



REVISTA BRASILEIRA DE ANESTESIOLOGIA

Publicação Oficial da Sociedade Brasileira de Anestesiologia
www.sba.com.br



CLINICAL INFORMATION

Severe fat embolism in perioperative abdominal liposuction and fat grafting[☆]



Rodrigo de Lima e Souza^{a,b,c,*}, Bruno Tavares Apgaua^a,
João Daniel Milhomens^a, Francisco Tadeu Motta Albuquerque^a,
Luiz Antônio Carneiro^a, Márcio Henrique Mendes^a, Tiago Carvalho Garcia^a,
Clerisson Paiva^a, Felipe Ladeia^a, Deiler Célio Jeunon^a

^a Centro de Ensino e Treinamento do Hospital Madre Teresa, Belo Horizonte, MG, Brazil

^b Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, MG, Brazil

^c Associação de Medicina Intensiva Brasileira (AMIB), São Paulo, SP, Brazil

Received 3 September 2013; accepted 26 November 2013

Available online 12 March 2016

KEYWORDS

Fat embolism;
Intraoperative;
Liposuction

Abstract

Background and objectives: Fat embolism syndrome may occur in patients suffering from multiple trauma (long bone fractures) or plastic surgery (liposuction), compromising the circulatory, respiratory and/or central nervous systems. This report shows the evolution of severe fat embolism syndrome after liposuction and fat grafting.

Case report: SSS, 42 years old, ASA 1, no risk factors for thrombosis, candidate for abdominal liposuction and breast implant prosthesis. Subjected to balanced general anesthesia with basic monitoring and controlled ventilation. After 45 min of procedure, there was a sudden and gradual decrease of capnometry, severe hypoxemia and hypotension. The patient was immediately monitored for MAP and central catheter, treated with vasopressors, inotropes, and crystalloid infusion, stabilizing her condition. Arterial blood sample showed pH = 7.21; PCO₂ = 51 mmHg; PO₂ = 52 mmHg; BE = -8; HCO₃ = 18 mEq L⁻¹, and lactate = 6.0 mmol L⁻¹. Transthoracic echocardiogram showed PASP = 55 mmHg, hypocontractile VD and LVEF = 60%. Diagnosis of pulmonary embolism. After 24 h of intensive treatment, the patient developed anisocoria and coma (Glasgow coma scale = 3). A brain CT was performed which showed severe cerebral hemispheric ischemia with signs of fat emboli in right middle cerebral artery; transesophageal echocardiography showed a patent foramen ovale. Finally, after 72 h of evolution, the patient progressed to brain death.

Conclusion: Fat embolism syndrome usually occurs in young people. Treatment is based mainly on the infusion of fluids and vasoactive drugs, mechanical ventilation, and triggering

[☆] Centro de Ensino e Treinamento (SBA) do Hospital Madre Teresa, Belo Horizonte, MG.

* Corresponding author.

E-mails: digoanest@hotmail.com, digoanest@icloud.com (R. de Lima e Souza).

factor correction (early fixation of fractures or suspension of liposuction). The multiorgânico involvement indicates a worse prognosis.

© 2014 Sociedade Brasileira de Anestesiologia. Published by Elsevier Editora Ltda. All rights reserved.

PALAVRAS-CHAVE

Embolia gordurosa;
Peroperatório;
Lipoaspiração

Embolia gordurosa grave no peroperatório de lipoaspiração abdominal e lipoenxertia

Resumo

Justificativa e objetivos: A Síndrome da Embolia Gordurosa (SEG) pode acontecer em pacientes vítimas de politrauma (fratura de ossos longos) ou operações plásticas (lipoaspiração), comprometendo circulação, respiração e/ou sistema nervoso central. O presente relato mostra evolução de SEG grave após lipoaspiração e lipoenxertia.

Relato do caso: SSS, 42 anos, ASA 1, sem fatores de risco para trombose, candidata a lipoaspiração abdominal e implante de prótese mamária. Submetida à anestesia geral balanceada com monitorização básica e ventilação controlada. Após 45 minutos de procedimento, houve queda súbita e progressiva da capnometria, hipoxemia e hipotensão grave. Imediatamente foi monitorizada com PAM e cateter central, tratada com vasopressores, inotrópicos e infusão de cristaloides, obtendo estabilização do quadro. Amostra sanguínea arterial mostrou pH = 7,21; PCO₂ = 51 mmHg; PO₂ = 52 mmHg; BE = -8; HCO₃ = 18 mEq/l e lactato = 6,0 mmol/l. Ecocardiograma transtorácico mostrou PSAP = 55 mmHg, VD hipocontrátil e FEVE = 60%. Diagnóstico de embolia pulmonar. Após 24 h de tratamento intensivo, a paciente evoluiu com anisocoria e coma com escala de glasgow 3. Realizada TC de encéfalo que evidenciou isquemia cerebral grave, hemisférica, com sinais de êmbolos de gordura em A. cerebral média D; e ecocardiograma transesofágico mostrou forame oval patente. Finalmente, após 72 h de evolução, a paciente evoluiu para morte encefálica.

Conclusão: A SEG ocorre geralmente em jovens. O tratamento baseia-se principalmente na infusão de líquidos e drogas vasoativas, ventilação mecânica e correção do fator desencadeante (fixação precoce de fraturas ou suspensão da lipoaspiração). O comprometimento multiorgânico indica pior prognóstico.

© 2014 Sociedade Brasileira de Anestesiologia. Publicado por Elsevier Editora Ltda. Todos os direitos reservados.

Introduction

The presence of fat emboli or free fatty acids in the pulmonary or systemic circulation can trigger the fat embolism syndrome (FES), often originated from long bone fracture of the lower limbs and pelvis. On a smaller scale, it can result from cosmetic surgery such as liposuction and/or fat grafting, cardiopulmonary bypass, pancreatitis, joint repair, severe burns, sickle cell anemia, diabetes mellitus, and lipid parenteral infusion.^{1,2}

FES is a relatively rare condition (0.3–5.0%), but extremely severe, with mortality rates ranging from 10% to 36%.^{1,2}

Historically, the first description of FES happened in the mid-nineteenth century on autopsy findings by Zenker.³ Later, still in the same century, Von Bergman made the first clinical diagnosis of FES,⁴ describing the classic triad characterized by acute respiratory failure with diffuse pulmonary infiltrate, neurological dysfunction and skin manifestations (petechiae). However, this triad occurs in only 0.5–2.0% of cases.⁵ The passage of emboli into the systemic circulation and the severe neurological involvement (coma), as well as

other organs, are indicative of a poor prognosis, especially the possibility of interatrial communication (persistence of patent foramen ovale).⁶

This report shows the fatal outcome of a massive fat embolism case during the intraoperative period of an abdominal liposuction and fat grafting due to the presence of patent foramen ovale, culminating with severe embolic stroke and brain death.

Case report

SSS, 42 years old, ASA 1, with no risk factors for deep vein thrombosis, candidate for abdominal liposuction and breast prosthesis implant. The patient was anxious and fearful about the possibility of complication and death. Therefore, general anesthesia was the option, a less common practice for this type of procedure at the Service (thoracic epidural anesthesia with sedation is the standard practice). The general anesthesia was balanced with propofol, remifentanyl, atracurium, sevoflurane, and controlled ventilation with 90% end-tidal oxygen. Basic monitoring was performed (ECG, capnography, oximetry,

Download English Version:

<https://daneshyari.com/en/article/2750179>

Download Persian Version:

<https://daneshyari.com/article/2750179>

[Daneshyari.com](https://daneshyari.com)