

Case Report

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Longstanding Multiple Pellets in Head and Neck Following Blast Injury

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Abstract

All kinds of foreign bodies have been described in most part of the body. Head injury after explosion of bomb can result in devastating functional and neurological consequences for patients. There is no consensus in the terms of removing or retaining longstanding foreign bodies such as pellets. We report a case of 55-year old male who suffered from blast injury 35-year ago. Although most of the pellets in the head and neck were still present after secondary blast injury, but there were no symptoms such as lead poisoning, foreign body reaction, recurrent infections to date except feeling of nasal blockade, cold and headache during the winter season.

Keywords: Secondary blast injury; Pellet; Lead poisoning; Foreign body reaction; Road traffic accidents; Glasgow coma scale

Introduction

Although, a number of case reports of foreign bodies in the head and neck region have been reported, various foreign bodies reported in head include metallic foreign bodies [1], wooden material [2,3], shotgun pellets [4] etc. In most of the instances, the foreign bodies were identified and removed at the time of their lodgement, but reports of longstanding asymptomatic foreign bodies have been reported rarely [5-7]. This is one such case report.

Case Report

A 55-year-old male patient was referred from orthopaedic department with complain of headache and nasal blockade after RTA. There was no history of loss of consciousness and vomiting after trauma. His vitals were stable and GCS was 15/15. He complained of occasional headache and nasal blockade beginning from the occipital region and gradually extending up to mid facial region since 5-years and cold sensation in head and neck in winter season since 20-years. A detailed history was taken and it revealed that the patient suffered from bomb blast injury about 35-years ago. Patient was advised X-Ray skull and Para nasal sinuses (Figure 1) and a CT-Scan of head (Figure 2). The CT-Scan revealed two pellets impacted in temporal and posterior cranial fossa without involvement of brain parenchyma. X-Ray skull and Para nasal sinuses revealed multiple pellets in skull and neck in deferent areas. Patient was advised for surgical intervention for posterior fossa

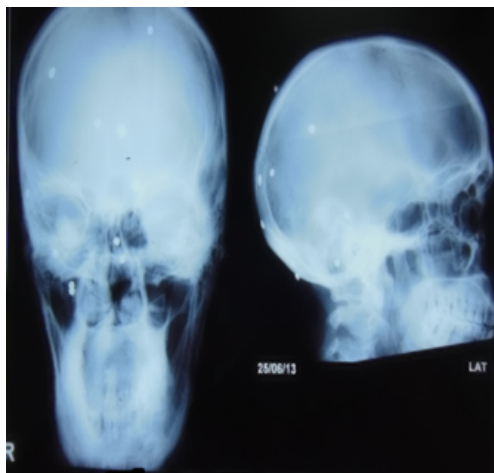


Figure 1: X-Ray skull showing pellets at multiple sites.

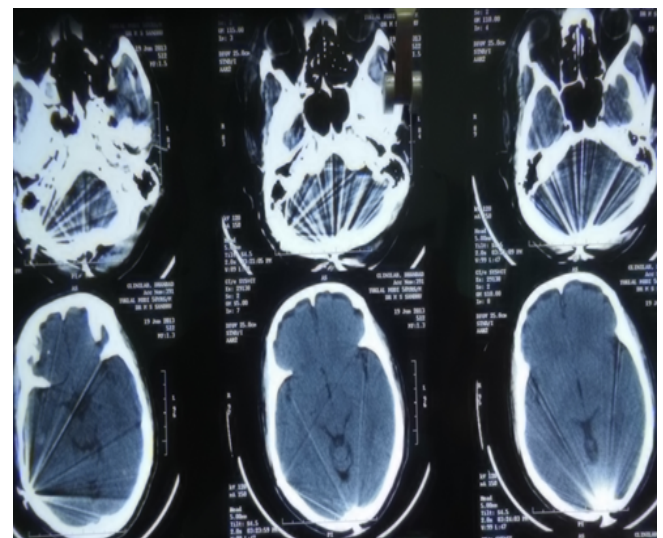


Figure 2: CT scan (Head) of the same patient showing no involvement of brain parenchyma.

and temporal impacted pellet, but he refused for operative intervention.

Discussion

The explosive blast in a conventional explosion is caused by the very rapid explosion of a mass of hot gases which cause four pattern of injury (Table 1).

1. Primary injury is caused by the blast wave itself.
2. Secondary injury is caused by the fragments of glass, masonry etc. propelled by explosion.
3. Tertiary injury caused by acceleration of part or whole body by the blast wind originated from explosion. Apart from movement of body, this will result in traumatic amputation of exposed limbs.

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Received May 02, 2015; Accepted August 10, 2015; Published August 17, 2015

Citation: Minj AP, Gurjar T, Kumar A, Chandrakant (2015) Longstanding Multiple Pellets in Head and Neck Following Blast Injury. J Clin Case Rep 5: 568. doi:10.4172/2165-7920.1000568

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Category	Injury caused by	Primary target organ
Primary blast injury	Blast wave	Ears, lungs, GI tract, CNS
Secondary blast injury	Victim struck by flying debris	Skin, CNS, eyes, musculoskeletal syst.
Tertiary blast injury	Acceleration + Impact with stationary objects	Abdominal viscera, CNS, lungs, skin
Miscellaneous	Inhalation of dust, toxic gases, burns, Radiation, psychological impact	Lungs, skin, musculoskeletal system

Table 1: Categorisation of damage caused by mode of injury.

- Miscellaneous: inhalation of dust or toxic gases, thermal burn, radiation, psychological impact, etc.

Our case was fully recovered from primary, tertiary and miscellaneous pattern of blast injury over 35-years but he had evidence and symptoms of secondary blast injury. The present case is interesting in many ways. Firstly, multiple pellets from blast injury just managed to lodge in head in the temporal region and posterior cranial fossa without extension to brain parenchyma (CT-Scan findings). X-Ray skull shows multiple pellets in head and neck which are evident in CT-Scan of head.

Secondly, the patient has been asymptomatic for almost 35-year with no evidence abscess formation [2,3] foreign body reaction and lead poisoning [8] all these years.

Thirdly, patient was remained asymptomatic for a long period with occasional headache and diffuses cold sensation in head and neck in

cold season. According to these findings, it can be suggested pellets can retain for long years without appreciable symptoms and signs, and may be left in situ without any surgical intervention. In our patient headache was probably due to irritation of dura by pellet in posterior fossa because headache started from occipital region. So, we advised him for removal of posterior fossa and temporal impacted pellet but, the patient refused operation.

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