

# Use of high pressure oxygen to remove nasal foreign body

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**Case report:** Use of an innovative and simple technique of removing foreign body from nose using high pressure oxygen is reported.

**Key Words:** High pressure oxygen, nasal foreign body, impacted slippery foreign body

## Introduction

Nasal foreign bodies are a common clinical problem seen mainly in age 2–8 year. These are mainly treated in busy accident and emergency departments, frequently without access to specialized ear, nose, throat (ENT) equipment or experience.<sup>1</sup> Common nasal foreign bodies includes beads, button, toy parts, pebble, candle wax, food, paper, cloth and button batteries.<sup>2,3</sup> Many techniques have been reported in the literature to remove nasal foreign body like inducing sneezing, use of various surgical instruments including forceps, hooks, suction catheter, Fogarty's catheter and positive pressure ventilation.<sup>4,5,6,7</sup> Impacted and slippery foreign bodies are difficult to remove. Removal procedures are often difficult in uncooperative and apprehensive children. We had similar difficult experience working in Patan Hospital Emergency and tried a simple approach using positive pressure from contralateral nose to remove nasal foreign body.

## Case

A 6 years boy was brought to Patan Hospital Emergency with history of foreign body in nose. He had inserted a pea in his right nostril. His parents had tried to remove it at home pushing it further inside. On arrival in emergency the child was very comfortable. On examination with nasal speculum only a part of foreign body was seen which was tightly impacted deep in the right nostril and could not be easily removed with a nasal probe or a nasal forceps. There was no discharge or bleeding. Since the foreign body could not be removed by conventional method and we did not have ENT specialist we tried an innovative approach.

We planned to remove the foreign body with high flow oxygen. We explained the problem and our plan to the parents and they readily agreed to give a try as it was relatively easy and harmless procedure.

The child was put on his mother's lap in sitting position with head tilted slightly backwards with mouth covered. We connected a standard oxygen delivery pipe to oxygen cylinder and put its other end on the opposite nostril that is left nostril and sealed that nostril with a pinch using a thumb. We gradually increased the oxygen flow from 4 liters per minute. When flow was at 10 liters per minute, pea popped out with force from the right nostril. It just took less than 15 seconds. On examination both nostrils were normal, no injury was noted and there was no bleeding. Bilateral ears were normal. The child was observed for 15 minutes. Child was active and had no complications and was discharged.

## Discussion

Various techniques using positive pressure to remove nasal foreign body has been reported in international journals but none have been described in detail. One is known as 'Parent's Kiss' involving blowing through the patient's mouth by the parent with the contralateral nostril occluded; it has been shown to be a safe and less invasive.<sup>(6)</sup> This technique has been tried successfully through ambu bag.<sup>(8)</sup> Positive pressure ventilation through contralateral nostril using oxygen has also been reported as alternative to restraints and instrumentation.<sup>(7)</sup> But sufficient evidence does not exist to say these techniques are superior to others.

Using the similar principal, we tried a very simple and

effective method to remove nasal foreign body in a child. But the problem with this technique is we do not know the exact mechanism that creates pressure in contralateral nostril and what pressure is required to remove different types of nasal foreign. This technique could be further improvised and applied for impacted and slippery foreign body and in uncooperative children.

## References

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