Descriptive epidemiological study on chronic skin lesions in home care in the districts of Sassari – Alghero – Ozieri

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ABSTRACT

The analysis of the current literature shows the fact that there are no epidemiological studies involving patients with chronic wounds in the Sardinia region. We therefore wanted to analyse and process data in this regard to obtain values on the number of home care patients with chronic wounds in the Province of Sassari, but also to understand what were the problems of the various healthcare professionals in managing this type of patient. A single instrument was used for data collection, administered to home care nurses; it emerged a high percentage of patients with chronic wounds and there was a need for a Wound Care Specialist. Numerically relevant data were obtained for Sardinia for the first time.

INTRODUCTION

Ulcer healing is altered by a persistent self-sustaining inflammatory process, whose histological picture is characterized by an excessive proliferation of capillaries with fibroblasts, lymphocytes and macrophages.[1,2] Skin ulcers should not be considered as a disease in and of themselves, but as a secondary or accessory manifestation of another morbid process of which the ulcer is at once symptom and sign.

A careful medical history and an accurate objective examination of the ulcer and of the patient, together with diagnostic and blood chemistry findings allow discovering the lesion pathogenesis and implementing the most correct systemic and local treatment.[3]

Skin lesions are of concern, both because of the number of patients affected by them, and the time and resources needed to treat such medical condition.

Skin ulcers have a high social significance, both in terms of public and welfare spending and the loss of working days. Although they are routinely diagnosed in clinical practice, their care and management cannot rely on large-scale epidemiological studies, which remain scarce.[4]

In Italy, some progress has been made by the S.I.U.C. project (Studio Italiano Ulcere Cutanee, Italian Study on Skin Lesions) completed in 2015-1016,[5] which, however, does not include conclusive data reports for the Sardinia region.

Given the scarcity of data, this study seeks to deepen the epidemiological picture of a large area of Northern Sardinia. The core information comes from a descriptive epidemiological study whose objective was to: i) monitor the chronic skin lesions phenomenon in Home Care in the Districts of Sassari, Alghero and Ozieri; ii) gather information on the distribution of skin lesions by etiology, in terms of the geographical area of concern; ii) understand the nursing management of patients under Integrated Home Care (ADI) for the treatment of chronic skin lesions; iv) understand the opinion of operators concerning nurses specialised in Wound Care.

MATERIALS AND METHODS

This work relies upon a descriptive epidemiological study. The study involved direct data collection through questionnaires administered to local nurses. For the purposes of the study, all patients enrolled in Integrated Home Care programmes in the Districts of Sassari, Alghero and Ozieri were monitored during a predefined period and selected based on the inclusion criteria, namely, patients under Integrated Home Care; patients who were administered *ad hoc* care were excluded from the study.

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Key words: Epidemiological study, chronic skin lesions, home care, Sardinia.

Conflict of interest: The author declares no conflict of interest.

Received for publication: 22 January 2020.
Accepted for publication: 31 October 2020.

Licensee PAGEPress, Italy
Italian Journal of Wound Care 2020; 4(2):45-52
doi:10.4081/ijwc.2020.57

The study was conducted from April 1, 2019 to May 1, 2019. The determination was made to collect data over a period of one month to ensure that operators had time to see all patients under active Integrated Home Care (with some patients requiring one or two monthly visits).

For data collection, a study project was used throughout the geographical area of interest, and namely, a single tool developed for this work.

The tool comprised two parts, Part 1 relating to the patient, and Part 2 relating to the operator who manages patients under Integrated Home Care.

Part 1 consisted of 12 questions. It included three questions concerning the patient's age range, co-morbidities and whether or not he/she was taking anticoagulant therapy. Subsequent questions drew attention to specific data, such as whether the patient had skin lesions and, if so, how many, type and duration of the lesion; the use or not of rating scales and of routine or advanced dressings, a description of the dressing protocol and products used, and whether request for surgical or specialist advice was made during treatment.

The last part included the use of the Braden scale generally used to predict pressure sore risks.

Part 2 consisted of 3 questions. The first question sought to probe the operators' knowledge of the job description of nurses specialised in Wound Care; the second delved more deeply into the opinion of operators on the usefulness of a Wound Care specialist in the geographical area of interest, and the third question sought to bring to the fore what problems are encountered by operators during the management of a patient with chronic skin lesions.

Additional data were entered by means of the Microsoft Access software, and all data were processed with Microsoft Excel and Microsoft Access. For the purposes of compliance with any applicable privacy legislation, the data gathered were not of sensitive nature.

RESULTS

As reported by the various district coordinators, the total number of patients under Integrated Home Care in April 2019 was 1074, with 718 of them being located in the Sassari district, 256 in the Alghero district and 100 in the Ozieri district.

A total of 654 questionnaires were completed.

It emerged that 10.24% of patients were less than 60 years old (n=67 patients); 37.57% between 60 and 80 years old (n=213) and 57.19% over 80 years old (n=374). As it pertains to comorbidities, 22.02% of patients had diabetes (n=144); 42.05% cardiovascular diseases (n=275) and 58.72% bed rest syndrome (n=384). In addition, 44.19% of the study population took anticoagulant drugs (n=289).

It was also found that 50.46% of patients (n=330) had skin lesions at the time of the study (Figure 1), with more than one lesion present in 29.20% of cases, and an average of 1.20 lesions per patient.

All lesions in the study sample were quantified, resulting in the total number of 785 (330 + 455).

Concerning the genesis of the lesion, 77.27% of patients had pressure lesions (n=255), 13.94% suffered from vascular ulcers (n=46), 4.55% from skin tears (n=15), 3.64% from diabetic foot (n=12), and 3.03% from tumor lesion and atypical ulcer, respectively; finally, for 2.42% of patients, the nurse was not able to identify the lesion (n=8).

Of 330 chronic skin lesions (Figure 2), 43.0% had been present for more than 6 months (n=142), 28.2% for 3-10 weeks (n=93), more than 3 months (n=79) and 4.8% for less than a week (n=16).

In addition, in 90.21% (n=590) of cases, evaluation scales were not used during lesion management (Figure 3).

The study also found that in 34.35% of cases, routine wound dressing was applied (n=224), while advanced dressing was used in 18.50% of cases (n=121), and both methods in 4.2% of cases (n=14).

A complex data re-processing allowed listing and create categories of wound dressing methods used by the nurses (Figure 4).

In addition, cleansing with 0.9% NaCl was used in 80.61% of lesions (n=266), and only 1.21% of lesions were cleansed with soap and water (n=4). The use of Prontosan cleansing solution concerned 25.76% of cases (n=85).

Disinfection with Povidone-iodone alcohol solution was used in 26.06% of lesions (n=86), of Amukine med 0.05% in 3.94% (n=13), of Eosin 2% cutaneous solution in 1.82% (n=6), of Hydrogen Peroxide (H2O2) in 0.91% (n=3), of Euclorine 2.5% soluble powder in 0.30% (n=1) and of Merbromin (Mercury Chromium) is 0.30% (n=1).

For bioactive dressings, Connettivina Gauzes was used in 31.52% of lesions (n=104), Connettivina cream in 30.30% (n=100), Vulnamin Gel in 23.33% (n=77),

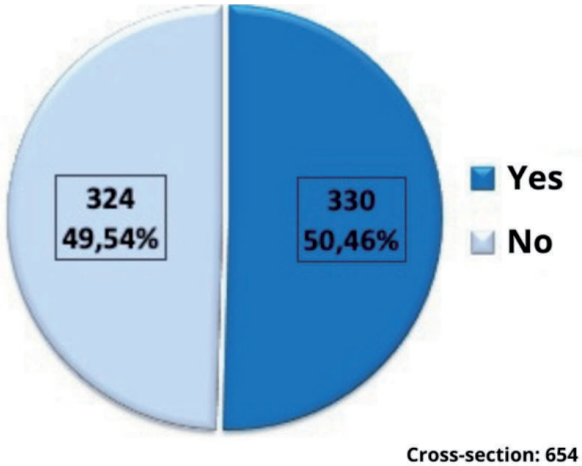

Figure 1. Percentage of patients with chronic wounds.

moistened gauze in 3.03% (n=10), of Vulnamin Cream in 2.12% (n=7) and of Dermotrofina cream in 0.91% (n=3).

Regarding the use of enzymatic dressings, collagenase was used in 44.55% of lesions (n=147).

Polyurethane foam was used in 11.82% of lesions (n=39), hydro fiber in 10.30% (n=34), alginate in 8.79% (n=29), Hydrogel in 5.15% (n=17), and Hydrocolloid in 0.61% (2).

The use of antiseptic dressing concerned Sofargen cream in 10.91% of cases (n=36), hydro-fiber Ag+ in 10.00% (n=33), Alginate Ag+ in 3.33% n=11), Ag+ polyurethane foam in 0.91% (n=3), honey dressings in 0.61% (n=2) and charcoal dressings in 0.61% (n=2).

Other products such as polyurethane films were used in 9.39% of cases (n=31), Protective sprays in 2.12% (n=7), Rigenoma cream in 0.30% (n=1), Gentamicin ointment in 0.30% (n=1), topical cortisone in 0.61% (n=2), of Tranex ampoules in 0.30% (n=1) and hydrobending in 0.30% (n=1). Compression bandage was used in 3.03% of cases (n=10).

In the sample under study, 41.59% required surgical or specialist advice (n=272).

Finally, from the compilation of the Braden Scale, it emerged that 26.15% (n=171) of the study population was represented by patients at high risk of injury, 40.21% (n=263) by patients at risk, and 33.64% (n=220) by patients not at onset risk.

Figure 5 summarizes the data from the questionnaire.

A second data processing took into account only the number of patients with skin lesions (n=330).

Of 330 patients with skin lesions, 73.64% of them (n=243) required surgical advice and 26.36% did not (n=87).

The percentage of multiple lesions on single patients was significant; patients with one type of lesion were taken into consideration, with assessments being complete to determine whether lesions of other etiology were present. In patients with pressure ulcers (n=255) 3.53% also had vascular ulcers (n=9), 3.14% skin tears (n=8), 1.57% the diabetic foot, 0.78% with ulcers whose etiology could not be adequately identified by nurse (n=2), and 0.39% presented an atypical ulcer (n=1).

In patients with vascular ulcers (n=46), 19.57% also had pressure lesions (n=9), 6.52% the diabetic foot (n=3) and 2.17% had skin tears (n=1).

In patients with skin tears (n=15), 53.33% also had pressure lesions (n=8) and 6.67% had vascular ulcers (n=1).

In patients with diabetic foot (n=12), 33.33% also had pressure lesions (n=8) and 25.00% had vascular ulcers (n=3).

In patients with atypical ulcer (n=10), 10.00% also had pressure lesions (n=1).

For patients whose lesions (n=8) could not be identified by the nurse, 25.00% of them also presented pressure lesions (n=2).

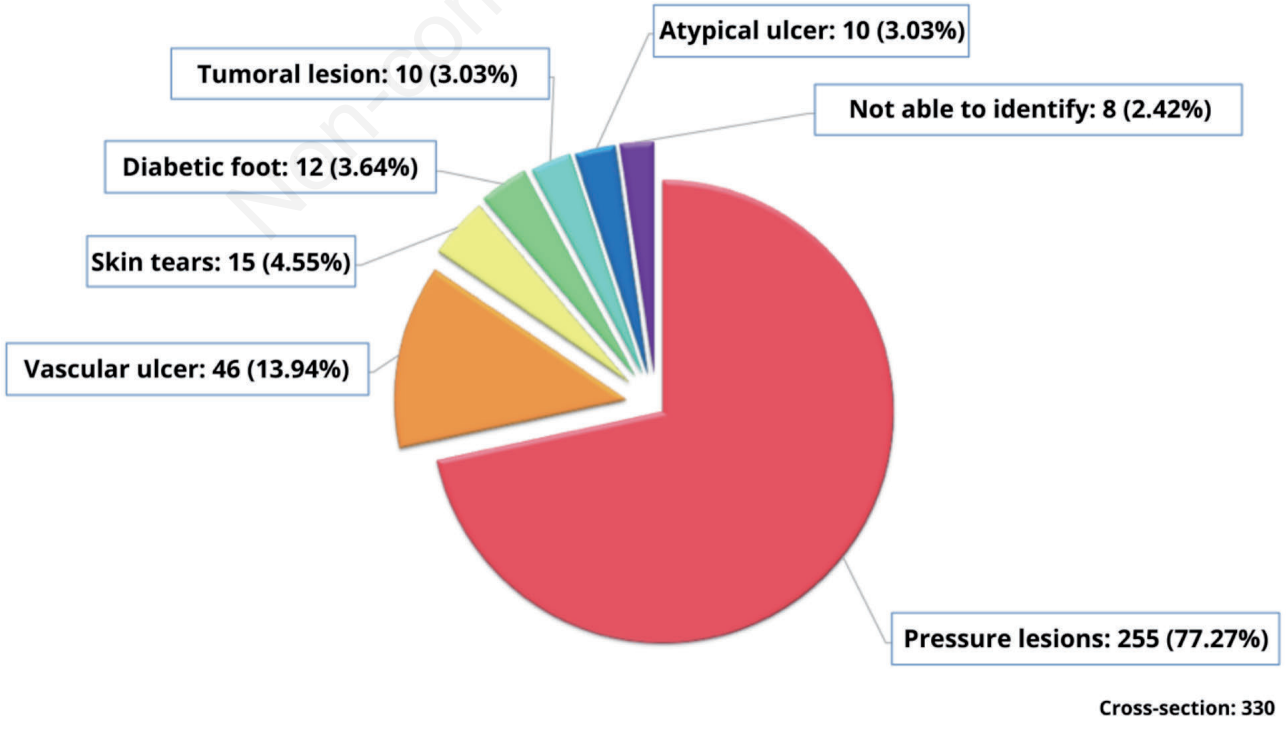

Figure 2. Distribuction of skin ulcers by etiology.

In patients with tumor lesions (n=10) no other lesions occurred concurrently at the time of data collection (Figure 6).

Taking into account only patients with lesions (n=330), it emerged that 139 patients had only one lesion at the time of the study, with 191 of them having more than one lesion. The nurses selected the exact number of lesions, obtaining a total number of 785. In short, each patient had an average of 2.38. As previously mentioned, however, the average lesions per patient of the entire study population is 1.20.

The correlation between age and patients with lesions was also analysed. Of 330 patients with skin lesions, 63.3% were over 80 years old (n=210), 28.5% between 60 and 80 years old (n=94) and 7.9% under 60 years old (n=26). Of 191 patients with more than one lesion, 61.8% were over 80 years old (n=118), 30.4% between 60 and 80 years old (n=58) and 7.9% under 60 years old (n=15).

The relationship between patients with injuries and pathologies (diabetes, cardiovascular pathologies and bed rest syndrome) was also studied. Of 330 patients with lesions, 213 suffered from bed rest syndrome, 160 from cardiovascular disease and 85 from diabetes.

It should be kept in mind that these pathologies are not mutually exclusive; indeed, of 213 patients with bed rest syndrome 89 also suffered from cardiovascular conditions and 46 also had diabetes.

Likewise, of 160 patients with cardiovascular conditions, 89 suffered from bed rest syndrome and 53 from diabetes.

Of 85 patients with diabetes, 46 also suffered from bed rest syndrome and 53 from cardiovascular conditions.

For the data collection relating to the operator, 58 questionnaires were considered, with an acceptance of 77.33%. The questionnaires were distributed to 75 local nurses: 43 nurses from the Sassari district, 21 from Alghero and 10 from Ozieri.

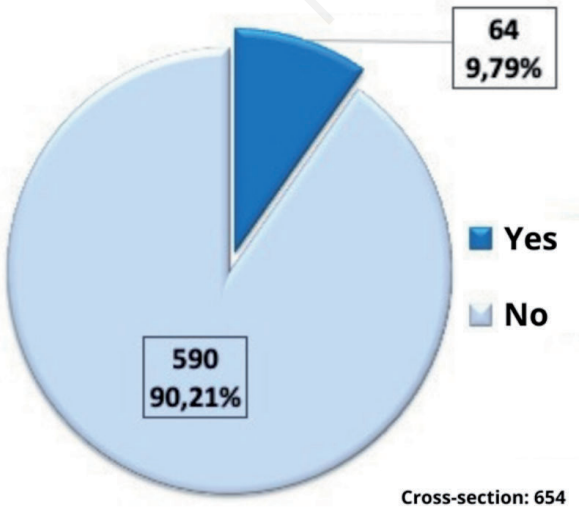

Figure 3. Percentage use of rating scales.

The most significant datum shows that 98.28% of operators (n=57) believe that it is useful to have a Wound Care specialist in order to coordinate all professionals involved and define adequate therapeutic strategies.

Full data from the questionnaire are summarized in Figure 7.

DISCUSSION

The data entered are affected by the compilation by several operators and the difference in their management; therefore, their analysis must always keep the methodology adopted in mind. 57.19% (n=374) of patients under Integrated Home Care in the districts of Sassari, Alghero and Ozieri are in an age group older than 80 years, with bed rest syndrome having been diagnosed in 58.72% of cases (n=384).

But an interesting fact is that a high percentage, 50.3% of the total patients (n=330), had a skin lesion at the time of data collection.

A significant datum is certainly given by the distribution of skin lesions by etiology, and, specifically 72% is represented by pressure lesions, 13% by vascular ulcers, 4% by skin tears, 3% by diabetic foot, tumor lesion and atypical ulcer; in 2% of cases, the nurse was unable to identify the type of injury. Although the study identified a high number of pressure lesions, when compared to the results of the Italian Study on Skin Ulcers (2015-2016) under Integrated Home Care setting, which states that over 95% of bedridden or non self-sufficient patients are affected by pressure injuries,[5] the estimate number in this study is comparatively lower.

The duration of the skin lesions is also important, since data show that 43.0% of the lesions (n=142) have been present for more than 6 months; this information, in turn, underscores the problem of lesion chronicity, as well as the challenges in healing skin ulcers.

From data processing, it was possible to assess not only the number of patients with skin lesions (n=330), but also the total and actual number of all lesions diagnosed at the time of the study; in fact, 785 skin lesions were evaluated, thus highlighting the real extent of the problem.

The mean lesions per patient of the study population is 1.20. This underlines that a high percentage of patients present multiple ulcerative lesions.

Nevertheless, it is encouraging that of 330 patients with skin lesions, 73.6% of them (n=274) required a surgical visit or the presence of a specialist to evaluate the lesions and to prescribe a therapeutic programme, though only 32.4% of patient required advanced dressing (n=107).

In a study population whose 40.21% was at risk of pressure injury and 25.54% of high onset risk, only in 9.79% of cases did nurses effectively use and evaluate scales during the management of patients under Integrated Home Care. Given the high prevalence of pressure sores in home care, perhaps the question must be asked about why nurses do not score patients in accordance with the applicable scales, especially subjects at risk.

79.31% of the local nurses who participated in the study had some familiarity with the job description of Wound Care specialists, and 98.28% of the operators confirmed that in their view the support of a Wound Care specialist able to coordinate all professionals involved and set up adequate therapeutic strategies would be useful, thus underscoring the need for a professional who can support the management of patients with chronic skin lesions.

Being a descriptive epidemiological analysis, this study aims to be a "snapshot" of the distribution of

	Total patients with lesions		Total patients Surgeon YES		Total patients Surgeon NO		Pressure lesions		Vascular ulcer		Skin tears		Diabetic foot		Tumor lesion		Atypical ulcer		Not able to identify	
TOTAL	330	%	243	73,64%	87	26,36%	255	77,27%	46	13,94%	15	4,55%	12	3,64%	10	3,03%	10	3,03%	8	2,42%
DRESSINGS USED																				
Nacl	266	80,61%	190	78,19%	76	87,36%	193	75,69%	36	78,26%	8	53,33%	8	66,67%	9	90,00%	6	60,00%	6	75,00%
Povidone-iodone	86	26,06%	63	25,93%	23	26,44%	54	21,18%	18	39,13%	3	20,00%	3	25,00%	3	30,00%	2	20,00%	3	37,50%
H2O2	3	0,91%	2	0,82%	1	1,15%	2	0,78%	0	0,00%	0	0,00%	0	0,00%	1	10,00%	0	0,00%	0	0,00%
Prontosan	85	25,76%	84	34,57%	1	1,15%	65	25,49%	7	15,22%	4	26,67%	5	41,67%	2	20,00%	2	20,00%	0	0,00%
Amukine Med	13	3,94%	13	5,35%	0	0,00%	7	2,75%	2	4,35%	0	0,00%	2	16,67%	1	10,00%	1	10,00%	0	0,00%
Soap and water	4	1,21%	4	1,65%	0	0,00%	1	0,39%	2	4,35%	1	6,67%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Euclorine	1	0,30%	1	0,41%	0	0,00%	0	0,00%	1	2,17%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Eosin	6	1,82%	6	2,47%	0	0,00%	2	0,78%	1	2,17%	2	13,33%	0	0,00%	0	0,00%	0	0,00%	1	12,50%
Mercury chromium	1	0,30%	1	0,41%	0	0,00%	1	0,39%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Connettivina cream	100	30,30%	61	25,10%	39	44,83%	74	29,02%	8	17,39%	8	53,33%	0	0,00%	3	30,00%	4	40,00%	3	37,50%
Connettivina gauzes	104	31,52%	73	30,04%	31	35,63%	73	28,63%	19	41,30%	3	20,00%	0	0,00%	3	30,00%	5	50,00%	1	12,50%
Collagenase	147	44,55%	124	51,03%	23	26,44%	114	44,71%	21	45,65%	1	6,67%	4	33,33%	4	40,00%	3	30,00%	0	0,00%
Sofargen cream	36	10,91%	15	6,17%	21	24,14%	30	11,76%	1	2,17%	1	6,67%	0	0,00%	0	0,00%	0	0,00%	4	50,00%
Gentamicin	1	0,30%	1	0,41%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	10,00%	0	0,00%
Topical cortisone	2	0,61%	2	0,82%	0	0,00%	0	0,00%	1	2,17%	0	0,00%	0	0,00%	0	0,00%	1	10,00%	0	0,00%
Vulnamin cream	7	2,12%	4	1,65%	3	3,45%	6	2,35%	0	0,00%	0	0,00%	0	0,00%	1	10,00%	0	0,00%	0	0,00%
Vulnamin gel	77	23,33%	74	30,45%	3	3,45%	57	22,35%	11	23,91%	1	6,67%	7	58,33%	1	10,00%	0	0,00%	0	0,00%
Hydrogel	17	5,15%	16	6,58%	1	1,15%	15	5,88%	0	0,00%	1	6,67%	1	8,33%	0	0,00%	0	0,00%	0	0,00%
Rigenoma cream	1	0,30%	1	0,41%	0	0,00%	0	0,00%	1	2,17%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Honey dressings	2	0,61%	2	0,82%	0	0,00%	2	0,78%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Dermotrofina cream	3	0,91%	2	0,82%	1	1,15%	2	0,78%	0	0,00%	1	6,67%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Spray	7	2,12%	5	2,06%	2	2,30%	6	2,35%	0	0,00%	1	6,67%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Tranex	1	0,30%	1	0,41%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	1	10,00%	0	0,00%	0	0,00%
Moistened gauze	10	3,03%	8	3,29%	2	2,30%	6	2,35%	2	4,35%	1	6,67%	0	0,00%	1	10,00%	0	0,00%	0	0,00%
Charcoal Dressings	2	0,61%	2	0,82%	0	0,00%	1	0,39%	1	2,17%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Hydrocolloid	2	0,61%	2	0,82%	0	0,00%	1	0,39%	0	0,00%	0	0,00%	1	8,33%	0	0,00%	0	0,00%	0	0,00%
Hydrofiber	34	10,30%	34	13,99%	0	0,00%	26	10,20%	4	8,70%	1	6,67%	2	16,67%	1	10,00%	0	0,00%	0	0,00%
Alginate	29	8,79%	28	11,52%	1	1,15%	26	10,20%	2	4,35%	0	0,00%	1	8,33%	0	0,00%	0	0,00%	0	0,00%
Hydrofiber AG	33	10,00%	33	13,58%	0	0,00%	24	9,41%	4	8,70%	0	0,00%	5	41,67%	0	0,00%	0	0,00%	0	0,00%
Alginate AG	11	3,33%	11	4,53%	0	0,00%	7	2,75%	0	0,00%	0	0,00%	2	16,67%	1	10,00%	1	10,00%	0	0,00%
Polyurethane foam	39	11,82%	39	16,05%	0	0,00%	34	13,33%	2	4,35%	1	6,67%	0	0,00%	1	10,00%	1	10,00%	0	0,00%
Polyurethane foam AG	3	0,91%	3	1,23%	0	0,00%	2	0,78%	1	2,17%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Hydrofilm	31	9,39%	30	12,35%	1	1,15%	28	10,98%	0	0,00%	1	6,67%	1	8,33%	0	0,00%	1	10,00%	0	0,00%
Hydrobending	1	0,30%	0	0,00%	1	1,15%	1	0,39%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Compression bandage	10	3,03%	10	4,12%	0	0,00%	0	0,00%	10	21,74%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%

Figure 4. Data of specialist visits and used dressings.

QUESTIONNAIRE PART 1 - PATIENT		TOT	%	SASSARI	%	ALGHERO	%	OZIERI	%
	Answer	654		443	67,74%	191	29,20%	20	3,06%
Question 1	Under 60 years old	67	10,24%	45	10,16%	22	11,52%	0	0,00%
Identify patient's age range:	Between 60 and 80 years old	213	32,57%	154	34,76%	54	28,27%	5	25,00%
	Over 80 years old	374	57,19%	244	55,08%	115	60,21%	15	75,00%
Question 2	Diabetes	144	22,02%	106	23,93%	33	17,28%	5	25,00%
Does the patient have one or more of these pathologies?	Cardiovascular pathologies	275	42,05%	184	41,53%	82	42,93%	9	45,00%
	Bed rest syndrome	384	58,72%	257	58,01%	117	61,26%	10	50,00%
Question 3	Yes	289	44,19%	191	43,12%	87	45,55%	11	55,00%
Does the patient take any anticoagulant? (e.g. Warfarin)	No	365	55,81%	252	56,88%	104	54,45%	9	45,00%
Question 4	Yes	330	50,46%	210	47,40%	100	52,36%	20	100,00%
Does the patient have any skin lesion at this time?	No	324	49,54%	233	52,60%	91	47,64%	0	0,00%
Question 5	Yes	191	29,20%	117	26,41%	59	30,89%	15	75,00%
If yes, is there more than one lesion?	TOT extra lesions	455		285		122		48	
	Avarage	1,20		1,11		1,16		3,4	
	No	463	70,80%	326	73,59%	132	69,11%	5	25,00%
Question 6	Pressure lesions	255	38,99%	164	37,02%	74	38,74%	17	85,00%
What kind of skin lesion does the patient have?	Vascular ulcer	46	7,03%	28	6,32%	14	7,33%	4	20,00%
	Skin tears	15	2,29%	12	2,71%	3	1,57%	0	0,00%
	Diabetic foot	12	1,83%	8	1,81%	3	1,57%	1	5,00%
	Tumor lesion	10	1,53%	4	0,90%	5	2,62%	1	5,00%
	Atypical ulcer	10	1,53%	5	1,13%	5	2,62%	0	0,00%
	Not able to identify	8	1,22%	6	1,35%	2	1,05%	0	0,00%
	TOT	356		227		106		23	
Question 7	Less 1 week	16	2,45%	11	2,48%	5	2,62%	0	0,00%
How long have the lesions been reported?	3-10 weeks	93	14,22%	54	12,19%	35	18,32%	4	20,00%
	Over 3 months	79	12,08%	51	11,51%	23	12,04%	5	25,00%
	over 6 months	142	21,71%	94	21,22%	37	19,37%	11	55,00%
Question 8	Yes	64	9,79%	22	4,97%	37	19,37%	5	25,00%
Do you use rating scales for lesions management?	No	590	90,21%	421	95,03%	154	80,63%	15	75,00%
Question 9	Simple dressings	224	34,25%	136	30,70%	77	40,31%	11	55,00%
What kind of dressings do you use?	Advanced dressings	121	18,50%	81	18,28%	27	14,14%	13	65,00%
Question 10		Look "Figure 4"							
Describe how heve you done the dressing and the products used:									
Question 11	Yes	272	41,59%	180	40,63%	75	39,27%	17	85,00%
Has been a surgical or specialist advice required?	No	382	58,41%	263	59,37%	116	60,73%	3	15,00%
Question 12	<13	171	26,15%	126	28,44%	38	19,90%	7	35,00%
Evaluate the patient and fill out the following risk assessment table (Braden Scale):	13-16	263	40,21%	177	39,95%	79	41,36%	7	35,00%
	17-23	220	33,64%	140	31,60%	74	38,74%	6	30,00%

Figure 5. Data of patient's questionnaire.

chronic skin lesions and their management in Integrated Home Care settings, in the districts of Sassari, Alghero and Ozieri of the Sardinia region, with all the limitations that a descriptive study entails.

This study was limited by the lack of experience in conducting this type of analysis and the reprocessing of copious data collected.

It can be used as a starting point for a future epidemiological study and to obtain statistical data on chronic skin lesions in the Sardinia region.

	Total patients with lesions		Total patients Surgeon YES		Total patients Surgeon NO		Pressure lesions		Vascular ulcer		Skin tears		Diabetic foot		Tumor lesion		Atypical ulcer		Not able to identify	
TOTALI	330	%	243	73,64%	87	26,36%	255	77,27%	46	13,94%	15	4,55%	12	3,64%	10	3,03%	10	3,03%	8	2,42%
TYPES OF LESIONS							% MULTIPLE LESIONS ON A SINGLE PATIENT													
Pressure lesions	255	77,27%	189	77,78%	66	75,86%			9	19,57%	8	53,33%	4	33,33%	0	0,00%	1	10,00%	2	25,00%
Vascular ulcer	46	13,94%	39	16,05%	7	8,05%	9	3,53%			1	6,67%	3	25,00%	0	0,00%	0	0,00%	0	0,00%
Skin tears	15	4,55%	9	3,70%	6	6,90%	8	3,14%	1	2,17%			0	0,00%	0	0,00%	0	0,00%	0	0,00%
Diabetic foot	12	3,64%	12	4,94%	0	0,00%	4	1,57%	3	6,52%	0	0,00%			0	0,00%	0	0,00%	0	0,00%
Tumor lesion	10	3,03%	7	2,88%	3	3,45%	0	0,00%	0	0,00%	0	0,00%	0	0,00%			0	0,00%	0	0,00%
Atypical ulcer	10	3,03%	8	3,29%	2	2,30%	1	0,39%	0	0,00%	0	0,00%	0	0,00%	0	0,00%			0	0,00%
Not able to identify	8	2,42%	2	0,82%	6	6,90%	2	0,78%	0	0,00%	0	0,00%	0	0,00%	0	0,00%	0	0,00%		

Figure 6. Data of multiple lesions.

QUESTIONNAIRE PART 2 - NURSE			TOT	%	SASSARI	%	ALGHERO	%	OZIERI	%
TOTAL QUESTIONNAIRES COMPLETED			58		32	55,17%	21	36,21%	5	8,62%
Question 1		Yes	46	79,31%	23	71,88%	19	90,48%	4	80,00%
Have you never heard about the specialist nurse in Wound Care?		No	12	20,69%	9	28,13%	2	9,52%	1	20,00%
Question 2		Yes	57	98,28%	32	100,00%	20	95,24%	5	100,00%
Do you think it useful have a Wound Care specialist able to coordinate the various professionals and set up adequate therapeutic strategies?		No	1	1,72%	0	0,00%	1	4,76%	0	0,00%
Question 3	In your opinion, which are the problems found maneging the skin damage?	Little knowledge of the subject	20	34,48%	15	46,88%	5	23,81%	0	0,00%
		Little collaboration between operators	14	24,14%	10	31,25%	3	14,29%	1	20,00%
		Little collaboration with caregivers	22	37,93%	12	37,50%	10	47,62%	0	0,00%
		Absence of appropriate dressings	48	82,76%	25	78,13%	19	90,48%	4	80,00%
		Absence of assistance material	54	93,10%	30	93,75%	19	90,48%	5	100,00%
		Weekly accesses to the patient not compliant with the type of dressing	19	32,76%	11	34,38%	4	19,05%	4	80,00%
		Other	9	15,52%	8	25,00%	1	4,76%	0	0,00%

Figure 7. Data of nurse's questionnaire.

CONCLUSIONS

The study underscores the extent of the challenges in managing patients with chronic skin lesions under Integrated Home Care in the districts of Sassari, Alghero and Ozieri, of the Sardinia region.

For the first time, it was possible to gather unequivocal data demonstrating the real entity of the problem, as well as its wide social and economic relevance.

These conclusions support the need to continue with a future study project that delves more deeply into Wound Care in Sardinia, in order to develop a strategy that can promote a uniform conduct by health professionals, thus, in turn, reducing healthcare costs and, last but not least, improving the quality of life of subjects with skin lesions.

This study also highlights the importance of relying upon Wound Care specialists who can actively assist health professionals through consultancy activities and the supervision of operational processes, in addition to designing a structured path to steer the choices of operators who manage such patients.

Therefore, this work intends to be a first step in trying to help patients with chronic skin lesions under Integrated Home Care in the Sardinia region, as well as the health professionals who take care of them, by deepening the etiology, care and management of skin lesions.

The hope is that, by bringing the challenges of managing patients with chronic skin lesions to the fore, we can try to solve, or at least improve, the many challenges encountered in Sardinia.

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