radiological sings of diffuse alveolar process but this is not a specific finding in any of them<sup>(9)</sup>. In the present case, the patient was healthy, with no comorbidity at the immediate postoperative period following upper airway surgery (tonsillectomy), presenting spontaneous resolution in only three days. Despite the nonspecificity of the radiological pattern, the preoperative history of the patient and the prompt resolution allowed for ruling out other causes, and NPPE was the only remaining possible diagnosis. Thus, the authors considered to be unnecessary to proceed with the diagnostic investigation with other imaging methods and laboratory tests.

#### REFERENCES

- 1. Cascade PN, Alexander GD, Mackie DS. Negative-pressure pulmonary edema after endotracheal intubation. Radiology. 1993;186:671–5.
- 2. Mamiya H, Ichinohe T, Kaneko Y. Negative pressure pulmonary edema after oral and maxillofacial surgery. Anesth Prog. 2009;56:49–52.
- Deepika K, Kenaan CA, Barrocas AM, et al. Negative pressure pulmonary edema after acute upper airway obstruction. J Clin Anesth. 1997;9: 403–8.
- 4. Davidson S, Guinn C, Gacharna D. Diagnosis and treatment of negative

#### Mammographic artifact leading to false-positive result

Artefato em mamografia causando resultado falso-positivo

#### Dear Editor,

A female, 75-year-old was referred by another service with previous screening mammogram demonstrating clustered pleomorphic microcalcifications in the superolateral quadrant of her left breast, classified as highly suspicious mammographic findings (BI-RADS category 5), to be submitted to mammographyguided needle localization followed by excisional biopsy of the suspicious lesion.

A new mammography demonstrated an apparently benign nodule already present and stable in relation to the findings of the previous mammogram, besides the presence of clustered pleomorphic microcalcifications, both findings located in the superolateral quadrant of the left breast. The finding of suspicious microcalcifications drew attention for being a round-shaped cluster (Figures 1A and 1B). pressure pulmonary edema in a pediatric patient: a case report. AANA J. 2004;72:337–8.

- Timby J, Reed C, Zeilender S, et al. "Mechanical" causes of pulmonary edema. Chest. 1990;98;973–9.
- Sulek C. Negative-pressure pulmonary edema. In: Gravenstein N, Kirby RR, editors. Complications in anesthesiology. 2nd ed. Philadelphia, PA: Lippincott-Raven; 1996. p. 191–7.
- Hobaika ABS, Lorentz MN. Laringoespasmo. Rev Bras Anestesiol. 2009; 59:487–95.
- Albergaria VF, Soares CM, Araújo RM, et al. Edema pulmonar por pressão negativa após hipofisectomia transesfenoidal. Relato de caso. Rev Bras Anestesiol. 2008;58:391–6.
- 9. Felson B. Disseminated interstitial diseases of the lung. Ann Radiol. 1966;9:325-45.

Lais Bastos Pessanha<sup>1</sup>, Adriana Maria Fonseca de Melo<sup>1</sup>, Flavia Silva Braga<sup>1</sup>, Gabriel Antonio de Oliveira<sup>1</sup>, Livia Guidoni de Assis Barbosa<sup>1</sup>, Antonio Roberto Carrareto<sup>1</sup>

1. Universidade Federal do Espírito Santo (UFES), Vitória, ES, Brazil. Mailing Address: Dra. Lais Bastos Pessanha. Rua Primeiro de Maio, 79, Centro. Campos dos Goytacazes, RJ, Brazil, 28035-145. E-mail: laispessanha@hotmail.com.

http://dx.doi.org/10.1590/0100-3984.2013.0015

A new assessment detected a skin nevus with irregular surface presenting with talc residues in the lesion fissures. Once the lesion was marked with a metal clip, a new mammographic image revealed that the microcalcifications corresponded to artifacts related to the talc residues present on the dermal nevus surface (Figures 1C and 1D). The mammogram was reclassified as benign mammographic findings (BI-RADS category 2) and the patient was referred for follow-up at the public basic health network.

Except for non-melanoma skin tumors, breast cancer is the most frequent neoplasm with high mortality in women in Brazil<sup>(1)</sup>. Mammography is the main imaging method for the early diagnosis of breast cancer; and the analysis of the differences between normal breast tissue and suspicious findings requires high imaging quality for early detection of lesions<sup>(2-9)</sup>. In addition, the presence of imaging artifacts reduces the sensitivity and specificity of imaging methods, masking or mimicking the diagnosis of initial-stage lesions and leading to the adoption os inappropriate approaches.

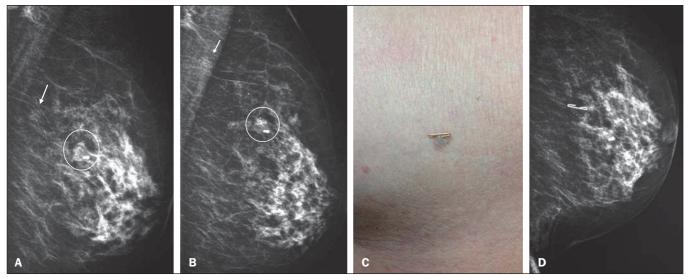


Figure 1. A,B: Mediolateral oblique and craniocaudal views of left breast showing a partially calcified nodule (circle) and a cluster of pleomorphic microcalcifications (arrow) located in the superolateral quadrant of the breast. C,D: Metal clip on the dermal nevus with talc residues in its fissures, and craniocaudal view of the left breast demonstrating that the cluster of microcalcifications corresponded to talc residues.

#### Letters to the Editor

Most common artifacts are associated with factors related to the patient, to the imaging technique, image processing or problems in the apparatus<sup>(10,11)</sup>. The main patient-related artifacts are caused by motion during images acquisition and use of substances on the skin.

The present case illustrates the necessity of a strict mammographic image quality control and correlation with clinical findings for greater diagnostic accuracy. As already mentioned, the skin lesion led to simulation of a clustered pleomorphic microcalcifications which would imply the necessity of biopsy. The active quest for prevention and detection of artifacts, in association with a continued quality control of imaging, processing, storage and images analysis, reduces the incidence of misdiagnosis and costs, e should be the objective of any team involved in mammography services.

## REFERENCES

- Brasil. Ministério da Saúde. Instituto Nacional do Câncer. Estimativas 2012 – Incidência de câncer no Brasil. Rio de Janeiro, RJ: INCA; 2011.
- Pisano ED, Hendrick RE, Yaffe MJ, et al. Diagnostic accuracy of digital versus film mammography: exploratory analysis of selected population subgroups in DMIST. Radiology. 2008;246:376–83.
- Caldas FAA, Isa HLVR, Trippia AC, et al. Controle de qualidade e artefatos em mamografia. Radiol Bras. 2005;38:295–300.
- Badan GM, Roveda Júnior D, Ferreira CAP, et al. Auditoria interna completa do serviço de mamografia em uma instituição de referência em imaginologia mamária. Radiol Bras. 2014;47:74–8.
- 5. Bitencourt AGV, Lima, ENP, Chojniak R, et al. Correlação entre resul-

# Hypertrophic olivary degeneration secondary to central tegmental tract injury

Degeneração olivar hipertrófica secundária a lesão do trato tegmentar central

## Dear Editor,

A male, 30-year-old patient presenting with a sudden-onset convergent squint attended the service complaining of diplopia. At physical examination the patient presented compromise of the left VI nerve and palatal myoclonus. Magnetic resonance imaging (Figure 1) demonstrated hypertrophic olivary degeneration (HOD) secondary to central tegmental tract injury. tado do PET/CT e achados histológicos e imuno-histoquímicos em carcinomas mamários. Radiol Bras. 2014;47:67-73.

- Rodrigues DCN, Freitas-Junior R, Corrêa RS, et al. Avaliação do desempenho dos centros de diagnóstico na classificação dos laudos mamográficos em rastreamento oportunista do Sistema Único de Saúde (SUS). Radiol Bras. 2013;46:149–55.
- Coeli GNM, Reis HF, Bertinetti DR, et al. Carcinoma mucinoso da mama: ensaio iconográfico com correlação histopatológica. Radiol Bras. 2013;46:242–6.
- Pardal RC, Abrantes AFL, Ribeiro LPV, et al. Rastreio de lesões mamárias: estudo comparativo entre a mamografia, ultrassonografia modo-B, elastografia e resultado histológico. Radiol Bras. 2013;46:214–20.
- Badan GM, Roveda Júnior D, Ferreira CAP, et al. Valores preditivos positivos das categorias 3, 4 e 5 do Breast Imaging Reporting and Data System (BI-RADS<sup>®</sup>) em lesões mamárias submetidas a biópsia percutânea. Radiol Bras. 2013;46:209–13.
- Chaloeykitti L, Muttarak M, Ng KH. Artifacts in mammography: way to identify and overcome them. Singapore Med J. 2006;47:634–41.
- Geiser WR, Haygood TM, Santiago L, et al. Challenges in mammography: Part I, artifacts in digital mammography. AJR Am J Roentgenol. 2011;197:1023–30.

# Matheus Silveira Avelar<sup>1</sup>, Orlando Almeida<sup>1</sup>, Beatriz Regina Alvares<sup>1</sup>

1. Departamento de Radiologia da Faculdade de Ciências Médicas da Universidade Estadual de Campinas (FCM-Unicamp), Campinas, SP, Brazil. Endereço para correspondência: Dr. Matheus Silveira Avelar. Rua Hermantino Coelho, 299, ap. 114A, Bairro Mansões Santo Antônio. Campinas, SP, Brazil, 13087-500. E-mail: avelarmatheus@ig.com.br.

http://dx.doi.org/10.1590/0100-3984.2013.0003

Recently, the Brazilian radiological literature has been much concerned about the relevant role played by imaging methods in the improvement of the diagnosis of central nervous system diseases<sup>(1-10)</sup>.

HOD is a rare phenomenon that occurs after an insult to the dentato-rubro-olivary tract (Guillain-Mollaret triangle), constituted by the dentate, rubro and inferior olivary nuclei, which are interconnected via the central tegmentar tract and superior and inferior cerebellar peduncles. This is a degenerative disorder that initially develops with hypertrophy<sup>(11)</sup>. Injury to any of such components may result in axonal interruption to the inferior olivary nucleus, leading to its degeneration<sup>(12)</sup>. In cases where the alterations are

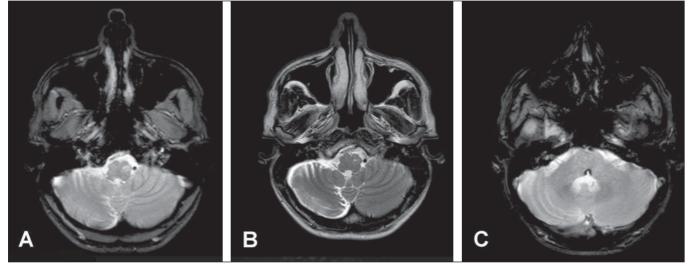


Figure 1. MRI of the brain. Axial, T2-weighted FFE image at the level of the bulb (A) and axial T2-weighted image (B) shows hypersignal in the region of the left inferior olivary nucleus, as well as accentuation of sulci in the right cerebellar hemisphere. Susceptibility-weighted imaging (C) at the level of the pons shows lesion with peripheral hyposignal in the pontine tegmentum (left facial colliculus), compatible with hemorrhagic focus.