occur concurrently within the same jaw. Radiographic findings and histopathology of the current case and a review of the literature are presented.


Histiocytic sarcoma (HS) is a rare neoplasm that often presents as an extranodal mass of the gastrointestinal tract, skin, or soft tissue. Multifocal presentations including nodal involvement have been rarely reported. We report a 65-year-old man who presented with a 1-month history of a gingival mass surrounding an implant in the left posterior mandible. The lesion had exhibited rapid growth and was firm to palpation. The patient’s medical history was notable for kidney and lung masses. Two months earlier, a needle core biopsy of the renal lesion was signed out descriptively as “histiocytic and lymphocytic infiltrates,” with a recommendation to obtain a larger sample. A biopsy of the gingival lesion demonstrated sheets of medium-to-large monoclonal cells with vacuolated to foamy eosinophilic cytoplasm. The nuclei demonstrated pleomorphism with vesicular chromatin, prominent eosinophilic nucleoli, and numerous as well as abnormal mitotic figures. Immunohistochemical studies demonstrated strong lesional cell positivity for CD68, CD163, CD4, and CD45RO. Variable positivity was demonstrated with lysozyme and MPO; Ki67 was expressed in 70%-80% of lesional cells. Probes for CD1a, CD79a, CD138, S100, CD21, CD117, and cytokeratins were negative, as was a Leder stain. To the best of our knowledge, this is the second case in the English-language literature of an HS in the oral cavity confirmed by immunohistochemistry, and the first as part of multifocal disease. It is an aggressive neoplasm with a poor response to therapy. The majority of patients present at a late stage (III/IV), and most will succumb to progressive disease.

AMORPHOUS BASOPHILIC DEPOSITS IN NODULAR LESIONS OF THE LIP: REPORT OF 2 CASES WITH HISTOLOGY OF RESTYLANE INJECTION. S. Farahani, S.-B. Woo. Harvard School of Dental Medicine, Boston, Mass.

Many fillers have been used for reducing facial skin lines and providing lip augmentation, one of which is hyaluronic acid (HA), a nonanimal-based material. There are 2 main commercial forms of HA: Restylane (Q Med, Sweden), produced by microbiologic engineering techniques, and Hylaform (Biomatrix, USA), an extract derived from rooster combs. Although HA is nontoxic and nonimmunogenic, hypersensitivity and granulomatous foreign body reactions have been reported as adverse reactions against this material. We report 2 women, aged 55 and 57 years, who presented with firm nodular lesions of the lip (one in the upper lip, the other in the lower lip) clinically diagnosed as adenoma, fibrous hyperplasia, or inflammatory minor salivary gland lesion. Histopathologically, both cases showed pools of amorphous hematoxyphilic material surrounded by densely collagenized connective tissue with no inflammation or foreign body reaction. Alcian blue stain confirmed the presence of acid mucopolysaccharides, such as HA. Both patients had undergone lip augmentation with Restylane.

Conclusion. Restylane (Q Med) is an inert filler that may persist at an injection site, resulting in a tumor-like nodule.


Background. A review of the literature shows that sialoliths (SL) of minor salivary glands (MISG) are infrequent compared with those of major salivary glands (MASG).

Objective. This study evaluated the frequency of SL in the MISG in the files of the University of Nebraska Medical Center Oral Pathology Biopsy Service, documenting agreement or lack thereof between the clinical and histologic diagnoses.

Study design. All cases with a final diagnosis of SL from 1987 through 2009 were reviewed.

Results. A total of 103 cases (0.3%) with a final diagnosis of SL were identified from 38,472 cases during this period. Among SL, the MISG SL constituted 64%, occurring most commonly in caucasian men (59%) with a mean age of 64 years. The upper lip (56%) was the most common location, followed by the cheek (30%) and lower lip (14%). Twenty percent of the clinical diagnoses matched the histologic diagnosis. In 76% of SL of MISG, the clinical diagnosis included mucocele, benign mesenchymal lesions, phlebolith, and salivary gland tumors.

Conclusion. We saw fewer SL in MASG than in MISG. There was a statistically significant difference between the clinical and histologic diagnostic agreement in MASG compared with MISG. The SL in MASG is correctly diagnosed clinically more often (92%) than in MISG (20%). SL in MISG was more frequent at ages >60 years compared with MASG. Lower lip lesions occurred at a younger age compared with the upper lip and cheek. This review demonstrates that SL in MISG occurs more often than clinically suspected and should be considered in the differential diagnosis of nodules in the upper lip, cheek and lower lip.


Objective. The objective of this clinical trial was to test the safety and efficacy of electrostimulation using the Salwell Gennarino device (GN). This was a part of a worldwide study, with ~10 subjects enrolled per site, 17 sites enrolled, and 140 subjects expected.

Study design. Dental impressions of both arches were taken with alginate impression material and stock trays and poured immediately with yellow stone. The casts were sent to Israel for fabrication of the GN, and the device was received ~1 month later. The use of the device was compared between active versus sham mode for 1 month each in a double-blind design (phase 1). In phase 2, the xerostomia-relieving effect of the active device was assessed in an open-label design for an additional 9 months, divided into 3 trimesters differentiated by the length of time of device wearing (1, 5, or 10 minutes).

Results. Eleven subjects were enrolled. Eight subjects completed phase 1 of the study, and 5 subjects completed the entire study. One subject was extremely pleased with the GN and nearly doubled both unstimulated and stimulated salivary flow. Six of 11 subjects dropped out from the study. Two subjects dropped out because they could not function without their sialogogue medication (both were taking Evoxac (cevimeline HCl)). One subject dropped out because the device was not tolerated. One subject
of pathologists, and performs statistical analysis to provide unstained slides are returned to the CIQC, which scans all results for
unstained slides from TMA blocks are sent to participants. The CIQC for PT. Ten runs have been completed since inception.

Pathology and provides several challenges in both class I and Recently, the Canadian Immunohistochemistry Quality Control
programs offer proficiency testing (PT) to clinical laboratories. though it is essential for proper IHC test calibration, only a few
of quality control/quality assurance measures for clinical labora-
tories produced poor results, indicating that about half of
participants and run 8 had 61 participants. In both runs, (TMA) for run 1 and a 30-sample TMA for run 8. Run 1 had 13
participants and run 8 had 61 participants. In both runs, >40% of laboratories produced poor results, indicating that about half of
clinical laboratories have inappropriately calibrated IHC tests for
most common markers of epithelial differentiation. Further analy-
sed that inappropriately selected external positive controls and samples for optimization of these tests were the
problem. Therefore, proper selection of positive control material and material for optimization of the tests is critical for proper
clinical application of class I IHC tests.

This research collected data for several parameters for up to
10 years for the private surgical oral pathology practice associ-
ated with the School of Dental Medicine, University of Pitts-
burgh. In 2009, the practice rendered a diagnosis on 2,179 sur-
gical biopsies, 15 cytologies for candidiasis, 21 external consult-
ations, and 44 internal ear-nose-throat pathology consult-
tations, for a total of 2,253 procedures. Of the biopsies, 64 were
dermatopathology cases (10 year average 42) and 48 were ma-
lignant (10 year average 34). Over 10 years, the practice saw
an average of 1,725 surgical biopsies/year, with a general upward
trend. The most common diagnoses in 2009 were: irritation fibroma (7.4%), hyperkeratosis (6.4%), giant cell fibroma (5.7%),
epithelial dysplasia (5.5%), radicular granuloma (4.7%), muco
ccele (4.7%), radicular cyst (3.6%), and papilloma (3.1%). Of
periapical (PA) lesions in 2009, 55% were granulomas. 72% of
PA lesions were from the maxilla; the maxillary incisors ac-
counted for 31% of all submitted PA lesions. Over the past 5
years, the practice had an average of 165 contributors, 94% from
Pennsylvania. The mean number of biopsies each submitted for
2009 was 11.6 (range 1-156, median 3, mode 1). In 2009, 51% of
contributors who sent >2 cases were oral surgeons, who contrib-
uted 84% of the cases. There was an average annual gain of 50
contributors, and a loss of 45. For one oral pathologist in 2009,
billings were mostly for level IV (59%), followed by level V
(29%) and level III (4%). Collections were most commonly from
Blue Cross/Blue Shield (59%), followed by cash (16%). Medi-
care accounted for 5% of collections.

CANADIAN IMMUNOHISTOCHEMISTRY QUALITY CONTROL (CIQC): AN ACADEMIC PROGRAM PROVIDING PROFICIENCY TESTING TO CANADIAN CLINICAL IMMUNOHISTOCHEMISTRY LABORATORIES. M. Copete, J. Garratt, B. Gilks, D. Pilvadzic, E. Torlakovic. U Saskatchewan, Lions Gate Hospital, BC, U British Columbia, General Jewish Hospital and McGill U, Que, U Toronto, Ont.
External quality assurance (EQA) is an important component of
quality control/quality assurance measures for clinical labora-
tories, and it includes immunohistochemistry (IHC) testing. Al-
though it is essential for proper IHC test calibration, only a few
programs offer proficiency testing (PT) to clinical laboratories. Recently, the Canadian Immunohistochemistry Quality Control (CIQC) was created to support EQA for clinical IHC testing. It is an academic program affiliated with the Canadian Association of Pathology and provides several challenges in both class I and class II IHC tests. Tissue microarray (TMA) design is used by the CIQC for PT. Ten runs have been completed since inception. Unstained slides from TMA blocks are sent to participants. The stained slides are returned to the CIQC, which scans all results for digital/virtual microscopy, performs expert assessment by a team of pathologists, and performs statistical analysis to provide in-

formation on kappa values and concordance with reference re-
sults. Although class II test results appear to be satisfactory, class I test results show very heterogeneous levels of success with different IHC tests/antibodies, ranging from <40% to near 90% with most tests being suboptimal. More extensive PT testing needs to be developed for class I tests, which account for a great majority of clinically used IHC tests.

IHC tests are generally classified as class I and class II tests. Class I test results are used by pathologists in conjunction with clinical and morphologic findings to determine cell differentiation. Class II tests are prognostic and predictive markers, which are used by clinicians to stratify patients for appropriate thera-
pies. Pankeratin (pan-CK) and low-molecular-weight keratin (LMWCK) tests are the most commonly used class I tests to
support evidence for epithelial differentiation. Canadian Immu-
nohistochemistry Quality Control (CIQC) is a new provider of
proficiency testing (PT) for Canadian clinical IHC laboratories. So far, CIQC has had 2 challenges in including PT for pan-CK and LMWCK. CIQC has designed a 70-sample tissue microarray (TMA) for run 1 and a 30-sample TMA for run 8. Run 1 had 13 participants and run 8 had 61 participants. In both runs, >40% of laboratories produced poor results, indicating that about half of clinical laboratories have inappropriately calibrated IHC tests for most common markers of epithelial differentiation. Further analy-
ses indicated that inappropriate selection of external positive controls and samples for optimization of these tests were the
problem. Therefore, proper selection of positive control material and material for optimization of the tests is critical for proper
clinical application of class I IHC tests.

NEONATAL TEETH IN 6-WEEK-OLD BABY WITH BILATERAL CLEFT LIP AND PALATE. CASE REPORT AND REVIEW OF THE LITERATURE. C. Haberland, J. Persing. Yale–New Haven Hospital, Conn.
The presence of teeth at birth or shortly thereafter is rare. We present a 6-week-old Hispanic baby girl with a nonsyndromic bilateral cleft lip and palate with a neonatal tooth on the right maxilla adjacent to the cleft. Clinically, the tooth had yellow
dysplastic enamel, gingival inflammation, and mobility. An oc-
clusal radiograph showed a calcified tooth-like structure lacking
a root, and a second outline of a tooth structure apical to it. Owing to feeding difficulties, the tooth was extracted. One week
later, the patient presented with an erupted second tooth-like structure at the previous extraction site. This tooth was also
extracted. Review of the literature showed that natal teeth occur more frequently (3:1) than neonatal teeth. Overall, the incidence
of natal/neonatal teeth is between 1:8,000 to 1:10,000 in patients
without orofacial clefts. However, natal/neonatal teeth have been
reported to occur in 2% of patients with unilateral cleft lip and palate and in 10% of patients with bilateral cleft lip and palate.
Clinically, the teeth usually appear with an opaque yellow-brown
irregular enamel and are mobile. Histologically, they present with
dysplastic and/or hypomineralized enamel, irregular dentinal tu-