Materials and Methods

Study Design

This was a cross-sectional, observational study on patients with hidradenitis suppurativa (HS) and psoriasis collected in the same research hospital. The study was approved by the Institutional Ethics Committee.

HS Patients

Data on HS patients were obtained from the hospital registry of HS of the IDI-IRCCS, a national dermatological reference center, located in Rome, Italy, an entity that contributes to the Italian registry [17]; our study, however, was more specifically focused on quality of life (QoL) and psychosocial issues of HS patients. Consecutive patients were recruited during the time period of November 2015–March 2017.

Inclusion criteria were (1) age 16–99 years; (2) both sexes; (3) patients with a new diagnosis of HS or presenting for the first time to the hospital with HS; (4) history of at least 6 months of nodules, abscesses, fistulae, and secondary retracting scars, affecting intertriginous sites, including axillae, breasts, groin, buttocks, and perineum; and (5) signed, written, informed consent. Exclusion criteria were the presence of lesions associated with HS (nodular acne associated with macro-comedones, single pilonidal cysts, and recurrent necrotic folliculitis of the scalp) in the absence of other criteria to fulfil the diagnosis of HS [1].

Information was collected on demographics, history of HS, and clinical characteristics. Outcome measures were (1) Hurley staging, Sartorius scale, and the International Hidradenitis Suppurativa Severity Score System (IHS4) for the clinical severity measure of HS; (2) VAS for pain intensity; and (3) Skindex-17 for the measure of the impact on QoL of patients.

Clinical Severity

Clinical severity of HS was assessed by the Hurley staging [18], the Sartorius HS score [19], and the IHS4 [20]. The Hurley grade is based on three clinical stages. The Sartorius HS score was conventionally grouped into three categories: <50, 50–99.9, and ≥100.

The IHS4 is a scoring system obtained by the sum of the number of nodules + (number of abscesses) × 2 + (number of draining tunnels (fistulae, sinuses)) × 4. HS was defined in the original article as follows: mild = score ≤3 points, moderate = 4–10 points, and severe = ≥11 points.

QoL: The Skindex-17

The Skindex-17 questionnaire [21] is a Rasch-reduced version of the Skindex-29 [22], an instrument measuring the impact of skin conditions on patients' QoL. The Skindex-17 has been shown to provide very similar information compared with the Skindex-29, with the advantage of being shorter [23]. It consists of two subscales: symptom and psychosocial. Higher scores indicate a higher impact on QoL (range 0–100).

Psoriasis Patients

Data on patients with psoriasis came from a survey about QoL [24] conducted in March 2010 at the IDI-IRCCS (Rome, Italy). Dermatological patients were recruited consecutively during the outpatient clinic's activities for 3 weeks. Patients completed the Skindex-29, from which we derived the Skindex-17, selecting the 17 items composing the Skindex-17 out of the 29 of the Skindex-29. As previously described [23], the emotion and functioning scales of Skindex-29 were pulled together into a "psychosocial" scale created by the mean value of the two subscales. We have shown [23] that the administration of the Skindex-17 provides information very similar to that of the Skindex-29. The clinical severity of psoriasis was evaluated using the 5-point Physician Global Assessment [24].

The "very mild" and "mild" categories for psoriasis were grouped together and compared with the IHS4 "mild" category of HS; the "moderate" category was compared with the "moderate" IHS4 category; and the "severe" and "very severe" categories were grouped together and compared with the "severe" IHS4 category.

Statistical Analysis

Mean Skindex-17 scores were compared in patients with HS at different levels of demographic and clinical variables using the *t* test or ANOVA.

Age was grouped into teenagers, patients in their 20s, and patients 30 years of age or older. The variables "years from onset" and "diagnostic delay" were grouped into three categories with similar numbers. The variable "education" was grouped into "high school or less" and "from college". BMI scores were grouped into <25 (normal weight or underweight), 25–30 (overweight), and >30 (obese). Pain, as measured by the VAS, was considered as mild (<5), moderate (5–6), or severe (≥7). The numbers of body sites were: 1, 2–3, or 4 or more.

The mean scores of the single items of the Skindex-17 were graphically represented – for each level of clinical severity – on a radar chart, after transforming them to a linear scale from 0 to 100. HS and psoriasis were ranked according to their Skindex-17 item scores among all the other skin conditions evaluated in the 2010 survey. The other conditions were: acne, alopecia (androgenetic and areata), bacterial infections, balanitis, benign skin neoplasias, bullous diseases, connective tissue disorders, dermatitis, ectoparasitic infections, hirsutism, hyperhidrosis, lichen, melanoma, mycoses, nail conditions, nevi, nonmelanoma skin cancer, other dermatoses, other skin neoplasias, pigmentation disorders, pityriasis rosea, pruritus, rosacea, scars, seborrheic dermatitis, ulcers, urticaria, and viral infections.