

# Varicella Zoster Cranial Polyneuropathy Presenting With Dysphagia, Esophagitis and Gastroparesis

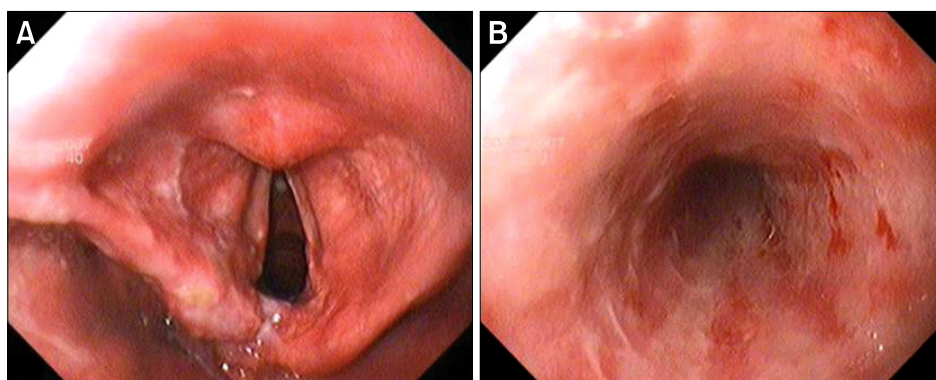
Maneesh Paliwal,<sup>1</sup> Kallambella Susheelendra Prasanna,<sup>1</sup> Vivek A Saraswat,<sup>1</sup> Asha Misra,<sup>1</sup> Narendra Krishnani<sup>2</sup> and Uday C Ghoshal<sup>1\*</sup>

Departments of <sup>1</sup>Gastroenterology and <sup>2</sup>Pathology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India

We present an immunocompetent patient with herpes zoster, multiple cranial nerves paralysis and persistent dysphagia, which is rarely reported.<sup>1,2</sup>

A 50-year male presented with absolute dysphagia, odynophagia, nasal regurgitation, hoarseness of voice and painful eruptions on left ear for 10 days and fever and cough for 5 days. Examination revealed vesicular rash on left ear and oropharynx, crepitations in the chest, left infra-nuclear facial, glossopharyngeal and vagus nerve palsy.

Investigations: hemoglobin 13 g/dL, total lymphocyte count  $2.9 \times 10^6/\text{mm}^3$  (85% neutrophils). Liver and kidney function tests and glucose were normal. Chest X-ray revealed pneumonia, blood, sputum culture and HIV serology were negative. Upper endoscopy revealed right-ward deviation of uvula, left vocal cord palsy, whitish vesicular lesions over oropharynx and vocal cords and circumferential ulceration of esophagus (Fig. 1). Esophageal tissue revealed intra-nuclear inclusion bodies on Tzanck smear (Fig. 2), acute inflammatory exudates on biopsy and negative



**Figure 1.** Upper gastrointestinal endoscopy showing, (A) ulceration in laryngopharynx and (B) circumferential ulcers in the esophagus.

Received: March 25, 2011 Revised: April 11, 2011 Accepted: April 11, 2011

© This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

\*Correspondence: Uday C Ghoshal, MD, DNB, DM, FACC

Additional Professor, Department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Raebareli Road, Lucknow 226014, India

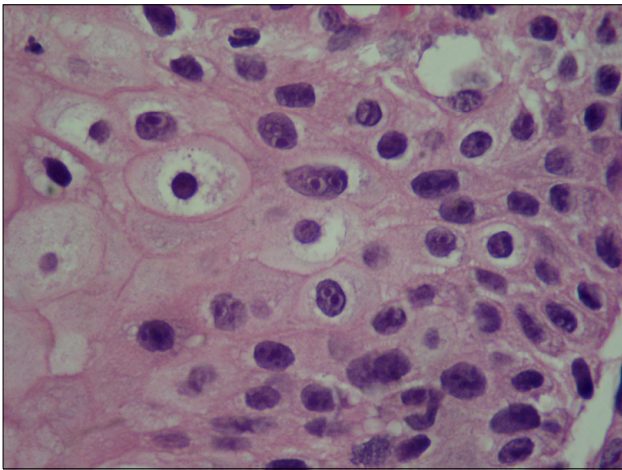
Tel: +91-962-8842456, Fax: +91-522-440017 (or 440078), Email: udayghoshal@gmail.com

Financial support: None.

Conflicts of interest: None.

Varicella zoster virus culture.

Intravenous acyclovir (10 mg/kg 8 hourly for 10 days), antibiotics and parental nutrition were started. Hoarseness and dysphagia persisted. Endoscopy repeated on the seventh day revealed mild erythema without any vesicle or ulceration; intra-nuclear inclusions with minimal inflammation persisted in biopsy. Esophageal manometry (water perfusion system, Redtech,

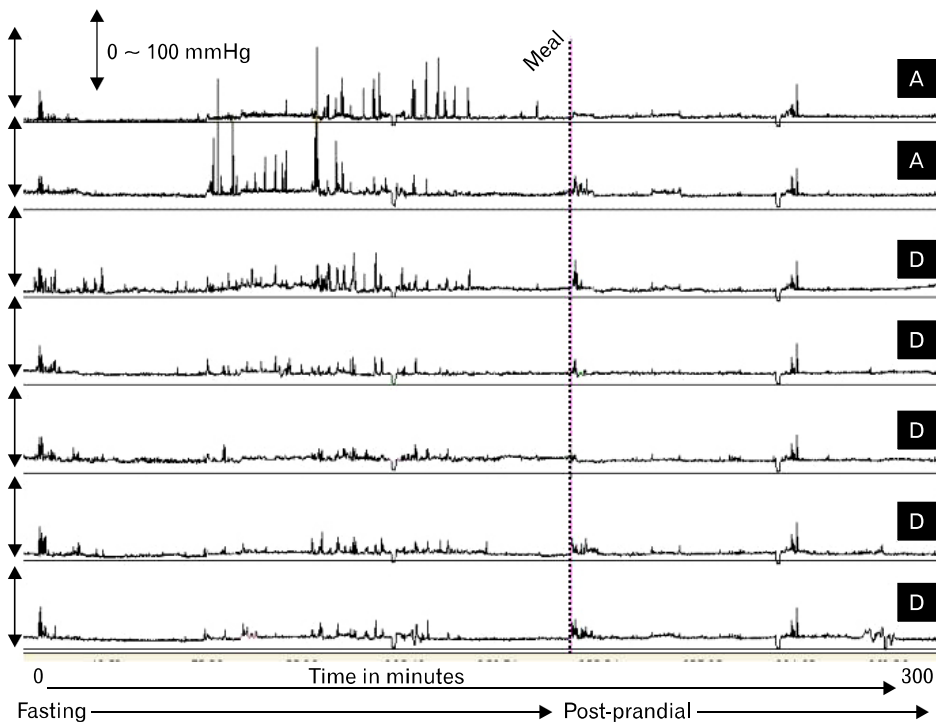


**Figure 2.** Tzanck smear from crushed esophageal tissue showing revealed intra-nuclear inclusion bodies (H&E,  $\times 400$ ).

Calabasas, CA, USA) in second week revealed hypomotility.

On the third week, percutaneous endoscopic gastrostomy (PEG) was done. Patient complained of epigastric pain, early satiety and vomiting on PEG feeds, raising a suspicion of gastroparesis. Nuclear scan was not feasible. Antroduodenal manometry (Redtech) revealed fasting antral, duodenal hypomotility and failure of conversion to fed pattern (Fig. 3), for which metoclopramide was added and diet was appropriately modified. He tolerated feeds without vomiting. He gained 3 kg weight, symptoms improved and cranial nerve palsy recovered on 3-month follow-up.

In immunocompetent patients, reactivated varicella zoster virus spreads into proximal nerve roots adjacent to dorsal root ganglia, causing neuritis or plexitis.<sup>3</sup> Cranial neuritis can cause nerve palsy.<sup>4</sup> Although esophagobronchial fistula has been reported in a patient with acquired immunodeficiency syndrome and herpes zoster,<sup>5</sup> severe esophageal involvement has not been described previously in immunocompetent individual. Prolonged dysphagia has been reported previously in a patient with polycranial involvement by herpes zoster virus.<sup>2</sup> Gastroparesis in our patient was documented by antroduodenal manometry that revealed lack of conversion of fasting to fed pattern on standard meal suggesting vagal neuropathy due to possible neuritis caused by this neurotropic virus.



**Figure 3.** Antroduodenal manometry tracing showing fasting antral and duodenal hypomotility along with failure of conversion to fed pattern, suggestive of gastroparesis. A denotes antral port and D denotes duodenal port.

## References

1. Nishioka K, Fujishima K, Kobayashi H, Mizuno Y, Okuma Y. An extremely unusual presentation of varicella zoster viral infection of cranial nerves mimicking Garcin syndrome. *Clin Neurol Neurosurg* 2006;108:772-774.
2. Maeda A, Shiojiri T, Tsuchiya K, Watabiki S. [A case of multiple cranial nerve palsy with severe dysphagia due to herpes zoster infection.] *Rinsho Shinkeigaku* 1992;32:524-526. [Japanese]
3. Fabian VA, Wood B, Crowley P, Kakulas BA. Herpes zoster brachial plexus neuritis. *Clin Neuropathol* 1997;16:61-64.
4. Gilden DH, Kleinschmidt-DeMasters BK, LaGuardia JJ, Mahalingam R, Cohrs RJ. Neurologic complications of the reactivation of varicella-zoster virus. *N Engl J Med* 2000;342:635-645.
5. Moretti F, Uberti-Foppa C, Quiros-Roldan E, Fanti L, Lillo F, Lazzarin A. Oesophagobronchial fistula caused by varicella zoster virus in a patient with AIDS: a unique case. *J Clin Pathol* 2002; 55:397-398.