

INTRODUCTION

Cocaine abuse, particularly when snorted, is associated with vasoconstriction- induced ischemia and necrosis of the nasal septum and palate.^{1,2} The incidence of nasal septum perforation – the most common adverse effect in cocaine users – is reported to be 4.8%.³ Chronic abuse may lead to oro-antral and oro-nasal defects, causing hypernasal speech, nasal air escape, dysphagia, and ultimately reduced quality of life.¹ Despite known risks, relapse remains high – up to 20-50% of individuals relapsing within the first year of treatment – complicating both prosthodontic and surgical management.⁶ The authors will present a series of three patient treatments involving cocaine abuse to highlight the essential role of Prosthodontists in assessment, diagnosis, prosthetic rehabilitation, and patient education throughout treatment.

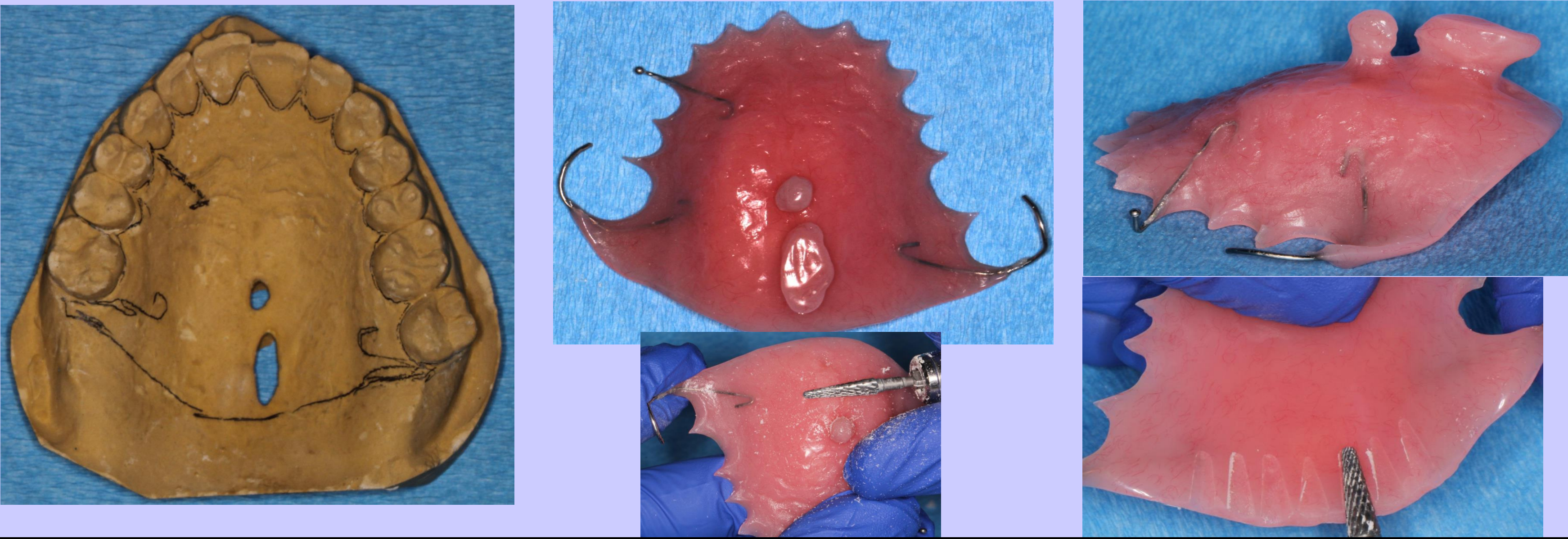
PATIENT PRESENTATION

Patient 1: Presented with an Aramany Class III defect and extraoral right nasal defect with intact maxillary dentition.



TREATMENT

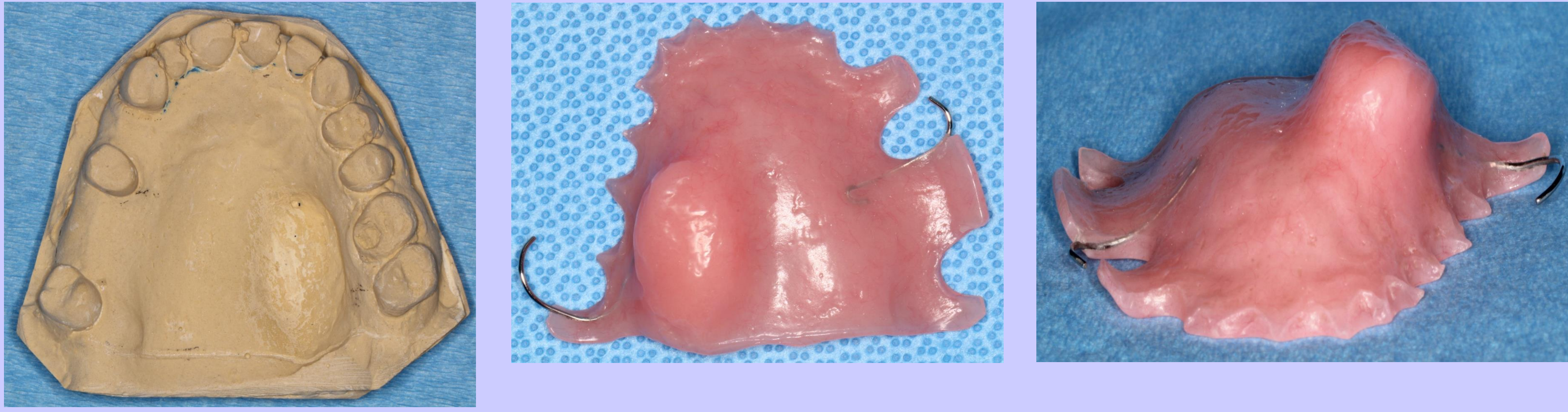
Preoperative impression made with irreversible hydrocolloid in stock tray. Obturator designed with clasps on #2, #12, #13 #15 designed on master cast. Processed base fabricated on duplicate cast and verified on master cast. Extensions into defect modified to ensure full seat of prosthesis. Acrylic resin relieved as not to violate space of Donder. Oral-naso defect to be manage once patient is habit free for at least 18 months.⁹



Patient 2: Presented with an Aramany Class III defect, extraoral left nasal defect, and partial edentulism with missing teeth #3 and #5.



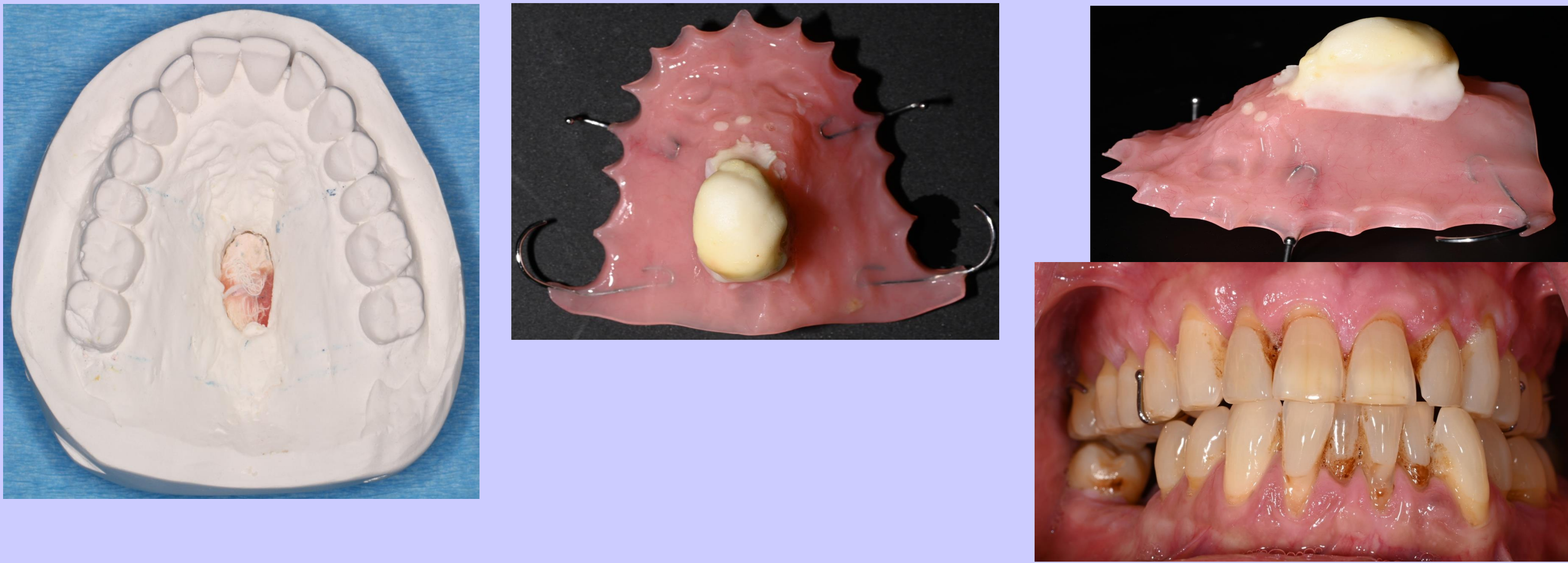
Preoperative impression made with irreversible hydrocolloid. Obturator designed with clasps on #4 and #15. Processed base fabricated on duplicate cast and verified on master cast. Minimal adjustments made on obturator . Oral-naso defect to be managed once patient is habit free for at least 18 months.⁹



Patient 3: Initially presented with an Aramany Class III defect with intact dentition; an obturator was fabricated and delivered. After failing all follow-ups appointments, patient returned one year later with an enlarged defect encroaching onto soft palate.



Preoperative impression made with irreversible hydrocolloid. Obturator with clasps on #2,#4,#5,#12,#13, #15 designed on master cast. Processed base fabricated on duplicate cast and verified on master cast. Extension into defect had to be relined with Coe-Comfort.



MANAGEMENT SUMMARY

1. Patient Counseling: refer to appropriate health care professional to curb habit
2. Surgical Management
 - Oro-antral surgical repair
 - Local approach: reverse mucosal flap^{7,8}, rotational flap^{7,8}, bilateral peidclcd musoperiosteal flap^{7,8}
 - Regional approach: temporalis muscle flap^{7,8}, dorsal pedicled tongue flap^{7,8}
 - Distant approach: radial forearm free forearm⁹, fibula flap¹⁰
 - Oral-nasal
 - Rhinoplasty²
 - Forearm radial free flap⁹
3. Obturator Management
4. Compliance challenges related to continue drug abuse
 - Psychological issues¹⁰
 - Depression
 - Denial
 - Self-Awareness & Cognition deficits^{11,12}
 - Apathy: lack of motivation, loss of energy interest & blunted affective expression
 - Disinhibition: behavioral self-regulation (problems with inhibitory control, emotion regulation and socially inappropriate behavior)
 - Executive dysfunction: deficits planning, goal setting & flexibility
5. Coding
 - Medical Diagnosis Code: M87.180: Osteonecrosis of jaw due to drugs
 - Interim Obturator Prosthesis Code: 21079, D5936
 - Definitive Obturator Prosthesis Code: 21080, D5932

CONCLUSIONS

Managing cocaine-induced palatal defects requires a multi-disciplinary approach of prosthodontic strategies, patient compliance, and an understanding of relapse behavior. Surgical closure is often contraindicated or delayed due to ongoing drug use or high relapse risk, emphasizing the critical role of prosthetic intervention. Behavioral relapse also poses risks of reinjury and prosthesis loss, reinforcing the need for regular follow-up with the management team.

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