SCIENCE CITATION INDEX EXPANDED JOURNAL LIST

Search terms: JOURNAL OF CRANIOFACIAL SURGERY
Total journals found: 1

1. JOURNAL OF CRANIOFACIAL SURGERY

Bimonthly ISSN: 1049-2275
LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, USA, PA, 19106-3621

1. Science Citation Index
2. Science Citation Index Expanded
3. Current Contents - Clinical Medicine

functional results because concomitant surgery may delay vigorous postoperative physical therapy, which is mandatory to prevent reankylosis. In our department, we prefer a staged treatment because we believe that it can achieve optimal aesthetic and functional results.

REFERENCES

1. Schmelzeisen R, Gellrich NC, Schramm A, et al. Navigation-guided resection of temporomandibular joint ankylosis promotes safety in skull base surgery. *J Oral Maxillofac Surg* 2002;60:1275–1283
2. El-Sheikh MH, Medra AM. Management of unilateral temporomandibular ankylosis associated with facial asymmetry. *J Craniomaxillofac Surg* 1997;109:15
3. Rowe NL. Ankylosis of the temporomandibular joint. Part 2. *J R Coll Surg Edinb* 1982;273:167–173
4. He D, Ellis E 3rd, Zhang Y. Etiology of temporomandibular joint ankylosis secondary to condylar fractures: the role of concomitant mandibular fracture. *J Oral Maxillofac Surg* 2008;66:77–84
5. Matsura H, Miyamoto H, Ogi N, et al. The effect of gap arthroplasty on temporomandibular joint ankylosis: an experimental study. *Int J Oral Maxillfac Surg* 2001;30:431–438
6. Kaban LB, Perrott DH, Fisher K. A protocol for management of temporomandibular joint ankylosis. *J Oral Maxillofac Surg* 1990;48:1145–1151
7. Moorthy AP, Finch LD. Interpositional arthroplasty for ankylosis of the temporomandibular joint. *Oral Surg* 1983;55:545–552
8. Meherotra D, Paradhan R, Mohammad S, et al. Random control trial of dermis-fat graft and interposition of temporalis fascia in the management of temporomandibular ankylosis in children. *Br J Oral Maxillofac Surg* 2008;46:521–526
9. Roychoudhury A, Parkash H, Trikha A. Functional restoration by gap arthroplasty in temporomandibular joint ankylosis. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1999;87:166–175
10. Manganello-Souza LC, Mariani PB. Temporomandibular Joint ankylosis: report of 14 cases. *Int J Oral Maxillofac Surg* 2003;32:24–33
11. Kwon TG, Park HS, Kim JB, et al. Intraoral staged surgical treatment for temporomandibular joint ankylosis: distraction after temporalis muscle flap reconstruction. *J Oral Maxillofac Surg* 2006;64: 1680–1683

Successfully Treated Massive Epistaxis in a Patient With Internal Carotid Artery Pseudoaneurysm

Fatih Buyukcam, MD, Feruza Turan Sonmez, MD, Kemal Aydin, MD

Abstract: Approximately 60% of the adult population experience at least 1 episode of epistaxis in their lifetimes. Because the blood supply of the nasal mucosa ultimately originates from the carotid arteries, acute epistaxis is potentially very serious. Sudden and massive epistaxis is usually fatal, and it is one of the most dreaded complications after radiotherapy (RT) among patients with cancer of the head and neck region. To the best of our knowledge, few patients who are alive have been presented with massive epistaxis due to ruptured internal carotid artery pseudoaneurysm associated with RT in the literature. Herein, we reported a successfully treated massive epistaxis case of ruptured internal carotid artery pseudoaneurysm associated with RT in a patient who has nasopharyngeal carcinoma.

Key Words: Epistaxis, nasopharyngeal carcinoma, radiotherapy, endovascular treatment

Nearly 60% of patients experience at least 1 episode of epistaxis in their lifetimes.[1] Massive nasal bleeding is usually fatal, particularly when it occurs in the nasopharynx, and it is one of the most dreaded complications after radiotherapy (RT) among patients with nasopharyngeal carcinoma (NPC).[2] Rupture of irradiated great vessels is an uncommon complication, and it tends to occur in the carotid artery in patients with cancer of the head and neck.[3] Few patients who are alive have been presented with massive epistaxis due to ruptured internal carotid artery pseudoaneurysm associated with RT in the literature. We reported a successfully treated massive epistaxis case of ruptured internal carotid artery pseudoaneurysm associated with RT in a patient who has NPC.

CLINICAL REPORT

A 47-year-old man complaining with repetitive nasal bleeding was admitted to our hospital. He had a history of NPC and had been treated with conventional radiotherapy for 45 days 8 years ago. Seven years later, he had received another 5-day course of radiotherapy because of local recurrence. He did not have any history of head and neck trauma. He had no other chronic medical disease or long-standing medication. On admission to our department, results of the physical examination was as follows: blood pressure of 120/80 mm Hg, pulse rate of 76/min, and nasal bleeding. Initial hemoglobin (Hb) level was 11.1 g/dL and platelet count was 547,000/μL; other blood test results were normal as well as coagulation profile. Anterior and posterior nasal packages were performed for epistaxis, and the patient was hospitalized in the emergency department for follow-up. After 5 hours, Hb level was decreased to 9.3 g/dL. Twelve hours after the initial approach, massive nasal bleeding emerged. Meanwhile, blood pressure was 70/30 mm Hg and pulse rate was 120/min. The patient was stabilized by continuous aspiration of oral cavity and massive intravenous serum physiologic infusion. At the same time, we compressed with packages to the anterior and posterior regions of the nasopharynx. Nasal thrombus was aspirated from the nasal cavity, and direct cauterization was performed. After stabilization of the patient, cervical magnetic resonance imaging showed a mass that destructed the skull base, occipital condyle, C1 vertebra, and clivus. Lateral pharyngeal recess and torus tubarius were eroded by the mass that also invaded the left carotid cavity. Within 5 hours, hemorrhagic shock developed, and the patient was intubated and connected to the mechanic ventilator. A digital subtraction angiograph showed large wall defect and high-flow extravasation of the left internal carotid artery at skull base localization, and a pseudoaneurysm 17 mm in length and 10 mm in diameter was present at the distal segment of left internal carotid artery on the nasopharyngeal level (Fig. 1). Balloon occlusion was performed to the distal

From the Department of Emergency Medicine, Diskapi Yildirim Beyazit Training and Education Hospital, Ankara, Turkey.
Received January 7, 2010.
Accepted for publication March 12, 2010.
Address correspondence and reprint requests to Fatih Buyukcam, MD, Department of Emergency Medicine, Diskapi Yildirim Beyazit Training and Education Hospital, Ankara, Turkey; E-mail: fatihbuyukam@gmail.com
The authors report no conflicts of interest.

ISSN: 1049-2275
DOI: 10.1097/SCS.0b013e3181e1e834

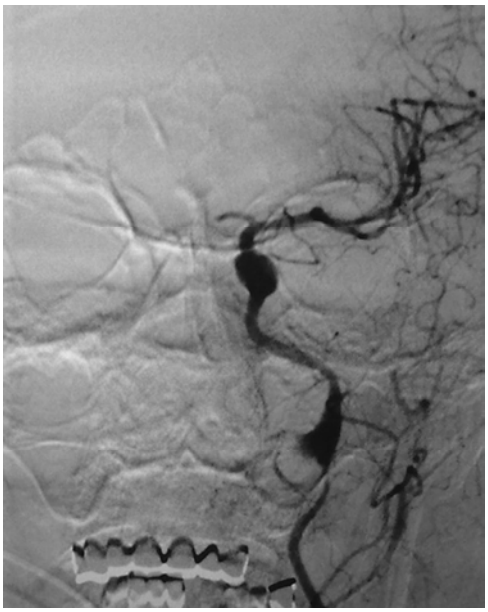

FIGURE 1. Digital subtraction angiograph showing large wall defect and high-flow extravasation of the left internal carotid artery at the skull base localization.

and proximal parts of the pseudoaneurysm. The patient was extubated 6 days later and discharged after 28 days of follow-up. A 7-month outpatient review revealed that he remained asymptomatic.

DISCUSSION

Nearly 60% of patients experience at least 1 episode of epistaxis in their lifetimes.[1] Because the blood supply of the nasal mucosa ultimately originates from the carotid arteries, acute epistaxis is potentially very serious, especially when the patient is frail or elderly.[4]

Radiation-related complications in patients with NPC, including xerostomia, hearing impairment, chronic otitis media, chronic rhinosinusitis, neck fibrosis, trismus, dysphagia, cranial neuropathy, and carotid stenosis, have been increasingly reported.[5] Skull base osteoradionecrosis with bleeding from the internal carotid artery is a potentially fatal complication of irradiation. Rupture of irradiated great vessels is an uncommon complication, and it tends to occur in the carotid artery in patients with cancer of the head and neck.[3] Massive nasal bleeding is usually fatal, particularly when it occurs in the nasopharynx, and it is one of the most dreaded complications after RT among patients with NPC. Although the angioembolization is a good method to resolve the problems of ruptured pseudoaneurysm, there is still high mortality and morbidity.[2]

In conclusion, emergency physicians should be aware that massive epistaxis might originate from the internal carotid artery. The condition can easily appear as common bleeding, which is treated with posterior nasal packing. Posttreatment NPC complications due to carotid artery disease may be difficult to recognize clinically, but a combination of clinical history, endoscopic examination, and imaging findings contributes to the diagnosis. Although conventional magnetic resonance imaging can define the location and extension of skull base osteoradionecrosis, it is less sensitive in the detection of vascular anomaly than in magnetic resonance or conventional angiography. Therefore, before invasive surgical intervention, conventional angiography should be first considered for treating unpredicted bleeding. Once the entity is confirmed, concurrent embolization is necessary. Our patient is alive only because he was in the hospital when the massive bleeding occurred. With immediate treatment in a hospital, mortality could be prevented in cases of ruptured internal carotid artery pseudoaneurysm.

REFERENCES

1. Shaw CB, Wax MK, Wetmore SJ. Epistaxis: a comparison of treatment. *Otolaryngol Head Neck Surg* 1993;109:60–65
2. Cheng KY, Lee KW, Chiang FY, et al. Rupture of radiation-induced internal carotid artery pseudoaneurysm in a patient with nasopharyngeal carcinoma—spontaneous occlusion of carotid artery due to long-term embolizing performance. *Head Neck* 2008;30:1132–1135
3. Okamura HO, Kamiyama R, Takiguchi Y, et al. Histopathological examination of ruptured carotid artery after irradiation. *ORL J Otorhinolaryngol Relat Spec* 2002;64:226–228
4. Thomas A, Waters W, Franclin IVP. *Nasal Emergencies and Sinusitis*. 6th ed. New York, NY: McGraw-Hill Co, 2004
5. Chen HC, Lin CJ, Jen YM, et al. Ruptured internal carotid pseudoaneurysm in a nasopharyngeal carcinoma patient with skull base osteoradionecrosis. *Otolaryngol Head Neck Surg* 2004;130:388–390

Dentoalveolar Trauma in the Pediatric Population

Ryan P. Casey, BS, Brian M. Bensadigh, BS, Michael T. Lake, MD, Seth R. Thaller, MD, DMD

Background: Dental alveolar trauma in pediatric patients is a challenge to health care professionals. It can lead to early tooth loss that can compromise oral function, aesthetics, and self-esteem and alter the long-term plan of care for the pediatric patient.

Methods: The authors reviewed the literature pertaining to pediatric dental and alveolar traumas. The current etiology, incidence, classifications of injury, and methods to diagnose and treat these patients were reviewed and outlined.

Conclusions: Management of dental trauma is complex and requires a comprehensive and accurate diagnostic and treatment plan. It is also important to consider the biologic, functional, aesthetic, and economic aspects, as well as the patient's desire.

Physicians who provide primary care for children have a unique position to provide diagnostic, triage, educational, and preventive dental care for patients. Several articles have been published regarding primary pediatricians' participation in the preventive dental health care of their patients. One publication, a survey of physicians in Alabama focusing on physicians' overall awareness of dental issues, concluded that most physicians believe they have a role in the oral health of their patients. Most were not aware of many of the American Academy of Pediatric Dentistry's recommendations.

Key Words: Pediatric, dental injury, alveolar injury, tooth fracture, alveolar fracture

Dental alveolar trauma in pediatric patients is a challenge to health care professionals. It can lead to early tooth loss that can compromise oral function, aesthetics, and self-esteem and alter the long-term plan of care for the pediatric patient.[1]

Trauma involving the anterior teeth may be associated with fractures of the alveolus, which is the tooth-bearing portion of the