Lupus: Open Access

AlSaif, Lupus Open Access 2016, 1:1

Short Communication Open Access

Discoid Lupus Erythematosus in Saudi Arabia: A literature review

AlSaif F *

***Corresponding author:** AlSaif F, Department of Dermatology, King Khalid University Hospital, College of Medicine, King Saud University, Riyadh, Saudi Arabia, Email: fsaif1000@hotmail.com

Received date: December 4, 2015; **Accepted date** January 15, 2016; **Published date:** February 22, 2016

Abstract

Background: Discoid lupus erythematous (DLE) is the most common type of chronic cutaneous lupus erythematosus with a small risk of progression to systemic lupus erythematous (SLE).DLE classically presents with erythematous to violaceous, scaly plaques with prominent follicular plugging that often results in scarring and atrophy. Although the diagnosis of classical DLE is generally clinical, histopathological study of skin biopsy is helpful to confirm the diagnosis in early or atypical DLE lesions.

Objectives: We aim to analyse the available PubMed database and local journals (Journal of the Saudi Society of Dermatology & Dermatologic Surgery) literature on Discoid lupus erythematosus in a Saudi population: Clinical and histopathological study.

Methods: We carried out a systemic search using the PubMed database and local journals (Journal of the Saudi Society of Dermatology & Dermatologic Surgery).The search was limited to the English language. The following search terms were used: discoid lupus erythematous in Saudi Arabia, chronic cutaneous lupus erythematous in Saudi Arabia, systemic lupus erythematous in Saudi Arabia, Lupus in Saudi Arabia.

Results: The PubMed database and local journals (Journal of the Saudi Society of Dermatology & Dermatologic Surgery) search generated 10 papers related to DLE in Saudi Arabia. The incidence of DLE in adult SLE Saudi patients is around 14% and lower incidence rate 3.3% in children.11.8% of DLE patients progressed to SLE. Human leukocyte antigen (HLA-DQB1*3) was increased among SLE patients with skin manifestation. The mean age of onset was 36.5 years and female to male ratio was 1.5:1.Scalp and face were the most affected .Atrophic form was the most common type. 16.1% of DLE patients had positive antinuclear antibody and 14.3% of those patients had positive DsDNA. Sever lichenoid reaction, vacuolar degeneration, deep dermal and periappendageal lymphocytic infiltration may use as alarming for progression to more severe form of lupus.

Conclusion: Despite the scanty of published papers about DLE in Saudi Population, the clinical and histopathological features of DLE in Saudi patients are comparable to those reported in the literatures. Further studies are required to demonstrate the clinical patterns, histopathological features and immunofluorescence of DLE to make accurate portray about the national status of DLE.

Keywords: DLE; SLE; Lupus; Saudi Arabia

Introduction

Discoid lupus erythematous (DLE) is the most common subtype of Chronic cutaneous lupus erythematous [1,2]. DLE occurs more frequently in women in their fourth decade of life [2,3]. The 70% of the DLE lesions occurred over face, nose, ears, and neck, while 20-40% is generalized (lesions both above and below the neck) [2,4]. The risk of progression to SLE in patients with DLE was recently demonstrated to be higher than previously reported; Up to 28% of patients with discoid lupus erythematosus (DLE) are susceptible to developing systemic lupus erythematosus (SLE) [5]. The 80%of SLE patient display skin symptoms sometime during the course of the disease and the incidence of DLE among SLE patient was around 11% [6,7]. Discoid lupus has rarely been reported in children without systemic symptoms and the risk of progression from DLE to SLE is much higher in children than in adults [8]. Typically, discoid lupus is characterized by erythematous macules, papules, and plaques with telangiectasia, scale, and follicular plugs, which results in a scaring process with atrophy and dyspigmentation, if the hairy area involved the lesions will end with scaring alopecia [9,10]. The classical histopathological features of DLE will include interface dermatitis with perivascular and periadnexal lymphocytic infiltrate, Liquefaction degeneration of basal keratinocytes with melanin incontinence, increased dermal deposition of mucin, and diffuse thickening of the basement membrane. Follicular plugs may be prominent in discoid lesions [11]. This study aimed to evaluate the peer-reviewed literature published about clinical and histopathological features of DLE in Saudi population.

Methods

A comprehensive literature review in PubMed database and local journals (Journal of the Saudi Society of Dermatology & Dermatologic Surgery) between 1980 and 2015 was performed using the following search terms: discoid lupus erythematous in Saudi Arabia, chronic cutaneous lupus erythematous in Saudi Arabia, systemic lupus erythematous in Saudi Arabia, Lupus in Saudi Arabia. The search was limited to the English language.

Results and Discussion

The PubMed database and local journals (Journal of the Saudi Society of Dermatology & Dermatologic Surgery) search generated 10 papers related to DLE in Saudi Arabia. 5 appropriate original articles were discussing SLE features in adult patients which include skin manifestations (table1) [12-16], and one original article related to SLE in children [17]. These studies were using retrospective case methodology and represented single center experiences, on the other hand, there was no comment in these papers about the way of DLE diagnosis and if the dermatologist involved in the diagnosis or not. One original study was carried out to investigate the association of HLA typing on SLE patients including patients with DLE [18]. This study was control study and represented single center experiences. The last 3 papers were about DLE, one original paper was discussing the clinical and histopathological features of DLE in Saudi population [19]. This paper studied retrospectively patients with documented DLE clinically and histopathologically in one center. The other 2 paper were DLE case report [20,21].

	Eastern region Abdi N 2013	Riyadh Al-Arfaj 2009	Western region Heller 2007	Western region Qari 2002	Riyadh Alballa 1995
No of SLE patients	46	624	93	65	87
No of DLE patients	6 (13%)	110 (17.6%)	6 (7%)	1 (1.5%)	16 (18.4%)

Table 1: Incidence of DLE patients among SLE patients.

All the identified articles represented single center experiences or case reports so it is difficult to give specific details about DLE in Saudi population. The majority of the literature agreed that the incidence of DLE among adult SLE Saudi patients is around 14% (range between 7%-18%) [12-16] which is comparable to the rates reported in the literature [6,7], on the other hand 11.8% of DLE patients in alsaif study progressed to SLE [19], which is lower than the new risk of progression to SLE in patients with DLE [5], but higher than the risk in Iraqi patients [22]. The incidence of DLE in Saudi children with SLE was 3.3 % [17], which considered less frequent in this study than which was reported in the literature [23]. The mean age of onset of Saudi DLE patients was 36.5 years and female to male ratio was 1.5:1 [19-21] and this finding is comparable to those reported in the literatures [12,22,24]. Human leukocyte antigen (HLA-DQB1*3) was increased among SLE patients with skin manifestation [18] but the authors did not mention the types of skin manifestations. Only one case reported family history of DLE [19].

Scalp and face were the most area affected (42.9% and 32.1% respectively) [19-21], which is comparable to those reported in the literatures [2,4,22,25]. Atrophic form was the most common type of presentation [19], which is different than Bajaj DR Study on Pakistani patients which showed the most common type is Plaque form [25]. No report recorded about the generalized DLE in Saudi patients and this is unusual because the incidence of generalized type in Bajaj DR study was 18.2% and about 30% in Al-Hattab study [22,25]. The 16.1% of DLE patients had positive antinuclear antibody in Alsaif study and 14.3% of those patients had positive DsDNA [19] and no comment about the pattern of this reaction, this percentages are lower than the rates reported in the literatures [22,24]. The histopathology features were similar to those reported in the literatures [11,22,25]. Interesting finding in alsaif study, they found patients with disease progression had more features of lichenoid reaction, vacuolar degeneration, deep dermal and periappendageal lymphocytic infiltration and the patients who improved were older and had shorter duration of the disease compared to those who progressed [19]. This review has highlighted and evaluated the DLE disorder among Saudis and the urgent need to make prober studies to fill the gaps in DLE disease in Saudi population.

References

1. Gilliam JN, et al. (1981) Distinctive cutaneous subsets in the spectrum of lupus erythematous. J Am Acad Dermatol 4: 471-475.
2. Mahfoudh A, et al. (2010) Chronic lupus erythematosus: 104 Tunisian cases. Tunis Med 88: 742-745.
3. Walling HW, Sontheimer RD (2009) Cutaneous Lupus Erythematosus: Issues in Diagnosis and Treatment. Am J Clin Dermatol 10: 365-381.
4. Cardinali C, Caproni M, Bernacchi E, Amato L, Fabbri P (2000) The spectrum of cutaneous manifestations in lupus erythematosus-the Italian experience. Lupus 9: 417-423.
5. B.F. Chong, J. Song and N.J. Olsen (2012) Determining risk factors for developing systemic lupus erythematosus in patients with discoid lupus erythematous. Br J Dermatol 166: 29-35.
6. Gronhagen CM, Fored CM, Granath F, Nyberg F (2011) Cutaneous lupus erythematosus and the association with systemic lupus erythematosus: A population-based cohort of 1088 patients in Sweden. Br J Dermatol 164: 1335-1341.
7. Gronhagen CM, Gunnarsson I, Svenungsson E, Nyberg F (2010) Cutaneous manifestations and serological findings in 260 patients with systemic lupus erythematosus. Lupus 19: 1187-1194.
8. Moises-Alfaro C, Berrón-Pérez R, Carrasco-Daza D, Gutiérrez-Castrellón P, Ruiz-Maldonado R (2003) Discoid lupus erythematosus in children: clinical, histopathologic, and follow-up features in 27 cases. Pediatr Dermatol 20: 103-7.
9. Gilliam JN, Sontheimer RD (1981) Distinctive cutaneous subsets in the spectrum of lupus erythematosus. J Am Acad Dermatol 4 : 471-475.
10. Lin JH, Dutz JP, Sontheimer RD, Werth VP, et al (2007) Pathophysiology of cutaneous lupus erythematosus. Clinic Rev Allerg Immunol 33: 85-106.
11. Rapini RP (2012) Practical Dermatopathology. Philadelphia: Elsevier.
12. Abid N, Khan AS, Al Otaibi FH (2013) Systemic lupus erythematous (SLE) in the eastern region of Saudi Arabia .A comparative study. Lupus 22: 1529-1533.
13. Al Arfaj AS, Khalil N (2009) Clinical and immunological manifestations in 624 SLE patients in Saudi Arabia. Lupus 18: 465-473.
14. Heller M, Ahmed M, Siddigg A, Wallrauch C, Bahlas S (2007) Systemic lupus erythematosus in Saudi Arabia: morbidity and mortality in a multiethnic population. Lupus 16: 908-914.
15. Qari FA (2002) Clinical pattern of systemic lupus erythematous in western Saudi Arabia. Saudi Med J 23: 1247-1250.
16. Alballa SR (1995) Systemic Lupus in Saudi patients. Clin Rheumatol 14: 342-346.

17. Muzaffer MA, Al-Mayouf SM (2011) Clinical and laboratory variables of childhood systemic lupus erythematosus in western province of Saudi Arabia. Rheumatol Int 31: 23-26.
18. Wadi W, Elhefny NE, Mahgoub EH, Almogren A, Hamam KD, et al (2014) Relation between HLA typing and clinical presentations in Systemic Lupus Erythematosus patients in Al-Qassim region, Saudi Arabia. Int J Health Sci (Qassim) 8: 159-6.
19. Fahad M. Al-Saif, Amal O. Al-Balbeesi, Abdullah I. Al-Samary, Saleh B. Al-Rashid, Mona Halwani, et al. (2012) Discoid lupus erythematosus in a Saudi population: Clinical and histopathological study. Journal of the Saudi Society of Dermatology & Dermatologic Surgery 16: 9-12.
20. Fatani M, Hussain WM, Baltow B, Alsharif S (2014) Cutaneous horn arising from an area of discoid lupus erythematosus on the scalp. BMJ Case Rep 3: 2014.
21. Alfadly A, Al-Rayes H, Hussein W, Al-Dalaan A, Al-Aboud K (2003) Thalidomide for treatment of severe generalized discoid lupus lesions in two patients with systemic lupus erythematosus. J Am Acad Dermatol 48: S89-S91.
22. Mohammed Kadhim Al-Hattab, Al-Waiz M (2004) Discoid lupus erythematosus in Iraqi patients: a clinical and histopathological study. Ann Saudi Med 24: 289-292.
23. Platt JL, Bruke BA, Fish AJ, Kim Y, Micheal AF (1982) SLE in the first two decades of life. Am J Kidney Dis 2: 212-222.
24. Clark AS (1986) Cutaneous lupus erythematosus. Recognition of its many forms. Postgrad Med 79: 195-203.
25. Bajaj DR, et al (2010) Discoid Lupus Erythematosus: A Profile .Journal of the College of Physicians and Surgeons Pakistan 20: 361-364.