Infective complications of midline destruction in a cocaine user

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DESCRIPTION

A 38-year-old man known to be a heavy cocaine user, presented to the emergency department with right orbital swelling. On examination there was evidence of ptosis, chemosis and conjunctival injection of his right eye. Other than his illicit drug use he did not have any medical issues.

On examination of his fauces an erosion of the hard and soft palate was visible (figure 1). There was no visible abscess formation or inflammation. CT was performed and palatal destruction was confirmed with no obvious signs of orbital cellulitis, so a diagnosis of preseptal cellulitis was made. During admission he was noted to be febrile at 39.1°C and he was started on ceftriaxone 2 g daily and Metronidazole 500 mg 8 hourly empirically. Septic screen was performed and Fusobacterium nucleatum was cultured from blood, this was found to be sensitive to Augmentin. Subsequently his antibiotics were downgraded to Augmentin 1.2 g 8 hourly. His condition improved after 7 days of intravenous antibiotics, with no further temperature spikes. Transthoracic echocardiography was also performed and this showed minimal mitral regurgitation with no signs of infective endocarditis. He was deemed fit for discharge and put in contact with local support groups to aid cessation of illicit drug use.

After 4 months he represented with a suspected drug overdose. He was found to be obtunded with a Glasgow Coma Scale (GCS) of 9. He was maintaining an airway spontaneously. No collateral history could be obtained at this point. On examination, he was found to be febrile at 38.9°C, with a blood pressure of 90/40 mm Hg and a pulse of 110 beats/min. A septic screen was performed and no organisms were cultured. Urgent bloods were taken and a neutrophilia of 23.95×10^9/L was established with a c reactive protein of 298 mg/L and an erythrocyte sedimentation rate of 124 mm first hour.

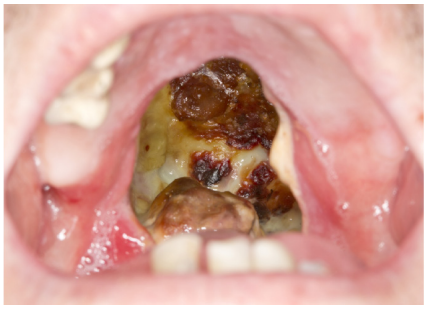

Figure 1 This image shows erosion of the hard and soft palate.

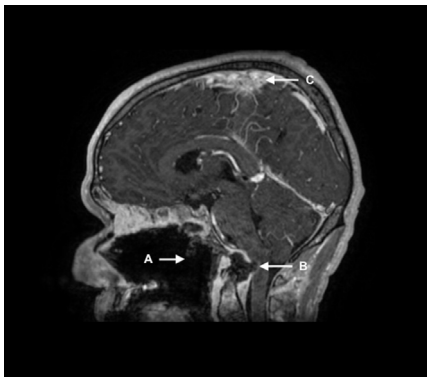

Figure 2 Sagittal contrast MRI showing a palatal defect marked (A) with soft tissue swelling and fluid collection compressing into the craniocervical junction causing myelopathy (B). An area of pachymeningitis is labelled (C).

He was started on piperacillin/azobactam 4.5 g empirically and was resuscitated with intravenous fluids.

On neurological examination he was noted to have a new right hemiplegia. He was taken for urgent MRI of his head and this showed a new fluid collection and soft tissue swelling at the craniocervical junction causing myelopathy (figure 2). Pachymeningitis was also observed.

Following the MRI result his antibiotic was switched to ceftriaxone 2 g and Metronidazole 500 mg for better penetration across the bloods brain barrier, but unfortunately he passed away shortly after.

Intranasal cocaine abuse is known to cause erosion of the palate and destruction of the mucosa.[1] Various mechanisms are postulated such as local vasoconstriction causing ischaemia, chemical irritation, trauma causing infection, impaired immunity and abnormal mucociliary transport.[2 3]

Important differential diagnosis to keep in mind in such cases are ear, nose and throat—limited Wegeners granulomatosis, midline granuloma, tumour, trauma and gumma of tertiary syphilis.[1 4]

This case highlights the importance of being vigilant when drug users present with a suspected drug overdose. Other causes of deterioration in their general condition should be explored prior to attributing a low GCS to illicit drug use. In such cases thorough history and examination is required. If available, collateral history should always be taken.

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Learning points

- Inhalation of cocaine can cause extensive destruction of the palate and nasal tissues.
- Known drug users presenting with suspected overdose should be investigated thoroughly to exclude other causes of their presentation.
- Intranasal cocaine users presenting without an obvious source of infection should have thorough examination of their palate and imaging of the head as required.

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REFERENCES

1 Goodger NM, Wang J, Pogrel MA, *et al*. Palatal and nasal necrosis resulting from cocaine misuse. *Br Dent J* 2005;198:333–4.
2 Smith JC, Kacker A, Anand VK. Midline nasal and hard palate destruction in cocaine abusers and cocaine's role in rhinologic practice. *Ear Nose Throat J* 2002;81:172–7.
3 Brembilla C, Lanterna LA, Risso A, *et al*. Craniovertebral junction instability as an extension of cocaine-induced midline destructive lesions: case report. *J Neurosurg Spine* 2015;23:159–65.
4 Rachapalli SM, Kiely PD. Cocaine-induced midline destructive lesions mimicking ENT-limited Wegener's granulomatosis. *Scand J Rheumatol* 2008;37:477–80.