

Original article:

Study of early diagnosis of various vesiculobullous lesions of the skin using histopathology

Dr Sachin Parhe*

Department of Pathology, DVVPF's Medical College & Hospital, Ahmednagar -414111.

Corresponding author*

Abstract:

Introduction: The present study was undertaken to analyze the pattern of vesiculobullous skin disorders in and around Solapur.

Material and methods: This prospective study was carried out in the Department of pathology in Dr.V.M.Govt. Medical College and Chhatrapati Shivaji Maharaj Sarvopchar Rugnalaya, Solapur. This histopathological study was carried out in collaboration with the Department of Skin and V.D. in the same institute. Detailed history, physical examination along with routine investigations were carried out. Provisional clinical diagnosis was recorded and the data was collected and described as in proforma for case study.

Results: In the present study, there was only one case of pemphigus vegetans of 70 years old female patient. No conclusion could be drawn as there is only one case. Oral lesion was present in this case. Nikolsky sign was positive. This case was diagnosed as pemphigus vulgaris. Biopsy showed changes typical of Neumann type of pemphigus vegetans.

There were two cases of IGA pemphigus in the present study. One patient was of 30 years old and another was 43 years old. Both were males.

Conclusion: All the patients of bullous pemphigoid were above 50 years of age with male predominance (m:F 3:1). Tense bullae with history of itching was seen in majority of cases.

Introduction:

The present study was undertaken to analyze the pattern of vesiculobullous skin disorders in and around Solapur.¹ A **vesiculobullous disease** is a type of mucocutaneous disease that is characterized by vesicles and bullae (i.e. blisters). Both vesicles and bullae are fluid-filled lesions, and they are distinguished by size (vesicles being less than 5–10 mm and bulla being larger than 5–10 mm, depending upon what definition is used). In the case of vesiculobullous diseases which are also immune disorders, the term *immunobullous*, is sometimes used.² In

the present study, there was only one case of pemphigus vegetans of 70 years old female patient. No conclusion could be drawn as there is only one case. Oral lesion was present in this case. Nikolsky sign was positive.

Material and methods:

This prospective study was carried out in the Department of pathology in Dr.V.M.Govt. Medical College and Chhatrapati Shivaji Maharaj Sarvopchar Rugnalaya, Solapur. This histopathological study was carried out in collaboration with the Department of Skin and V.D. in the same institute. Detailed history, physical examination along with routine

investigations were carried out. Provisional clinical diagnosis was recorded and the data was collected and described as in proforma for case study.

Selection of the patients: In this study, the patients with vesiculobullous lesions attending the outdoor of the skin department as well as those admitted in the same ward were selected.

Procedure:

When lesion was selected for biopsy the skin surface was cleaned with a spirit swab. Local anesthesia was obtained by infiltration under the lesion of 2% lignocaine solution. Adrenaline 1:1,00,000 was added to greatly reduce the bleeding. Injection was made deep in to the corium and subcutaneous tissue, e

mm to 4mm punch biopsy provided an adequate amount of tissue for diagnosis of most skin lesion.

Sometimes excisional scalpel biopsy was done. Intact vesicles or bullae was included. Biopsy specimen was kept in 10% formain for 24 hours for proper fixation. Amount of fixative solution was about 20 times the volume of the specimen.

Observations

The total number of versiculobullous disorders of the skin, during the study period from November 2003 to November 2005 were 50. The versiculobullous lesions constituted 25% of the total skin biopsies received during this period.

Table No. 1 Pemphigus Foliaceus—Clinicopathological features

Case No.	Age Yrs.	Sex	Oral Lesion	Nikolsky sign	Clinical diagnosis	Histopathological diagnosis
1	40	F	+	+	Pemphigus vulgaris	Pemphigus foliaceus
2	50	M	-	+	Pemphigus foliaceus	Pemphigus foliaceus
3	24	M	-	+	Pemphigus foliaceus	Pemphigus foliaceus
4	19	F	-	+	? Pemphigus foliaceus ? Pemphigus vulgaris	Pemphigus foliaceus
5	30	F	-	+	Pemphigus foliaceus	Pemphigus foliaceus
6	34	F	-	+	Pemphigus foliaceus	Pemphigus foliaceus

- All the patients were between 19-50 years of age with female predominance.
- Oral lesions were present in only one patient.
- Nikolsky sign was positive in all the cases.
- Clinical diagnosis of pemphigus foliaceus was suspected in 5 patients out of 6.

Table No. 2 Bullous Pemphigoid—Clinicopathological features

Case No.	Age Yrs.	Sex	Itching	Associated diseases	Clinical diagnosis	Histopathological diagnosis
1	70	M	+	Bronchial Asthma	Bullous Pemphigoid	Bullous Pemphigoid
2	50	M	+	-	Bullous Pemphigoid	Bullous Pemphigoid
3	55	F	+	Diabetes	Bullous Pemphigoid	Bullous Pemphigoid
4	60	M	+	-	Bullous Pemphigoid ? Periphigus Vulgaris	Bullous Pemphigoid

- All the patients were over the age of 50 years
- Males are affected predominately. Male to female ratio 3:1
- Clinical association of diabetes was observed in 1 case and bronchial asthma in another cases.
- Clinical diagnosis of Bullous Pamphigoid was suspected in all cases.

Table No. 3 Toxic Epidermal Necrolysis

Case No.	Age Yrs.	Sex	H/o drug ingestion	Clinical diagnosis	Histopathological diagnosis
1	27	F	For sore throat	Bullous erythema multiforme major	T.E.N.
2	28	M	K/c/o nephritic syndrome with hypertension and GTC seizures on dilantin	Bullous erythema multiforme major Going to T.E.N.	T.E.N.

- Both the patients were in third decade.
- Male and female was equally affected. Male to female ratio (1:1)
- History of drug ingestion was present in both the cases.
- Clinical diagnosis of T.E.N. was done in both the cases.

Table No. 4 Bullous Erythema Multiforme—Clinicopathological features

Case No.	Age Yrs.	Sex	H/o drug ingestion	Clinical features	Clinical diagnosis	Histopathological diagnosis
1	28	M	--	Typical targetoid lesion	Bullous erythema multiforme	Bullous erythema multiforme
2	35	F	for sore throat	Typical targetoid lesion	Bullous erythema multiforme	Bullous erythema multiforme

- Both the patients were in the adult age group with equal sex incidence (M:F – 1:1)
- History of drug ingestion for the sore throat was present in one case.
- Clinical diagnosis of bullous erythema multiforme was done in both the cases.

Table No. 5 Impetigo contagiosa

Case No.	Age Yrs.	Sex	Thick, Yellow crusts	Clinical diagnosis	Histopathological diagnosis
1	5	M	+	Impetigo contagiosa	Impetigo contagiosa
2	8	M	+	Impetigo contagiosa	Impetigo contagiosa
3	6	M	+	Impetigo contagiosa	Impetigo contagiosa

- All the cases were in the pre-school and primary school age group.
- All the three were boys
- Clinical diagnosis of impetigo contagiosa was done in all the three cases.

Table No. 6 Chicken pox—Clinicopathological features

Case No.	Age Yrs.	Sex	Clinical features	Clinical diagnosis	Histopathological diagnosis
1	8	F	Papulovesicular, dewdrop like lesions over the face, trunk and extremities	Chicken pox	Consistent with chicken pox
2	14	F	Macules and papulovesicular lesions over face trunk and upper extremities	Chicken pox	Consistent with chicken pox

- Both the patients were females younger than 14 years.
- Clinical diagnosis of chicken pox was done in both the cases.

Table No. 7 Herpes Zoster :—Clinicopathological features

Case No.	Age Yrs.	Sex	Associated diseases	Burning sensation	Clinical diagnosis	Histopathological diagnosis
1	70	M	--	+	Herpes Zoster	Herpes Zoster
2	15	M	K/c/o septic arthritis with septicemia	--	Herpes Zoster	Herpes Zoster

- Both the patients were males of which one was a elderly age.
- Clinical association of septic arthritis with septicemia (immune suppression) was seen in one case.
- Clinical diagnosis of Herpes zoster was done in both the cases

Discussion

The present study was undertaken to analyze the pattern of vesiculobullous skin disorders in and around Solapur. In the present study, there was only one case of pemphigus vegetans of 70 years old female patient. No conclusion could be drawn as there is only one case. Oral lesion was present in this case. Nikolsky sign was positive. Clinical diagnosis: This case was diagnosed as pemphigus vulgaris.

Histopathology: Biopsy showed changes typical of Neumann type of pemphigus vegetans.

IGA Pemphigus:

There were two cases of IGA pemphigus in the present study. One patient was of 30 years old and another was 43 years old. Both were males. Hodak et al 30 (1990) reported that IGA pemphigus occurs in middle aged individuals in agreement with the resent study.

Clinical Diagnosis:

Of subcomeal pustuar dermatosis was suspected in one case whereas multiple pustulosis was in the another.

H/O: Itching:

Was present in both the cases as reported by Robinson ND 60 (1999).

Histopathology:

In both the cases, biopsy sewed morphology of subcorneal pustular dermatosis type of IGA pemphigus in both cases. There is subcorneal pustule formation which contains numerous neutrophils. Differential diagnosis of sucorneal pustular dermatosis and pemphigus foliaceus were given in both the cases as immunofluorescence study was not conducted in present study to confirm the diagnosis.

Bullous Pemphigoid

Almost all the patients with bullous pemphigoid in the present study were elderly individuals which is in agreement with reports from western countries (Lever W F⁴², 1984, Kanwar A J³⁷ 1987)

Sex incidence : Males were more commonly affected (M:F--3:1)

In all the patients, disease was preceded b y prodromal phast of itching as reported by Amato D A³(1988)

Association with internal malignancy:

The association of malignant neoplasms with bullous pemphigoid has been described since beginning of this century³ (Bogrow 1909) .

However, association with internal malignancy was not observed in the present study. Similar observation were made by Stephen P (1975) and Razzaque Ahmed (1977)^{4,5}

Interestingly, associated bronchial Asthma was observed in 1 case and diabetes in one case. This may be coincidental finding as both are diseases of elderly.

Clinical diagnosis:

Diagnosis of bullous pemphigoid was suspected clinical in all the cases. Although diagnosis of pemphigus vulgaris was preferred in one patient. There were two cases of Herpes zoster in the present study, one case a 70 years old male and other case a 14 year male patient. H/o septic arthritis with septicemia leading to immunosuppression was present in 14 year male

patient. Trigger mechanisms for Herpes zoster includes trauma, stress; old age and immunosuppression⁸⁶ (Xiaowei Xu 2005) in agreement with present study.^{6,7,8}

Conclusions

Among the vesicubullous disorders pemphigus and its variants were the most common (30%). Majority of cases of the pemphigus group 63.33% were seen in the age group 21-60 years. Oral lesions and Nikolsky sign were seen in all the cases of pemphigus vulgaris, whereas oral lesions were seen in only one case of pemphigus foliaceus. However, Nikolsky sign was absent in both the cases of IgA pemphigus . All the patients of bullous pemphigoid were above 50 years of age with male predominance (m:F 3:1). Tense bullae with history of itching was seen in majority of cases.

Bibliography:

1. Amato DA, Silvestein J, Zitelli J. The prodrome of bullous pemphigoid. *Int. J. Dermatol* 1988; 27:560
2. Ambady BM, Sugathan P & Nair BKH—Pemphigus. *Ind J Dermatol Venerol* 1965; 31:239-244.
3. Arya SR, Valand AG, Krishna K—A clinicopathological study of 70 cases of pemphigus *Indian J dermatol venerol Leprol* 1999; 168-171
4. Bajaj AK Contact dermatitis in; Valia AR, Valia RG, editors *IADV L. Textbook and Atlas of Dermatology*, Bhalani Publishing House, Mumbai 1994; Vol 1, 379-418
5. Bedi BMS and Garg BR Darier's disease (clinical study of fifteen cases). *Indian J. Dermatol Veneroal Leprol* 1978; Vol 44, No. 3; 145.
6. Bogrow SL: Zur Kasuistik der. Dermatitis herpetiformis Duhring. *Arch Dermatol Syphil* 909; 98:327-334.
7. Hoffenden GP, Blen Kinsopp WK, Ring NP, Wojnarowska F & Fry L (1980). The potassium iodide patch test in dermatitis herpetiformis in relation to treatment with a gluten-free diet and dapsone. *British Jr of Dermatology* 1980; 102:313.
8. Horn TD Anhalt GJ. Histologic features of paraneoplastic pemphigus. *Arch Dermatol Aug.* 1992; 128:1091-95.