known that it is easier to treat mild forms of HS, compared to severe forms that are less responsive to therapies. Also, the disease progression has a significant impact on the quality of life of patients. Furthermore, the literature shows that inadequate management of HS patients causes worsening not only of skin but also of systemic clinical conditions [11] [12].

Indeed, HS has been considered a systemic disease because of the possible association with several comorbidities like endocrine disorders, such as diabetes and hyperinsulinemia, acromegaly and Cushing disease, cardio-metabolic comorbidities, metabolic syndrome, obesity and other conditions like inflammatory bowel diseases (especially Crohn disease), spondyloarthritis, genetic keratin disorders associated with follicular occlusion and squamous cell carcinoma [13] [14] [15] [16] [17] [18] [19] [20]. Early recognition of the HS associated diseases and a timely therapy improve disease outcome and can prevent long-term complications.

The worsening natural history of the disease, together with co-morbidities, makes necessary a multidisciplinary approach to HS. The multidisciplinary assessment of patients allows a complete evaluation of the disease and a more comprehensive treatment approach compared with traditional consultation.

In a shared and multidisciplinary approach, the GP plays a key role, as the first physician interfaces with patients suffering from HS.

The GP should be able to recognise the dermatologist as the reference figure in the treatment of HS patients, notwithstanding the contribution of the other medical figures indispensable for the proper

management of a multidisciplinary pathology, such as HS.

In conclusion, this study emphasises the need for education of GPs to make an accurate and early diagnosis, to initiate treatment and obtain the best management of HS patients.

Future objectives include submitting the same web-based questionnaire to the largest number of general practitioners on a national scale.

## References

1. Naik HB. Hidradenitis suppurativa, introduction. *Semin Cutan Med Surg.* 2017; 36(2):41. <https://doi.org/10.12788/j.sder.2017.025> PMID:28538741
2. Hoffman LK, Ghias MH, Garg A, Hamzavi IH, Alavi A, Lowes MA. Major gaps in understanding and treatment of hidradenitis suppurativa. *Semin Cutan Med Surg.* 2017; 36(2):86-92. <https://doi.org/10.12788/j.sder.2017.024> PMID:28538750
3. Fitzsimmons JS, Guilbert PR, Fitzsimmons EM. Evidence of genetic factors in hidradenitis suppurativa. *Br J Dermatol.* 1985; 113:1-8. <https://doi.org/10.1111/j.1365-2133.1985.tb02037.x> PMID:4015966
4. Jemec GB. The symptomatology of hidradenitis suppurativa in women. *Br J Dermatol.* 1988; 119:345-50. <https://doi.org/10.1111/j.1365-2133.1988.tb03227.x> PMID:3179207
5. Vazquez BG, Alikhan A, Weaver AL et al. Incidence of hidradenitis suppurativa and associated factors: a population-based study of Olmsted County, Minnesota. *J Invest Dermatol.* 2013; 133:97-103. <https://doi.org/10.1038/jid.2012.255> PMID:22931916 PMID:PMC3541436
6. Cosmatos I, Matcho A, Weinstein R et al. Analysis of patient claims data to determine the prevalence of hidradenitis suppurativa in the United States. *J Am Acad Dermatol.* 2013; 69:819. <https://doi.org/10.1016/j.jaad.2013.06.042> PMID:24124817
7. Bettoli V, Pasquinucci S, Caracciolo S, Piccolo D, Cazzaniga S, Fantini F, Binello L, Pintori G, Naldi L. The Hidradenitis suppurativa patient journey in Italy: current status, unmet needs and opportunities. *J Eur Acad Dermatol Venereol.* 2016; 30(11):1965-1970. <https://doi.org/10.1111/jdv.13687>
8. Saunte DM, Boer J, Stratigos A, Szepletowski JC, Hamzavi I, Kim KH, Zarchi K, Antoniou C, Matusiak L, Lim HW, Williams M. Diagnostic delay in hidradenitis suppurativa is a global problem. *British journal of dermatology.* 2015; 173(6):1546-9. <https://doi.org/10.1111/bjd.14038> PMID:26198191
9. Alavi A, Lynde C, Alhusayen R, Bourcier M, Delorme I, George R, Gooderham M, Gulliver W, Kalia S, Marcoux D, Poulin Y. Approach to the management of patients with hidradenitis suppurativa: A consensus document. *Journal of cutaneous medicine and surgery.* 2017; 21(6):513-24. <https://doi.org/10.1177/1203475417716117> PMID:28639459
10. Abdelrahman W, Dawson R, McCourt C. A retrospective review of the management of patients with hidradenitis suppurativa in the Belfast health and social care trust, Northern Ireland. *Ir Med J.* 2017; 110(5):574. PMID:28737315
11. Huang C, Lai Z, He M, Zhai B, Zhou L, Long X. Successful surgical treatment for squamous cell carcinoma arising from hidradenitis suppurativa: A case report and literature review. *Medicine (Baltimore).* 2017; 96(3):e5857. <https://doi.org/10.1097/MD.0000000000005857> PMID:28099342 PMID:PMC5279087
12. Gold DA, Reeder VJ, Mahan MG et al. The prevalence of

- metabolic syndrome in patients with hidradenitis suppurativa. *J Am Acad Dermatol.* 2014; 70:699–703. <https://doi.org/10.1016/j.jaad.2013.11.014> PMID:24433875
13. Menter A. Recognizing and managing comorbidities and complications in hidradenitis suppurativa. *Semin Cutan Med Surg.* 2014; 33(3 Suppl):S54-6. <https://doi.org/10.12788/j.sder.0093> PMID:25188459
14. Shalom G, Freud T, Harman-Boehm I, Polishchuk I, Cohen AD. Hidradenitis suppurativa and metabolic syndrome: a comparative cross-sectional study of 3,207 patients. *Br J Dermatol.* 2015; 173:464–470. <https://doi.org/10.1111/bjd.13777> PMID:25760289
15. Salgado-Boquete L, Román J, Carrión L, Marín-Jiménez I. Epidemiology of hidradenitis suppurativa and inflammatory bowel disease: are these two disease associated? *Actas Dermosifiliogr.* 2016; 107 Suppl 2:8-12. [https://doi.org/10.1016/S0001-7310\(17\)30003-0](https://doi.org/10.1016/S0001-7310(17)30003-0)
16. Fabbrocini G, De Vita V, Donnarumma M, Russo G, Monfrecola G. South Italy: A Privileged Perspective to Understand the Relationship between Hidradenitis Suppurativa and Overweight/Obesity. *Skin Appendage Disord.* 2016; 2(1-2):52-56. <https://doi.org/10.1159/000447716> PMID:27843924
- PMCID:PMC5096266
17. Kohorst JJ, Kimball AB, Davis MD. Systemic associations of hidradenitis suppurativa. *J Am Acad Dermatol.* 2015; 73(5 Suppl 1):S27-35. <https://doi.org/10.1016/j.jaad.2015.07.055> PMID:26470611
18. Sartorius K, Emtestam L, Jemec GB, Lapins J. Objective scoring of hidradenitis suppurativa reflecting the role of tobacco smoking and obesity. *Br J Dermatol.* 2009; 161(4):831-9. <https://doi.org/10.1111/j.1365-2133.2009.09198.x> PMID:19438453
19. Napolitano M, Megna M, Timoshchuk EA, Patrino C, Balato N, Fabbrocini G, Monfrecola G. *Clin Cosmet Investig Dermatol.* 2017; 10:105-115. <https://doi.org/10.2147/CCID.S111019> PMID:28458570 PMCID:PMC5402905
20. Tiri H, Jokelainen J, Timonen M, Tasanen K, Huilaja L. Somatic and psychiatric comorbidities of hidradenitis suppurativa in children and adolescents. *J Am Acad Dermatol.* 2018. <https://doi.org/10.1016/j.jaad.2018.02.067> PMID:29518461