

# Nasal Alar Cleft Deformity: A Rare Complication Of Nasogastric Tube

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## Abstract

Nasogastric tube is commonly employed in various clinical situations. Although generally safe, associated complications are reported which include misplacement, mucosal trauma/abrasions and nasogastric tube syndrome. Nasal alar cleft secondary to NGT is very rare. A case of nasal alar deformity resulting from prolonged use of nasogastric tube is reported.

## INTRODUCTION

Nasogastric tubes are frequently used in the clinical setting for the management of patients. The insertion and management of NG tubes is a procedure undertaken by nurses, house officers and medical practitioners. Proper selection of the size of the nasogastric tube, assessment of position of the tube and the method of securing NG tubes are important, to minimize the risks of NG tube-related complications. A case of nasal alar deformity resulting from prolonged use of nasogastric tube is reported and possible factors discussed.

## CASE REPORT

A 18 year old male presented to the outpatient department of PGIMS Rohtak India, with a history of right alar deformity since childhood. Past history revealed that the patient had pyogenic meningitis when he was one year old. He was given parental feeding through nasogastric tube (NGT). After three weeks of NGT feeding a blackish discoloration was noted on the right ala near the midline where the NGT was in contact with ala. The nasogastric tube was removed and the discoloration subsided but a cleft of the right ala of the nose persisted. (Figure1).

## Figure 1

Figure 1: Photograph of the patient (when he was 6 year old) showing right alar deformity



Patient was advised augmentation alarplasty. After anesthetic fitness patient was posted for surgery under local anesthesia. Nasal septal cartilage was harvested and placed over the right alar cartilage after elevating the skin. Patient on follow up was satisfied with the result.

## DISCUSSION

Naso-gastric tube insertion is a common procedure in hospitals and is performed mainly for two indications – enteral feeding and gastric decompression. Although generally safe, associated complications are occasionally reported. These can occur due to NGT misplacement or

result from trauma from the NGT insertion. Potential sites of misplacement include: endotracheal and intracranial.

Misplacement within the upper gastrointestinal lumen also occurs, with coiling within the oropharynx or oesophagus.<sup>1,2,3</sup>

Traumatic complications can be due to mucosal trauma/abrasions, or from perforating injuries at insertion. Mucosal trauma can be minor, leading onto epistaxis and sore throats or more catastrophic (particularly in long-term placements), such as oesophago-arterial fistulas, and nasogastric tube syndrome. Perforation can occur partially, with submucosal insertion or with oesophageal or gastric perforation resulting in complications like mediastinitis, or pneumothorax.<sup>1</sup>

There are recognized conditions which predispose to these complications, in which NGT are contraindicated. Recent mid-facial trauma or surgeries (with the associated risk of intracranial insertion) are total contraindications. Double aortic arch is a rare vascular congenital abnormality in which a vascular ring surrounds bronchus and esophagus any oral or nasal intubation can physically cause fatal aorto-oesophageal fistula (AEF) in such cases. Abnormal oesophageal anatomy may also complicate insertion – the presence of strictures or diverticulae are relative contraindications. Further abnormalities such as tracheo-oesophageal fistula predispose to tracheal misplacement.<sup>1,4</sup>

Nasogastric tubes are associated with various nasal complications. Sinusitis is common with NGT and it should be ruled out as a cause of infection in febrile intensive care patients with an indwelling nasal tube.<sup>5</sup> Epistaxis can result from local mucosal trauma or more sinister pathology.

Selcuk et al reported a case of pseudoaneurysm of an anterior ethmoidal branch of the left ophthalmic artery in a patient presenting with persistent epistaxis for 20 days that had started 2 weeks after removal of a nasogastric tube placed for an abdominal operation.<sup>6</sup> Pressure necrosis of the nasal tip or ala can rarely occur secondary to NGT. Salati and Rather reported cleft deformity of nasal tip in an infant caused by pressure necrosis of nasal tip due to prolonged use of the nasogastric tube.<sup>7</sup> The present case of nasal alar cleft secondary to NGT to best of our knowledge is second case reported, and the first case being treated by augmentation alarplasty. These cases warrant that the NGT should be secured in such a way so as not to cause any pressure over the nose.

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