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Figure 1 Patch testing.

cases. Patch testing with a battery of sunscreens gave a positive reading (++) at 48 and 96 h to butyl methoxydibenzoylmethane 2% (Parsol 1789) in both cases (Fig. 1).

Since only one of the sunscreens contained parsol, we decided to test with other sunscreens. The results are shown in Table 1. All sunscreens that gave a positive patch test reaction contained octocrylene, which is included in some sunscreen series only. In order to confirm the positivity of octocrylene, we requested this component from the laboratory Chemotechnique for patch testing. Readings were positive (+++) in both cases at 48 and 96 h.

Of the sunscreens tested, the only one with a negative result was the physical sunscreen Eucerin Kids Sun Micropigment Lotion®, which has no chemical components.

We report two cases of allergic contact dermatitis in infants who were sensitised to sunscreen (Parsol 1789 and octocrylene). Although these compounds have traditionally been considered safe, reports of allergic reactions are increasingly frequent.<sup>3</sup> Octocrylene is an emergent allergen, which appears to cause direct allergic contact dermatitis in children, and allergic photocontact dermatitis in adults, often in patients previously diagnosed with photocontact allergy to topical ketoprofen.<sup>4</sup> Therefore, we recommend

patch testing with a comprehensive series of sunscreen ingredients, as well as with the actual commercially available sunscreens responsible for patient dermatitis, and awareness of the risk of applying chemical filters in infants. Only physical sunscreen should be used in this age group.

#### Ethical disclosures

Protection of human subjects and animals in research. The authors declare that no experiments were performed on humans for this investigation.

**Confidentiality of Data.** The authors declare that no patient data appears in this article.

**Right to privacy and informed consent.** The authors declare that no patient data appears in this article.

## Conflict of interest

The authors have no conflict of interests to declare.

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# Desensitisation to aspirin in antiphospholipid antibody syndrome

To the Editor,

The antiphospholipid antibody syndrome (APS) is a prothrombotic disorder defined by the presence of thromboembolic complications (both venous and arterial) and/or pregnancy morbidity. Antiphospholipid antibodies are persistently increased in these patients.<sup>1–5</sup>

The first diagnostic criteria of APS were developed in Japan in 1999 and called the Sapporo criteria.<sup>6</sup> An update was published in Sydney in 2006.<sup>2,3,7,8</sup> The diagnosis is based on clinical and laboratory criteria. Clinical symptoms and signs include the presence of vascular thrombosis and/or pregnancy morbidity (unexplained deaths of normal foetus beyond 10 weeks of gestation, three or more spontaneous abortions before the 10th week of gestation and premature births due to severe pre-eclampsia or placental insufficiency).<sup>2,8</sup> The laboratory criteria refer

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to the persistent presence of antiphospholipid antibodies, including lupus anticoagulant, anticardiolipin and anti- $\beta$ 2-glycoprotein-1 antibodies, on two or more determinations, at least six weeks apart.  $^{1,2,4,9}$ 

The APS is characterised by episodes of arterial or venous thrombosis, affecting both large and small vessels. Thrombocytopenia can also be present. 1,2,4,9 Obstetric morbidity is an important manifestation of APS. An unusually high proportion of adverse events during pregnancy are found in women with antiphospholipid antibodies. These can include recurrent miscarriages, foetal losses, premature delivery due to pregnancy-associated hypertensive disease and placental insufficiency, among others. 3,6,7,9,10

Due to high risk of thromboembolism, the mainstay of treatment of APS is antithrombotic therapy.<sup>1</sup> The risk of foetal loss and other pregnancy events related to APS may be prevented, making early maternal treatment mandatory in the management of these high-risk pregnancies.<sup>11,12</sup> Women with previous obstetric morbidity should receive prophylactic treatment with low-dose aspirin (75–100 mg/day), considered the first step of prevention in those patients management, and unfractionated heparin, or aspirin combined with low molecular weight heparin, the most widely accepted treatment plan.<sup>1,7–10,12–14</sup> As it remains controversial, the treatment should always be individualised.

The ingestion of aspirin (ASA) or other non-steroidal anti-inflammatory drugs (NSAIDs) can trigger hypersensitivity reactions, leading to acute asthma episodes, urticaria/angio-oedema or anaphylactic reactions. This is mostly observed in asthmatic patients with exacerbation of the basal condition. <sup>15–17</sup> In most ASA-sensitive patients in whom the benefits of aspirin intake are high, ASA desensitisation, followed by daily treatment, is a valuable therapeutic option. <sup>17,18</sup>

Few cases of ASA desensitisation in APS patients have been published.

## Case report

The authors report a case of a 36-year-old woman, with allergic persistent moderate asthma, rhinosinusitis and conjunctivitis, sensitised to house dust mites, with a history of hypersensitivity reactions to paracetamol and multiple NSAIDs, including nimesulide and aspirin. Previous reaction to ASA was immediate with palpebral angio-oedema, conjunctival hyperaemia and facial pruritic exanthema, associated to mild dyspnoea. Non-immediate reactions, with similar mucocutaneous and respiratory symptoms, occurred when the other NSAIDs were involved.

The patient had a history of three miscarriages before achieving 10 weeks of gestation, following one previous successful pregnancy. She was studied and a persistent presence of anticardiolipin antibodies was confirmed, establishing the diagnosis of antiphospholipid antibody syndrome. To prevent future pregnancy loss, the patient needed prophylaxis with daily aspirin, in a dose of 100 mg.

Studied in the Drug Allergy Unit, the first step was to find an alternative drug that could be safely taken in the future, if necessary. A negative oral provocation test with etoricoxib allowed to confirm the tolerance to this drug, in a dose of 120 mg/day.

Table 1	Table 1 Aspirin desensitization protocol.		
Day	Tir	ne (min)	ASA dose (mg)
	(	)	2.5
1	90	)	5
	180	)	10
	(	)	10
2	90	)	20
	180	)	40
3		)	50
	90	)	50
4 and the	ereafter (	)	100 (single tablet)

ASA desensitisation was proposed to this ASA hypersensitivity asthmatic patient, and antiphospholipid syndrome with recurrent miscarriages, because she intended to become pregnant again.

A desensitisation procedure was prepared with a solution of ASA in 20 ml of saline, beginning with 2.5 mg of ASA. After signing informed consent, doubling doses of ASA were administered, orally, with a 90-min interval. Three incremental doses were given on the first day and three others on the second day. On the third day of protocol the patient took two doses of 50 mg. Thereafter the treatment was maintained with a daily single dose of 100 mg of aspirin (Table 1). Some ocular symptoms occurred one week after achieving 100 mg of ASA. These complaints were controlled with ocular drops and were related with mite exposure. The patient was followed in our outpatient clinic twice a month for two months, with no complications and maintaining a single daily dose of aspirin.

The antiphospholipid antibody syndrome is an acquired thromboembolic condition, consisting of arterial and venous thrombosis, with relevant pregnancy morbidity, including recurrent miscarriages. 1-4,8,9

The mechanism that promotes thrombosis in patients with antiphospholipid antibodies remains unclear, although several mechanisms have been proposed.  $^{1,5,11}$  The binding of antiphospholipid antibodies to trophoblast cells resulting in defective placentation, the prothrombotic changes, thrombosis and an impaired flow, interfering in the crucial contact between placenta and maternal circulation, or even placental inflammation, could explain the adverse pregnancy outcomes.  $^{4,7-10,12}$ 

The obstetric adverse events may be prevented with prophylactic treatment. Pre-pregnancy and antenatal care is crucial. 11,12,14 Low-dose aspirin (75–100 mg/day) is the first step in thrombotic prophylaxis. Unfractionated heparin can also be used or aspirin can be combined with low molecular weight heparin. 1,7–10,12,13 A Cochrane database review recently concluded that the combined treatment with aspirin and unfractionated heparin could reduce pregnancy loss by about 54%. 19

Aspirin and other NSAIDs can cause hypersensitivity reactions. ASA desensitisation is a valuable therapeutic option if the treatment with this drug is highly beneficial.<sup>17,18</sup> The procedure is possible because after each given dose of aspirin there is a refractory period of 2–5 days' duration, during which ASA can be taken without reaction.<sup>16</sup> Thereby,

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ASA desensitisation therapy involves the elimination of immunological reactions by slowly increasing exposure to oral ASA.<sup>17</sup> Incremental doses of ASA are given over a period of 2–3 days, until the desirable and/or well tolerated dose is achieved and then daily maintained.<sup>17</sup>

ASA desensitisation has been mostly performed in ASA-sensitive patients with rhinosinusitis and asthma or aspirin exacerbated respiratory disease (AERD). This therapeutic option could also be indicated for treatment or prophylaxis in other conditions such as cardiovascular diseases in ASA-sensitive patients.<sup>11</sup>

Few cases of ASA desensitisation in APS patients have been published. In a study of Alijotas-Reig et al., four women, three of them pregnant, were successfully desensitised to ASA and maintained on a single daily dose of aspirin, in combination with subcutaneous enoxaparin throughout gestation, until full term delivery, with favourable pregnancy outcomes, without any complications. <sup>11</sup>

The present case describes an asthmatic and ASA-sensitive patient with APS leading to recurrent pregnancy losses before 10 weeks of gestation.

To prevent further pregnancy complications, the patient would benefit from an aspirin prophylactic treatment, the first therapeutic choice in this case. Due to ASA-sensitivity, only a desensitisation procedure could solve the problem. A safe protocol of four days was used and no complications occurred. This approach allowed the ASA-prophylaxis for APS comorbidities, with daily dose of 100 mg of aspirin.

Desensitisation seems to be a valid method and may be indicated in ASA-sensitive patients with APS to prevent future thromboembolic complications.

## Ethical disclosures

**Protection of human subjects and animals in research.** The authors declare that no experiments were performed on humans or animals for this investigation.

**Patients' data protection.** The authors declare that no patient data appear in this article.

**Right to privacy and informed consent.** The authors declare that no patient data appears in this article.

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