

Septic shock in ASIA syndrome. A case report.

Emmanuel Stephano Bracho Ruiz M.D.
 Omar Alberto Perez Benitez M.D.
 Alberto Cahuana Quispe M.D.
 Sergio Sandoval Tapia M.D.
 Daniel Benito Castillo Martinez M.D.
 Cuauhtemoc Aguilar Barragan M.D.

Background

The number of plastic surgery procedures have been rising in the last few years. The morbi-mortality due to illegal use of biopolymers is a public health problem. The autoimmune inflammatory syndrome induced by adjuvants (ASIA, for its acronym in English) has been proposed since 2011, triggered within other exposures by the administration of substances used for aesthetic purposes, which acting as adjuvants can have a stimulatory action on the immune system, s are silicone, hyaluronic acid, methacrylate compounds and various oils. NOT only the application of these substances have been associated with the syndrome, but also the post-vaccination phenomenon and the Gulf War syndrome.

Keywords: Biopolymers, Modelling Agents, ASIA syndrome

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Case report

Plastic Surgery



Different terms have been used to describe the disease cause by allogenic substances that are foreign to the body and injected by unauthorized personnel. The term ASIA has been recently coined in order to describe multiples clinical conditions namely silicosis, gulf war syndrome (GWS), macrophage myofasciitis syndrome (MMF), sick building syndrome (SBS) and post- vaccination phenomena which share similar signs or symptoms. Several major and minor criteria have been proposed. The autoimmune inflammatory syndrome induced by adjuvants (ASIA, for its acronym in English) also know as Shienfeld Syndrome , is a condition triggered within other exposures by the administration of substances used in some cases for aesthetic purposes, that leads to an aberrant autoimmune response. An immunological adyuvant is a substance that enhances the antigen- specific immune response, such as silicone, aluminum salts, mineral oils, collagen and hyaluronic acid. A Genetic predisposition has also been implicated in the development of this condition, which predisposes to the appearance of such autoimmune syndrome. Arthralgia (60%) , myalgia (49 %) , and chronic fatigue (59 %) were the most frequently reported symptoms, the time latency between application and development of autoimmune conditions are from just 3 days to even 20 years. At the time of diagnosis almost 80 % were also diagnosed with a another autoimmune conditions as Undifferentiated connective tissue disease (UCTD) ,

rheumatoid arthritis, lupus or Sjogren's syndrome .The body areas in cosmetic procedures, where the unknown materials are most frequently injected are buttocks (8-70%) and breasts (12-16%).Some authors think these problems have reached epidemic proportions especially in Latin-America.

Case report

We present the case of a 60-years-old female patient, with a medical history of systemic arterial hypertension without any treatment, as well Sjogren's syndrome and recurrent nephrolithiasis, chronic low back pain, muscular weakness, chronic fatigue, dry mouth, and a history of gluteal injections, hips, legs and calves by unknown substance in her mid-30s referred to our plastic and reconstructive surgery department by ER department with a diagnosis of septic shock by a spontaneous gluteal ulcer after a minor trauma with a exposure of unknown biopolymer . At the moment of our examination gluteal region, we observe a full thickness lesion with purulent exudate, as well hips, legs and calves with multiple skin injuries with hyperpigmentation and indurated at touch. Due to the gravity of our patient we did a surgical debridement, with partial response on Intensive care unit, and unfortunately the patient died after 7 days by septic shock.

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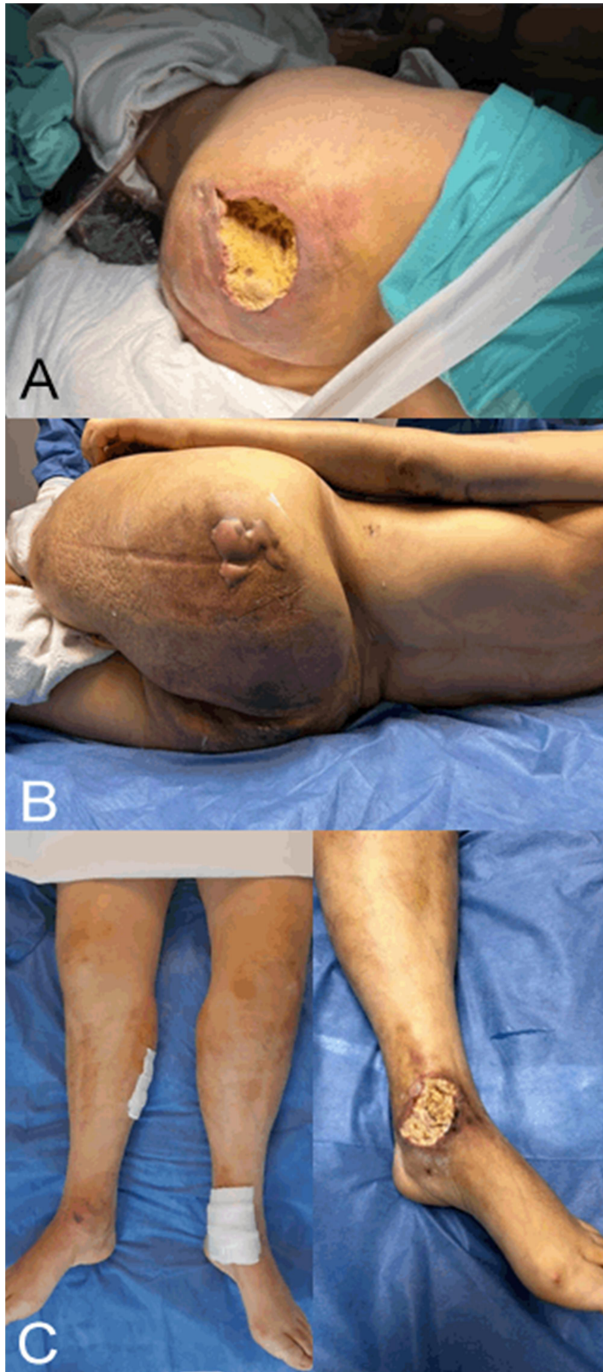


Figure 1. A. Initial right gluteal ulcer lesion post-surgical debridement. Left Lateral View. B. Skin lesions and hyperpigmentation. Right Lateral View. C. Legs and calves. Anterior view.

Discussion

The number of plastic surgery procedures has been rising in the last few years. The morbi-mortality due to illegal use of biopolymers is a public health problem. One of the clinical consequences, foreign body modelling reaction, may be a precursor of ASIA (Autoimmune/Inflammatory disease induced by adjuvants) syndrome. The concept of beauty is related

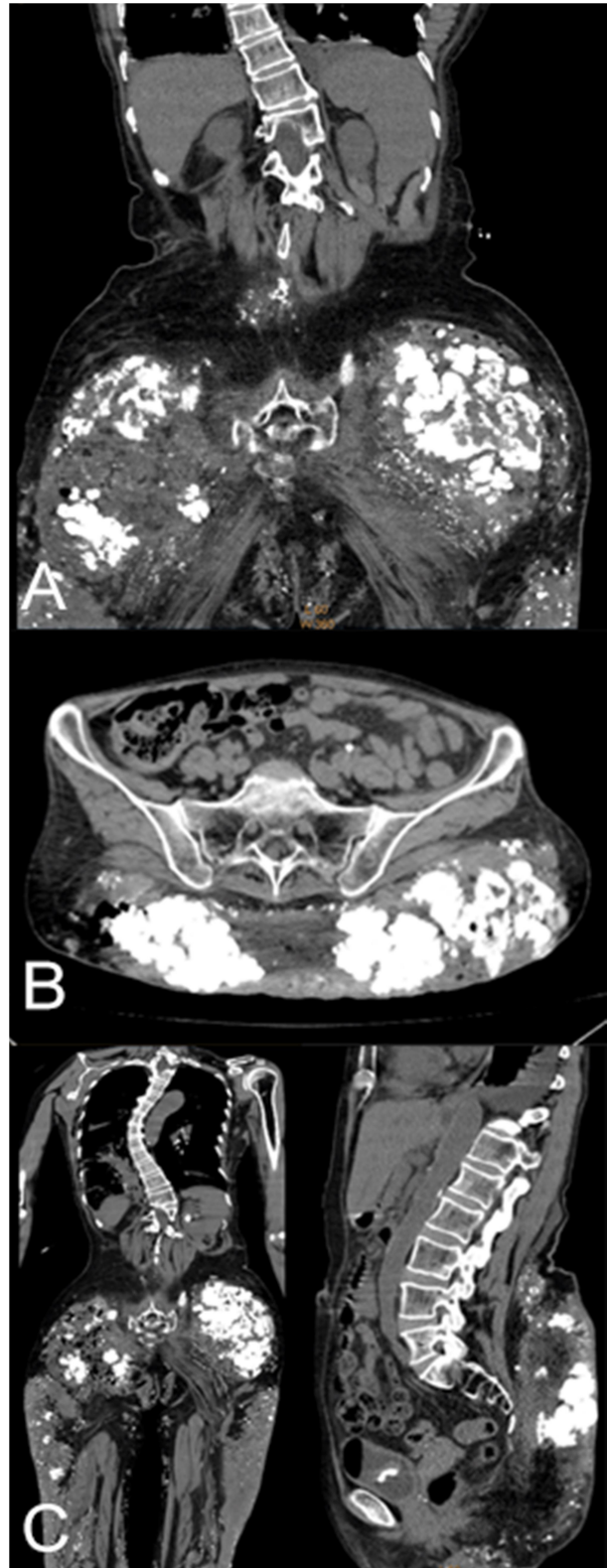


Figure 2. A. CT scan. Coronal view. B. Deep gluteal lesion. Axial view. C. Deep gluteal, thigh and hips lesion.

to pre-established social stereotypes based on the era and culture, the body areas in cosmetic procedures, where the unknown materials are most frequently

Major Criteria

Exposure to an external stimulus (infection, vaccine, silicone, adjuvant) prior clinical manifestations
 Myalgia, myositis or muscle weakness
 Arthralgia and / or arthritis
 Chronic fatigue, un-refreshing sleep or sleep disturbances
 Neurological manifestations
 Cognitive impairment, memory loss
 Pyrexia, dry mouth
 Removal of inciting agent induce improvement
 Typical biopsy of involved organs

Minor Criteria

The appearance of autoantibodies or antibodies directed suspected adjuvant
 Other clinical manifestations (irritable bowel syndrome)
 Specific HLA (HLA DRB1, HLA DQB1)
 Evolvement of an autoimmune disease (multiple sclerosis, systemic sclerosis)

Table 1. Proposed criteria for the diagnosis of ASIA S

injected are buttocks (8-70%) and breasts (12-16%) The clinical adverse effects of are usually related to type IV hypersensitivity reactions, according to the Gell and Coombs classification. Mineral oils are generally considered 'non-toxic' and have been used extensively in food, cosmetics, medicines and other products. Subcutaneous injections of mineral oil induce sclerosing lipogranulomas, an a chronic local inflammatory reaction. The adjuvant effect is accomplished via several mechanisms involving both the innate and adaptive immune pathways. Briefly, adjuvants increase innate immune responses by mimicking evolutionary conserved molecules, e.g. bacterial walls or unmethylated CpG-DNA residues, and binding to Toll-like receptors (TLRs), and reinforce the activities of antigen-presenting cells. Thus, adjuvants increase local reactions to antigens, with further release of inflammatory cytokines from T-helper and mast cells. The spectrum of manifestations fluctuates from mild to severe depending on the amount of substance infiltrated, the area of application, and the length of exposure as well as other variables. The most commonly reported signs or symptoms of ASIA syndrome are fatigue, mialgia, myositis, arthralgia, neurological manifestations, fever, dry mouth and cognitive alterations. Fatigue represents one of the most disturbing and disabling manifestations of ASIA being associated in several occasions with sleep disturbances or non restfull sleep. Subsequently, the migration of the substance to peripheral or distal areas takes place with similar manifestations, progressive local and distant hyperpigmentation, development of a collateral venous network, cutaneous atrophy, and the formation of ulcers. Based on the toxic effects that these dermal fillers generated in the quality of life of the patients, several surgical techniques have been proposed which include extensive surgical resection and subsequent reconstruction using local or microsurgical flaps,

particularly when the disease affects the mammary and facial áreas. There is no standard treatment for gluteal complications from injections of foreign materials and, in addition, the scientific literature is scarce. The surgical removal can be difficult given that large amounts of injected modeling agent tend to mix with healthy tissue and the extraction of biopolymers may be done on asymptomatic patients.

Conclusion

Physicians need to be aware of the possible expression clinical pictures of various entities such as lupus, rheumatoid arthritis, mixed tissue disease connective tissue, Sjögren's syndrome, fibromyalgia, as in our case, associated with a history of exposure to adjuvants as modeling substances or implants to avoid errors or diagnostic delays, which can cause health problems that even compromise life in some patients, also in mind that a group of the population is going to have genetic characteristics that when exposed to substances of this type could develop the picture of ASIA and treatment requires multidiscipline.

Conflicts of interests

The authors have no conflicts of interest to declare.

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Emmanuel Stephano Bracho Ruiz
 Plastic Surgery Service
 Hospital Central Norte Pemex
 Mexico City, Mexico