Pencil In The Nose

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Citation

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Abstract

Foreign bodies in the nose are quite common especially in children. Various complications due to foreign body in the nose are reported. Penetrating injuries of the paranasal sinuses due to a foreign body are rare and usually require senior otolaryngolosist, neurosurgeon and radiologists for their management. Evaluation of the extent of injury plays a major role in planning management.

We are reporting a rare case of self-inflicted injury with a pencil. The foreign body had passed through the nasal septum and caused sphenoid sinus injury. There was also suggestion of injury to the internal carotid artery. He was surgically managed and had uncomplicated recovery.

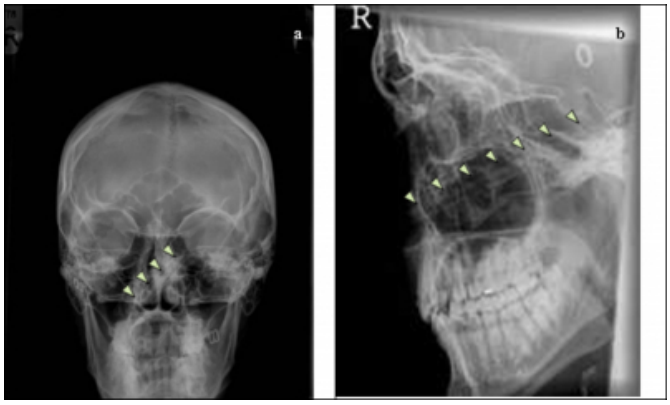
CASE REPORT

A twenty-five year old patient with a known history of depression and deliberate self-harm was brought to Accident and emergency department following an attempt to commit suicide. He had put a pencil in his right nostril and deliberately fallen on a table pushing the pencil into his nose. There was no history of bleeding from the nose or loss of consciousness. On examination the patient was alert with a GCS of 15 and was haemodynamically stable. There was no epistaxis and no CSF leak. A broken pencil shaft could be seen through the right nostril.

The initial x-ray of the paranasal sinuses taken showed part of a pencil shaft going from the right nostril through the nasal septum, the ethmoid air cells and into the left sphenoid sinus (Fig.1).

Figure 1

Figure 1 a, b: AP and lateral skull radiographs displaying a pencil shaft (arrowheads) going from the right nostril into the left sphenoid sinus.



Subsequently a CT scan done demonstrated a fluid level in the left sphenoid sinus and the tip of the pencil at the left foramen lacerum (Fig.2 & 3). A computerised CT reformat depicted that the pencil had probably penetrated the left internal carotid artery where the horizontal part of the vessel turns to the vertical part within the cavernous sinus (Fig.4).

Subsequently the patient had a CT scan, which demonstrated a fluid level in the left sphenoid sinus and the tip of the pencil at the left foramen lacerum. (Fig.2 a, b, c, d), (Fig.3).

Figure 2

Figure 2 a, b, c, d: Transverse CT scans of the head displaying the course of the pencil (arrowheads).Fluid level in sphenoid sinus (arrows). Foramen lacerum ().

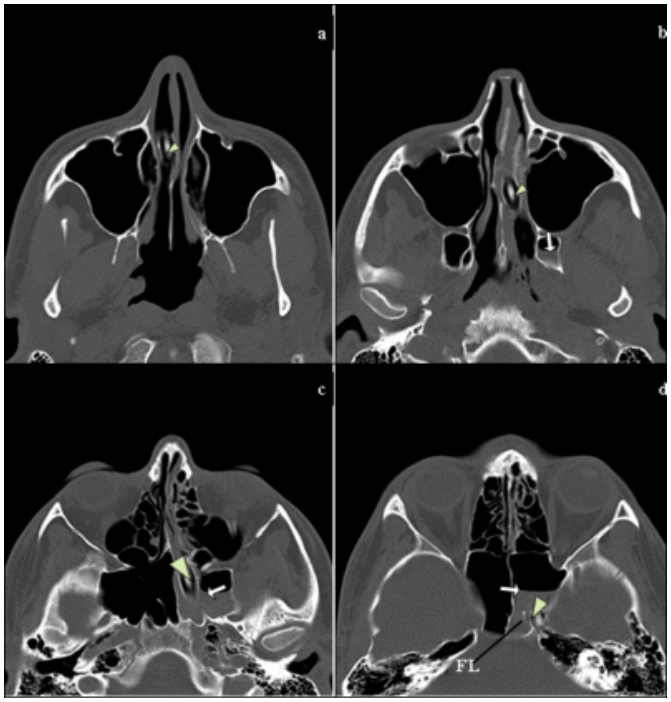
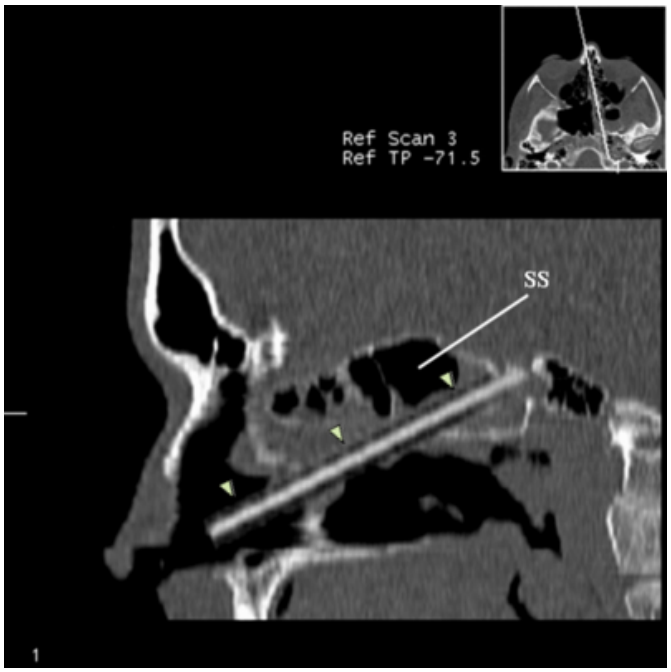


Figure 3

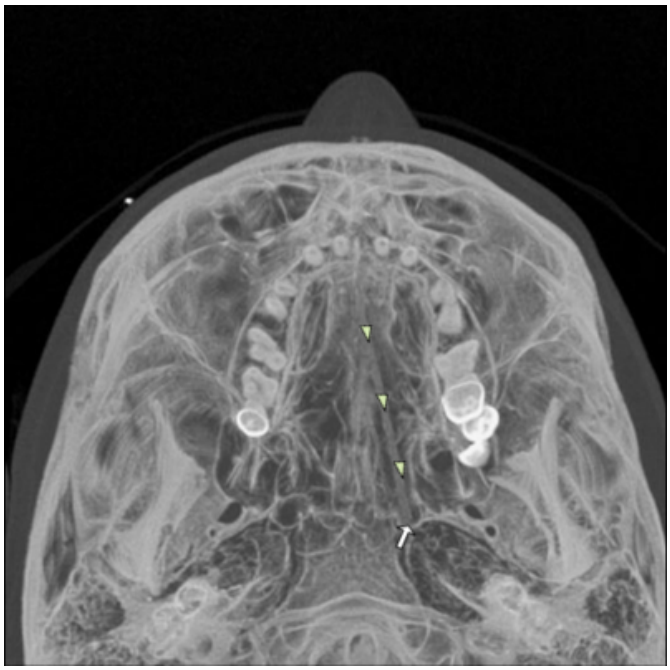
Figure 3: Reformatted sagittal oblique CT of the head showing the course of the pencil (arrowheads) from the nasal cavity, through the ethmoid air cells and into the sphenoid sinus () which contains a fluid level



A computerised CT reformat depicted that the pencil had probably penetrated the left internal carotid artery where the horizontal part of the vessel turns to the vertical part within the cavernous sinus. (Fig.4)

Figure 4

Figure 4: CT reformat shows the pencil tip at the left foramen lacerum and apparently displacing or penetrating the left internal carotid artery (arrow).

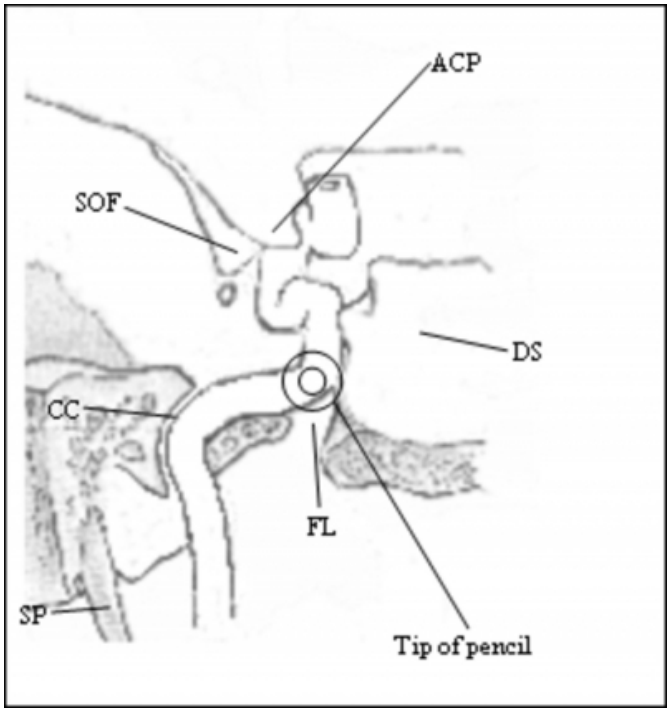


The diagram below depicts the intracranial course of the internal carotid artery and its relation to the pencil tip as assessed by the CT scan (Fig. 5).

The diagram below depicts the intracranial course of the internal carotid artery and where the tip of the pencil was in relation to that. (Fig. 5)

Figure 5

Figure 5: Diagram showing the intracranial course of the left internal carotid artery. The double circle above the foramen lacerum (FL), where the horizontal petrous part of the artery turns to the vertical cavernous part, indicates where the tip of the pencil was. (ACP) anterior clinoid process, (SOF) superior orbital fissure, (CC) carotid canal, (SP) styloid process, (FL) foramen lacerum, (DS) dorsum sellae.



It proved possible to extract the pencil in the theatre without any complication, other than minor epistaxis. There was no need for any further surgical intervention, indicating that ICA was not significantly injured.

DISCUSSION

Penetrating injuries of the paranasal sinuses are uncommon. Most cases are described in road traffic accidents or resulting from firearms. Evaluation of the extent of injury plays a major role in further management of these patients.

Penetrating injuries through the nose due to suicidal attempts are rare. We described a very uncommon presentation of a patient with history of depression and previous suicidal attempts. Initial evaluation by plain radiography was not very helpful in deciding the extent of injury and for any intracranial extension. X-rays is not a very sensitive test to identify the injury sustained and also doesn't give accurate information for further management of these patients. The use of CT scan versus plain radiographic evaluation in the position of chest tube has shown the CT was extremely accurate in evaluating the position of a chest tube and had often provided addition valuable information with significant therapeutic impact ([6]). The use of the CT in foreign body of nasal cavity has become essential in diagnosing the extent of the injury, which can be intracranial ([1]).

Three-dimensionally reconstructed images can provide accurate information which can be crucial in planning the management.

The majority of foreign bodies are seen on the plain chest radiograph. CT is helpful in demonstrating the presence of radiolucent foreign bodies and determining the exact location of the foreign bodies within the airways or lung parenchyma ([7]).

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