

Retraction Notice

Title of retracted article: A rare presentation of silent gastric perforation in quadriplegic patient

Author(s): Suryapratap Singh Tomar*, Saranjeet Singh Bedi, Akheel Mohammad

* Corresponding author. Email: dr.suryapratap_singh_tomar@yahoo.com

Journal: Open Journal of Clinical Diagnostics (OJCD)

Year: 2013

Volume: 3

Number: 2

Pages (from - to): 30-32

DOI (to PDF): <http://dx.doi.org/10.4236/ojcd.2013.32007>

Paper ID at SCIRP: 33582

Article page: <http://www.scirp.org/journal/PaperInformation.aspx?PaperID=33582>

Retraction date: 2016-5-3

Retraction initiative (multiple responses allowed; mark with **X**):

- ☒ All authors
- ☐ Some of the authors:
- ☒ Editor with hints from
- Journal owner (publisher)
- Institution:
- Reader:
- Other:

Date initiative is launched: 2016-5-3

Retraction type (multiple responses allowed):

- ☐ Unreliable findings
- Lab error Inconsistent data Analytical error Biased interpretation
- Other:
- ☐ Irreproducible results
- ☐ Failure to disclose a major competing interest likely to influence interpretations or recommendations
- ☐ Unethical research
- ☐ Fraud
- Data fabrication Fake publication Other:
- ☐ Plagiarism ☒ Self plagiarism ☐ Overlap ☐ Redundant publication *
- ☐ Copyright infringement ☐ Other legal concern:
- ☐ Editorial reasons
- Handling error Unreliable review(s) Decision error Other:
- ☐ Other:

Results of publication (only one response allowed):

- ☐ are still valid.
- ☒ were found to be overall invalid.

Author's conduct (only one response allowed):

- ☐ honest error
- ☐ academic misconduct
- ☒ none (not applicable in this case – e.g. in case of editorial reasons)

* Also called duplicate or repetitive publication. Definition: "Publishing or attempting to publish substantially the same work more than once."

History

Expression of Concern:

☐ yes, date: yyyy-mm-dd

X no

Correction:

☐ yes, date: yyyy-mm-dd

X no

Comment:

The paper does not meet the standards of "Open Journal of Clinical Diagnostics".

This article has been retracted to straighten the academic record. In making this decision the Editorial Board follows [COPE's Retraction Guidelines](#). Aim is to promote the circulation of scientific research by offering an ideal research publication platform with due consideration of internationally accepted standards on publication ethics. The Editorial Board would like to extend its sincere apologies for any inconvenience this retraction may have caused.

Editor guiding this retraction: Dr. Natalia Bizunok (EiC, OJCD)

A rare presentation of silent gastric perforation in quadriplegic patient

Suryapratap Singh Tomar^{1*}, Saranjeet Singh Bedi², Akheel Mohammad³

¹Department of Neuro, Trauma and Spine Surgery, Narayana Medical College and Hospital, Nellore, India

²Department of Neurology, Narayana Medical College and Hospital, Nellore, India

³Department of Cranio-Maxillofacial Surgery, Narayana Medical College and Hospital, Nellore, India

Email: dr.suryapratap_singh_tomar@yahoo.com

Received 26 April 2013; revised 31 May 2013; accepted 10 June 2013

Copyright © 2013 Suryapratap Singh Tomar *et al.* This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Traumatic cervical spinal cord lesions are highly susceptibility to produce life threatening complications like respiratory failure, cardiac failure and gastrointestinal complications. We are presenting a case of traumatic cervical cord injury with quadriplegia, presented with chief complaints of constipation with abdominal distention and altered sensorium. After detailed examination and history, patient diagnosed as case of post traumatic cervical spine with incidental finding of gastric perforation and managed surgically in emergency.

Keywords: Gastric Perforation; Cervical Spinal Cord Injury; Viscus Perforation

1. INTRODUCTION

Gastrointestinal complications after acute spine injury are not uncommon but misdiagnosed and frequently lethal. Cervical spine cord injury (CSCI) affects the physiology of the gastrointestinal system [1]. Gastric motility changes in cervical spine injury because of dissociation of duodenal motility with manifestation of autonomic dysreflexia [2]. Surgical and medical treatment of traumatic spinal cord injury is well proved in literature but it may present with complication like perforation of hollow viscus due to stasis of gastric acid, disruption of mucosal and bicarbonate barrier and bacterial overgrowth [3].

2. CASE HISTORY

A 60 years old male was admitted in the ward as follow-up with the chief complaints of traumatic quadriplegia of two weeks duration. He was bedridden for last

3 years with urinary catheter. His general and systemic examination was unremarkable.

Neurologically, higher mental functions and cranial nerve examination were normal. There was hypotonia in all limbs. He had sensory loss below C4-5 and power grade was 1/5. Deep tendon reflexes were mildly decreased. Babinski signs were positive bilaterally.

X-ray cervical spine was normal. MRI cervical spine showed traumatic cord compression (C3-5 level) with signal intensity changes. His baseline blood investigations were within normal limit.

Patient was managed conservatively and was on NSAID'S, Baclofen with low dose steroid.

After 24 hr of admission in hospital, patient developed hypotension, feeble pulse and weakness. He was drowsy but arousable. Per abdomen examination reveals mild distension and chest examination was normal. Based on these findings, spinal shock was suspected and medical management with proton pump inhibitors, steroid and intravenous fluid started. The patient gradually became alert, pulse and blood pressure became normal.

After 48 hours, he developed massive abdominal distension. Per abdominal examination revealed distension, diffuse tenderness and rebound tenderness over the abdomen. On auscultation of abdomen, bowel sound was absent and shifting dullness was absent on percussion. Routine investigation revealed high leukocyte count with 16,800/cumm. Supine X-ray chest and abdomen were normal (**Figure 1**). Patient was unable to stand up for erect abdominal X-ray and facility of computer tomography of abdomen was not available, so we decided to proceed with abdominal X-ray in lateral decubitus, which showed free air in the peritoneal cavity (**Figure 2**). A diagnosis of perforation of hollow viscous with peritonitis, electrolyte imbalance and septicemia was made.

With all pre-operative preparation, patient underwent emergency laparotomy and a pyloric perforation was

*Corresponding author.



Figure 1. Supine X-ray abdomen appears normal.

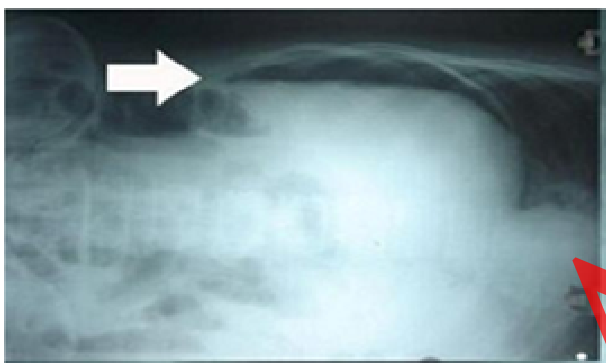


Figure 2. Abdominal X-ray in lateral decubitus reveals gas inside the peritoneum.

identified and repaired (**Figure 3**). Post operative period was uneventful and patient discharged after 10 days.

3. DISCUSSION

Patients with traumatic cervical cord lesions have increased susceptibility to develop life threatening gastrointestinal complications [1,4].

Spinal cord injury patients presents with disruption of autonomic innervation of the gastrointestinal tract [3].

The Pelvic and Vagus nerve are the source of parasympathetic innervations to the gut [2,3].

The parasympathetic nerve most of the time remains intact after cervical spine injury, but sympathetic innervations lost. This results in uncontrolled parasympathetic activity, which enhances gastric stasis, pancreatic and gastric secretions and relaxes sphincters, causing the majority of gastrointestinal complications in spinal cord injuries [3,5].

The use large-dose NSAID'S, Baclofen and steroid administration has been advocated in spine-injured patients to lessen neurologic deficits: however it can act a two-edged sword particularly in patient with spinal cord lesions [6,7].

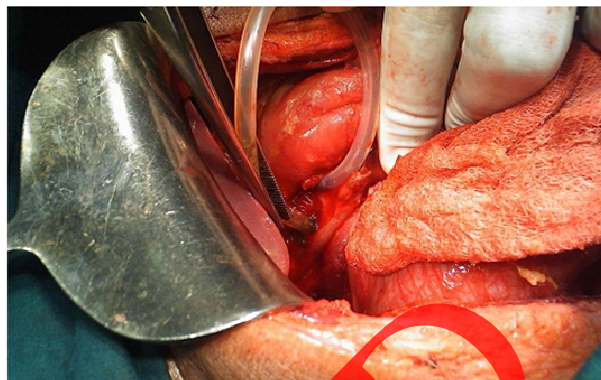


Figure 3. Intra-operative image reveals perforation in pyloric part of the stomach.

The incidence of hemorrhaging and perforating gastrointestinal lesions is higher in patients with cervical spinal cord lesions and more so in patients with complete deficits [7,8].

As in present case, to complicate the issue further, the patients with complete high cervical cord lesions can develop painless penetration, perforation, and peritonitis, with increased morbidity [8].

Present case illustrates that in the background of acute spinal cord lesion, silent, hidden and life-threatening abdominal complication can occur and the clinical manifestations may be masked by the associated neurological deficits like loss of sensation, hypotonia of abdominal muscles and associated bowel/bladder disturbance [6].

As in the literature, we recommend that a high index of suspicion and an aggressive therapeutic approach is necessary to avoid increase in morbidity [4,6].

Accurate and smart use of radiological technology and emergency surgical intervention requires in special condition like our case.

4. CONCLUSION

Life-threatening acute abdomen in the background of acute spinal cord injury or lesion is usually silent and findings may be masked either due to loss of sensation and tone of abdominal muscles or because of ongoing steroid therapy. This requires a high index of suspicion and correct basic evaluation. Quadriplegics needs a lateral view of X-ray abdomen specially after pushing 80 - 120 ml air through nasogastric tube to delineate gastric perforation. Careful use of steroid therapy is warranted for spinal shock patients. In emergency hours, definitive investigations and accurate approach can change the results of life threatening condition like hollow viscus perforation.

REFERENCES

- [1] Albert, T.J., Levine, M.J., Balderston, R.A. and Cotler,

- J.M. (1991) Gastrointestinal complications in spinal cord injury. *Spine*, **16**, S522-S525. [doi:10.1097/00007632-1991110001-00013](https://doi.org/10.1097/00007632-1991110001-00013)
- [2] Lynch, A., Antony, A., Dobbs, B. and Frizelle, F. (2001) Bowel dysfunction following spinal cord injury. *Spinal Cord*, **39**, 193-203. [doi:10.1038/sj.sc.3101119](https://doi.org/10.1038/sj.sc.3101119)
- [3] Gore, R.M., Mintzer, R.A. and Calenoff, L. (1981) Gastrointestinal complications of spinal cord injury. *Spine*, **6**, 538-544. [doi:10.1097/00007632-198111000-00002](https://doi.org/10.1097/00007632-198111000-00002)
- [4] Walters, K. and Silver, J. (1986) Gastrointestinal bleeding in patients with acute spinal injuries. *Disability & Rehabilitation*, **8**, 44-47. [doi:10.3109/03790798609166511](https://doi.org/10.3109/03790798609166511)
- [5] Charney, K.J., Juler, G.L. and Comarr, A.E. (1975) General surgery problems in patients with spinal cord injuries. *Archives of Surgery*, **110**, 1083. [doi:10.1001/archsurg.1975.01360150027005](https://doi.org/10.1001/archsurg.1975.01360150027005)
- [6] Galandiuk, S., Raque, G., Appel, S. and Polk Jr., H.C. (1993) The two-edged sword of large-dose steroids for spinal cord trauma. *Annals of Surgery*, **218**, 419. [doi:10.1097/0000658-199310000-00003](https://doi.org/10.1097/0000658-199310000-00003)
- [7] Soderstrom, C. and Ducker, T. (1985) Increased susceptibility of patients with cervical cord lesions to peptic gastrointestinal complications. *The Journal of Trauma*, **25**, 1030-1038.
- [8] Leramo, O.B., Tator, C.H. and Hudson, A.R. (1982) Massive gastroduodenal hemorrhage and perforation in acute spinal cord injury. *Surgical Neurology*, **17**, 186-190. [doi:10.1016/0090-3019\(82\)90273-7](https://doi.org/10.1016/0090-3019(82)90273-7)

RETRACTED