ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 11, Issue, 01, pp.260-262, January, 2019

DOI: https://doi.org/10.24941/ijcr.33835.01.2019

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

CASE REPORT

A CURIOUS CASE OF ZYGOMATICO-MAXILLARY COMPLEX FRACTURE

[1]Dr. Manoj Bhaskaran, [2]Dr. Joseph Lijo, [3]Dr. Arjun Shenoy, [4]Dr. Yash Chadha and [4,*]Dr. Himanshu Soni

[1]BDS, MDS, Head of the Unit & Director of Centre for Excellence for Fellowship in Cranio-Maxillo-Facial Trauma, Elite mission hospital, Thrissur, Kerala
[2]BDS, MDS, Consultant Maxillofacial Surgeon, Elite Mission Hospital, Thrissur, Kerala
[3] BDS, MDS, Consultant Maxillofacial Surgeon, Elite Mission Hospital, Thrissur, Kerala
[4]BDS, MDS, Fellow in Cranio-Maxillo-Facial Trauma, Elite Mission Hospital, Thrissur, Kerala

ARTICLE INFO

Article History:
Received 21st October, 2018
Received in revised form
19th November, 2018
Accepted 09th December, 2018
Published online 30th January, 2019

Key Words:

Zygomatico Maxillary complex ZMC, Pre-Herpetic neuralgia, Herpes Zoster

ABSTRACT

ZMC fractures are fairly common in a trauma setting. A maxillofacial surgeon deals with them day in and day out. They are fairly easy to diagnose with modern investigative methods like CT scan, however in the absence of CT it can be diagnosed with a PNS x-ray combined with the clinical status of the patients. Treatment methods for the same have evolved over the years, and in spite of all the literature available, ZMC fracture treatment varies from no intervention at all, to elevation of the fractured segment alone, or sometimes an extensive ORIF with one, two or three point fixation according to the preferences of the surgeon. A case of minimally displaced anterolateral and postero lateral wall of maxillary bone fracture with excruciating pain reported to the casualty with a history of 14 days old trauma. To relive pain nerve block was administered which subsided the pain. Following which there was appearance of vesicles which were unilateral, the nature of the pain and the appearance of the vesicle led to a diagnosis of Pre Herpetic Neuralgia, with classical herpes zoster infection. Although the patient in this case presented with a history of trauma, it was the detail to attention and the involvement of the multidisciplinary approach that the correct diagnosis was made, the patient treated appropriately and discharged.

Citation: Dr. Manoj Bhaskaran, Dr. Joseph Lijo, Dr. Arjun Shenoy, Dr. Yash Chadha and Dr. Himanshu Soni. **2019.** "A curious case of zygomatico-maxillary complex fracture", *International Journal of Current Research*, 11, (01), 260-262.

INTRODUCTION

Zygomatico-maxillary complex fractures are fairly common in a trauma setting. A maxillofacial surgeon deals with them day in and day out. They are fairly easy to diagnose with modern investigative methods like CT scan, however in the absence of CT it can be diagnosed with a PNS x-ray combined with the clinical status of the patients. Treatment methods for the same have evolved over the years, and inspite of all the literature available, ZMC fracture treatment varies from no intervention at all, to elevation of the fractured segment alone, or sometimes an extensive ORIF with one, two or three point fixation according to the preferences of the surgeon. Nevertheless basic guidelines and principles have been very clearly laid out and it should be followed for optimum results.
A one such simple case presented to us and the case report is as follows.

****Corresponding author:*** **Dr. Himanshu Soni,**
BDS, MDS, Fellow in Cranio-Maxillo-Facial Trauma, Elite Mission Hospital, Thrissur, Kerala

Case Report

A 24 year old male came to the casualty at 1:00am with the complaint of pain in the left zygomatico-maxillary complex region. The history revealed that he had suffered a RTA 14 days before for which he took treatment in a nearby hospital. A CT scan had been taken at the time which revealed anterior and postero-lateral wall fracture of the maxillary sinus and he was sent home with some antibiotics and analgesics. He had constant dull pain the following day but he decided to continue with the same drugs. However the pain did not come down till day 4 after RTA and he went to the same hospital, from there he was referred to an ENT surgeon. The ENT surgeon put him on an Antral regime and asked to report after 2 days. On revisit to the ENT surgeon he referred him to a neurophysicianon account of the pain which was not subsiding. There he was started on sedatives and tricyclic antidepressants and was asked to review. The patient's pain had increased on his revisit and was referred to a neurosurgeon. The neurosurgeon on examination of the CT scan and diagnosing the pain originating from the fractured maxilla referred him to us for further treatment.

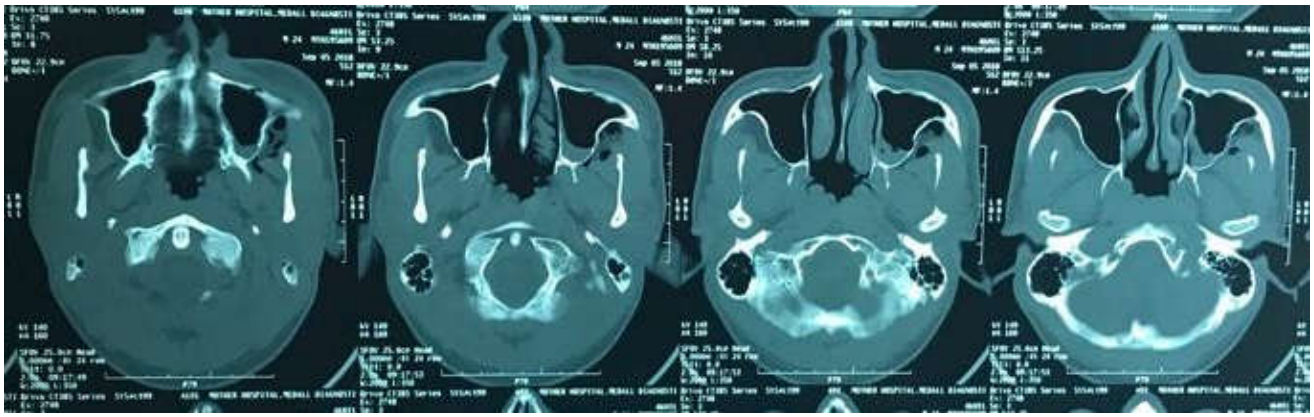

Fig. 1. CT showing left Antero and Postero-lateral wall fracture

Fig. 2A.

Fig. 2B

Fig. 2. Post antiviral drug therapy

So Now we had a patient who after 14 days of his RTA complaint of unbearable pain in the left Zygomatico-maxillary region. The patients family revealed that his pain had increased during due course of time and on VAS (Visual Analog scale) marked it as 9. The patient was unable to sleep for the past 2 days. On examination the patient was conscious but barely alert. His vitals were normal but had a pale dehydrated appearance. He had constant pain over the left ZMC region which further increased on palpation. In the immediate line of management IV fluids were started with a large bore IV cannula. Following which an Infraorbital nerve block with 2% lidocaine with adrenaline was administered. After about 15minutes the patient's pain came down and he narrated the entire proceedings with tears in his eyes as described above. The tears were an expression of gratitude for relieving him from pain as apparently no other speciality of medicine thought of giving him a nerve block. The CT scan was carefully studied and the diagnosis remained the same as a fracture of left Ant and posterolateral wall of maxillary sinus which did not require intervention [Fig 1]. The patient was admitted in our hospital and had a painless sleep. The following morning his pain returned worse than ever, the patient wanted relief from pain and we were forced to repeat the nerve block. As this not being a permanent solution our line of thinking proceeded to whether there is infraorbital nerve entrapment which was causing the pain. In our previous experience we had a case who reported with the pain in a similar region, gave history of RTA 3 months ago, CT scan showed a Malunited ZMC fracture. ORIF with osteotomy of the malunited fracture and decompression of the infraorbital nerve was done and he had immediate pain relief. Thinking in the same line we decided to go with infraorbital nerve decompression and fixation of the fractured segment if required.

We consulted our Neurosurgeon who Adviced to defer the surgery for the time being, as he was thinking that the pain was more of a headache of a vascular origin, he started him on Sumatriptan 85mg bd and tab Divalproex 500mg bd. The patient continued on the same drugs for the next day but to no avail, had hardly any relief from pain. The Neuro-physician started him on 100% oxygen. Next day morning it was noted that the patient had developed some vesicles over the same region over which he was complaining of pain earlier (Fig 2 A and B). The vesicles were small, multiple in number, tender to palpate present in the distribution of the V1 nerve. We were ecstatic, the battle had been won. Patient was started on acyclovir 800 qid, gabapentin 300 tid, shifted to the isolated ward. Patient continued on analgesics and was discharged from the hospital after 3 days uneventfully. (Fig 3)

Still can't guess the diagnosis?

The pain was Pre Herpetic Neuralgia,the vesicles were of a classical herpes zoster as has been described in the literature.

DISCUSSION

Varicella-zoster virus is one of six herpes viruses isolated from humans. The core of a typical herpes virus contains a linear, double-stranded DNA, whereas the viral capsid is icosadeltahedral and contains 162 capsomeres with a hole running down the long axis (Roizman, 1990). The varicella-zoster virus (VZV) is associated with two distinct clinical syndromes: varicella (chickenpox) and herpes zoster (shingles). Whereas varicella is a ubiquitous and highly contagious primary infection affecting the general population (especially in childhood), herpes zoster is less common endemic clinical condition that usually occurs in older and/or

immune-compromised individuals. Herpes zoster usually is manifested with a painful vesicular eruption customary limited to a single dermatome, although cases of generalized eruptions have also been observed. It does not associate to exogenous exposure but appears to be secondary to reactivation of VZV that remained latent after an earlier attack of varicella (Gelb, 1990). In general, the pathogenesis and mechanism of reactivation of herpes zoster are not well-understood. Predisposing factors associated with the appearance of herpes zoster are generally linked to compromised immune defenses (Hope-Simpson, 1952) and include Hodgkin's disease and other lymphomas, immunosuppressive therapy, trauma to the spinal cord and adjacent structures, and heavy-metal poisoning (Hope-Simpson, 1952; Head, 1990; Juel-Jensen, 1972 and Schimpff, 1972). In some instances, the host immune response is still viable enough to halt cutaneous lesions, but not the necrosis and inflammatory response in the ganglion. Such cases, known as zoster sine herpete, are characterized with radicular pain without associated skin lesions (Easton, 1970; Luby, 1977 and Gallagher, 1977). The most common complication of herpes zoster is the post-herpetic neuralgia that occurs in nearly 50% of patients 60 year and older; it has been rarely observed in patients under 40 yr. Other complications, especially in immune-compromised hosts include chronic zoster (Gallagher, 1977), and persistent CNS infection (Horten, ? and Ryder, 1986). In adults, VZV vasculopathy is reported more commonly in immune-compromised than in immune-competent individuals. Before the availability of antiretroviral therapy, CNS infection caused by VZV was detected in 1.5 to 4.4 % of autopsy cases among HIV-infected patients with documented vasculopathy (Morgello, 1988 and Gray, 1992) and leukoencephalitis; most of these cases occurred in patients with severe CD4 T cell depletion. VZV can present with or without rash and produces clinical features and imaging, and CSF abnormalities similar to those of other vasculitis. Acyclovir has been the standard therapy for VZV infections for more than a decade. However, it has a relatively short half-life and poor bioavailability necessitating the administration of high doses five times daily in order to maintain adequate plasma concentrations above the IC50 for VZV. Nevertheless, its systemic administration has been effective in reducing the severity of acute attack of herpes zoster. In immune-compromised hosts, infections owing to acyclovir-resistant VZV strains have attained some urgency creating the need for alternative antiviral therapies (Gnann, 1991 and Balfour, 1993). In general, antiviral medications have been most effective when started within 72 hours after the onset of rash. The addition of an orally administered corticosteroid can provide modest benefits in reducing the pain of herpes zoster and the incidence of post-herpetic neuralgia. Also, tricyclic antidepressants or anticonvulsants, often administered in low dosages may help in controlling neuropathic pain (Stankus, 2000).

Although the patient in this case presented with a history of trauma, it was the detail to attention and the involvement of the multidisciplinary approach that the correct diagnosis was made, the patient treated appropriately and discharged.

REFERENCES

Balfour, H. H. Jr. Current management of varicella zoster virus infections. J. Med. Virol., Suppl. 1, 74, 1993.

Easton, H. G. Zoster sine herpete causing trigeminal neuralgia. Lancet, 2, 1065, 1970.

Gallagher, J. G. and Merigan, T. C. Prolonged herpes-zoster infection associated with immunosuppressive therapy. Ann. Intern. Med., 91, 842, 1977.

Gelb, L. D., Varicella-zoster virus, in Fields Virology, 2nd ed., Fields, B. N., Knipe, D. M., Chanock, R. M., et al. Eds. Raven Press, New York, 2011, 1990.

Gnann, J. W. and Whitley, R. J. Natural history and treatment of varicella-zoster in high-risk populations. J. Hosp. Infect., 18(Suppl.), 317, 1991.

Gray F, Mohr M, Rozenberg F, Belec L, Lescs MC, Dournon E, Sinclair E, Scaravilli F (1992) Varicella-zoster virus encephalitis in acquired immunodeficiency syndrome: report of four cases. NeuropatholApplNeurobiol 18:502–514

Head, H. and Campbell, A. W. The pathology of herpes zoster and its bearing on sensory localization.Brain, 23, 353, 1900.

Hope-Simpson, R. E. Infectiousness of communicable diseases in the household (measles, chickenpox, and mumps). Lancet, 2, 549, 1952.

Horten, B., Price, R. W., and Jimenez, D. Multifocal varicella-zoster virus leukoencephalitis temporarily remote from herpes zoster. Ann. Neurol., 9, 251.

Juel-Jensen, B. W. and MacCallum, F. O. Herpes simplex, Varicella and Zoster. J. B. Lippincott, Philadelphia, 1972.

Luby, J. P., Ramirez-Ronda, C., Rinner, S., Hull, A., and Vergne-Marini, P. A longitudinal study of varicella zoster infections in renal transplant recipients. J. Infect. Dis., 135, 659, 1977.

Morgello S, Block GA, Price RW, Petito CK (1988) Varicella-zoster virus leukoencephalitis and cerebral vasculopathy. Arch Pathol Lab Med 112:173–177

Roizman, B. Herpesviridae: a brief introduction, in Fields Virology, 2nd ed., Fields, B. N., Knipe, D. M., Chanock, R. M., et al. Eds., Raven Press, New York, 1787, 1990.

Ryder, J. W., Croen, K., Kleinschmidt-DeMasters, B. K., Ostrove, J. M., Straus, S. E., and Cohn, D. L. Progressive encephalitis three months after resolution of cutaneous zoster in a patient with AIDS. Ann. Neurol., 19, 182, 1986.

Schimpff, S., Serpick, A., Stoler, B., et al. Varicella-zoster infection in patients with cancer. Ann. Intern. Med., 76, 241, 1972.

Stankus, S. J., Dlugopolski, M., and Packer, D. Management of herpes zoster (shingles) and postherpetic neuralgia. Am. Fam. Physician, 61, 2437–2444, 2447–2448, 2000.

****