

Short Communication

Peripheral facial palsy as a complication of varicella

Sir, we report the case of an 18-year-old boy who presented in the dermatology OPD 7 days after varicella with complaints of fever, headache, weakness and numbness of right side of face along with inability to close the right eye since 3 days (**Figure 1**). On examination, the characteristic healing lesions of varicella were apparent on whole body including face. The exanthematous rash was compatible with the diagnosis of varicella, but he had not taken any treatment. There was no clinical history of associated nausea, vomiting, visual disturbances, neurological focal deficits, muscular weakness, or other symptoms suggestive of an additional central nervous system involvement. The patient denied history of ear pain, hyperacusis, decreased production of tears, or altered taste. The patient was afebrile and his vital signs were within the normal range. He had had no vesicular eruption over the external pinna, ear canal. There were no signs of otitis or mastoiditis, the pupillary reflexes were symmetrical, normal eye movements, and preserved convergence. The neurological examination showed lid lag on right side and decreased ability to close the right eye though there was no drooping of mouth. These findings were compatible with a right peripheral facial palsy developing as a neurological complication of chickenpox.

He was treated with oral valacyclovir 1g three times a day along with methylprednisolone 8mg two times a day. He was also prescribed artificial tears. On follow-up after 10 days, a complete recovery of the initial deficits and a restoration of normal functions were registered.

Varicella is a benign, highly contagious, acute, febrile, and exanthematous disease.



Figure 1 Right facial nerve palsy with healing varicella.

There is a higher risk of complications in males, smokers, pregnancy and immunodeficient individuals.¹ Neurological complications develop in up to 0.03% of the cases.² The main neurological syndromes are encephalitis, acute cerebellar ataxia, myelitis and meningitis. Among the rare neurological complications are Guillain-Barré syndrome, meningoencephalitis, ventriculitis, optic neuritis, delayed contralateral hemiparesis, peripheral motor neuropathy, Reye's syndrome, and facial palsy.² The incidence of chickenpox in adults has doubled in recent years and this recent shift in age for varicella from childhood to adulthood and adolescence has resulted in increase in complications.¹ In a study done on 60 cases with neurological complications due to chicken pox, there were 8.3% patients with facial palsy.³ Acute peripheral facial palsy may develop five days before to sixteen days after appearance of exanthem.² This peripheral neuropathy can be isolated or bilateral and can have different degrees of functional impairment.⁴ The two possible mechanisms for peripheral facial palsy in varicella are: direct nerve lesion due to direct viral toxicity or nerve damage associated with immunologically mediated inflammatory

response. The route of infection is neurogenous in the patients who had palsy after the appearance of the eruptions but is hematogenous in patients who develop the palsy before the appearance of vesicles.⁵

In conclusion, peripheral facial palsy, although rare, can be a neurological complication of varicella and should be kept in mind. There is need to focus on adults with chickenpox as they are more susceptible to complications. The antiviral treatment should be highlighted as a fundamental therapeutic measure, which can reduce the duration of symptoms and avoid possible complications following infection by the Varicella zoster virus.

References

- Abro AH, Ustadi AM, Das K, Abdou AM, Hussaini HS, Chandra FS. Chickenpox: presentation and complications in adults. *J Pak Med Assoc.* 2009;**59**:828-31.
- Yılmaz C, Çaksen H. Severe neurological complications of chickenpox: Report of four cases. Neurological complications of chickenpox. *Eur J Gen Med.* 2005;**2**:177-9.
- Shiihara H. Neurological complications of varicella-zoster virus (VZV) infection. *No To Hattatsu.* 1993;**25**:128-34.
- Rama Rao GR, Amareswar A, Kishan Kumar YH, Rani R. Isolated facial palsy in varicella. *Indian J Dermatol Venereol Leprol.* 2008;**74**:261-2.
- Ödemiş E, Türkay S, Tunca A, Karadağ A. Acute peripheral facial palsy during chickenpox in a child. *J Pediatr Neurol.* 2004;**2**:245-6.

Pooja Bains,

Department of Dermatology and Venereology,
Sri Guru Ram Das Institute of Medical Sciences &
Research, Amritsar, India

Address for correspondence

Dr. Pooja Bains, Assistant Professor,
Department of Dermatology and Venereology,
Sri Guru Ram Das Institute of Medical Sciences &
Research, Amritsar, India
Email: pjdhanwan76@gmail.com

The association between scalp involvement in psoriasis and disease severity among Iranian patients

Sir, psoriasis is a common inflammatory disease with heavy economic and psychosocial burden.¹ In the present study, we investigated the relationship between scalp involvement and disease severity.

In this study, we analysed 109 patients with chronic plaque type psoriasis referring to the dermatology clinic of Razi hospital affiliated to Tehran University of Medical Sciences. The following data were recorded: patients' demographic data, age of onset, disease duration, family history, history of nail involvement and psoriatic arthritis and disease severity. Disease severity was measured by Psoriasis Area and Severity Index (PASI).² Patients were divided in two groups based on presence or absence of scalp involvement, and the disease severity was compared between the two groups. The Institutional Review Board (IRB) of our university approved the study protocol, and informed consent was obtained from all participants.

Independent samples t-test was used to compare the means. All statistical analyses were performed using SPSS 15.0 (SPSS, Inc., Chicago, IL, USA). A P-value < 0.05 was considered statistically significant.

One hundred and nine patients with chronic plaque type psoriasis were studied. Fifty-six

Table 1 Demographic data of patients.

	<i>Patients with scalp involvement</i>	<i>Patients without scalp involvement</i>	<i>All patients</i>	<i>P value</i>
Number of patients	56 (51.4%)	53 (48.6%)	109	
Age (years)	35.3 (± 9.2)	51.1 (± 13.2)	42.9 (± 13.7)	0.001
Age of onset (years)	24.2 (± 9.1)	42.2 (± 14.1)	32.1 (± 14.3)	0.001
Duration of disease (years)	11.2 (± 9.1)	10.6 (± 10.5)	10.9 (± 9.6)	0.88
Male / female ratio	38/19	41/11	79/30	0.68
Positive family history	7 (12.5%)	15 (33.3%)	22 (21.8%)	0.36

Table 2 Comparison of PASI and other clinical characteristics between the two groups.

	<i>Patients with scalp involvement</i>	<i>Patients without scalp involvement</i>	<i>All patients</i>	<i>P value</i>
Whole body PASI score	14.7 (± 12.9)	5.7 (± 5.7)	10.4 (± 11.0)	0.02
Nail involvement	26 (46.4%)	19 (35.8%)	45 (41.3%)	0.71
Psoriatic arthritis	8 (14.3%)	8 (15.1%)	16 (14.7%)	0.94

(51.4%) patients had scalp involvement and 53 (48.6%) did not. The mean age of patients with scalp involvement in comparison to patients without scalp involvement was significantly lower (with scalp involvement 35.3 \pm 9.2 year, without scalp involvement 51.1 \pm 13.2 year; $p=0.001$).

The mean age of onset in patients with scalp involvement was 24.2 \pm 9.1 year and the mean age of onset in patients without scalp involvement was 42.2 \pm 14.1 years ($p=0.001$). The difference in male to female ratio between the two groups was not statistically significant ($p>0.05$). Also positive family history was not significantly different between the two groups ($p>0.05$). The detailed information is shown in **Table 1**.

Mean PASI score of the patients with scalp involvement was 14.7 \pm 12.9 and 5.7 \pm 5.7 in the patients without scalp involvement ($p=0.02$).

The rate of nail involvement and psoriatic arthritis were not significantly different between patients with scalp involvement and patients without scalp involvement ($p>0.05$). The detailed information is shown in **Table 2**.

According to our data, disease severity index was higher among the patients with scalp involvement. Ferrándiz *et al.*³ suggested that the early onset of disease is associated with more severe cutaneous involvement. In this study, the age of onset was significantly lower among patients with scalp involvement compared to patients without scalp involvement.

Tham *et al.*⁴ suggested a positive correlation between the prevalence of nail involvement and the presence of scalp involvement. Our findings, however, did not show any significant relationship between the two, which could be due to different characteristics of the disease in different populations.

The results of our study revealed that scalp involvement was a marker of disease severity. This could affect management plans in patients with scalp involvement.

References

1. Hazard E, Cherry SB, Lalla D, Woolley JM, Wilfehrt H, Chiou CF. Clinical and economic burden of psoriasis. *Manag Care Interface*. 2006;**19**:20-6.
2. Fredriksson T, Pettersson U. Severe psoriasis -- oral therapy with a new retinoid. *Dermatologica*. 1978;**157**:238-44.

3. Ferrándiz C, Pujol RM, García-Patos V, et al. Psoriasis of early and late onset: a clinical and epidemiologic study from Spain. *J Am Acad Dermatol*. 2002;**46**:867-73.
4. Tham SN, Lim JJ, Tay SH, Chiew YF, Chua TN, Tan E *et al*. Clinical observations on nail changes in psoriasis. *Ann Acad Med Singapore*. 1988;**17**:482-5.

Seyedeh Zahra Ghodsi, Zahra Hallaji, Iraj Shekari, Arash Shekari, Maedeh Sharifian

Department of Dermatology, Razi Hospital, Tehran University of Medical Sciences, Tehran, Iran

Address for correspondence

Seyedeh Zahra Ghodsi

Department of Dermatology, Razi Hospital, Tehran University of Medical Sciences, Tehran, Iran