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LETTER TO THE EDITOR

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A successful protocol for desensitization to iron salts

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Sir,

Iron deficiency is the most frequent nutritional disorder and accounts for about half of the anemia cases. Its treatment includes oral or tolerated well by most of the patients. Hypersensitivity reactions against iron preparations have been seldom reported, and they were intravenous applications.^[1]

We want to present a successful desensitization protocol with iron (III) hydroxide polymaltose complex (IPC) in a profound anemia to an oral iron preparation. A 20-year-old female with no previous history of allergy and comorbidity had been diagnosed with iron deficiency anemia with excessive vaginal bleeding due to menorrhagia. Her main symptom had been fatigue; laboratory test results had been as follows: hemoglobin 6.4 g/dL (37–47%), mean corpuscular volume (MCV) 56.5 fL (88–99 fL), iron 8 µg/dL (37–145 µg/dL), ferritin 2 µg/L (482 µg/dL (225–450 µg/dL)). She had been started on daily oral ferrous sulfate (Oroferon[®], Koçak Farma). After about 1 h following experienced hives and tightness in the throat. She had been treated in an emergency room (ER) and stopped the drug. Six months later and was started on IPC (Maltofer[®], Abdi Ibrahim) treatment. After about 5 h following the drug, she had urticarial lesions all over the

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0,109€ kWh

0,076€

0,305€

Since the patient needed to receive treatment due to profound anemia, desensitization to an iron preparation was planned and IPC was performed. The procedure was based on the dose protocol previously applied and reported to be successful by Demir *et al.* for ferrous sulfate and dextran (112.50/5 ml of ferrous sulfate complex being equivalent of 20 mg elemental iron and 357 mg/5 ml of IPC being equivalent of 100 mg/ml) was combined with 4 ml of SS to obtain the first vial with a concentration of 4 mg/ml. This solution was further diluted 10 times. The solutions were reproduced as necessary. The doses were administered with 30-min intervals on day 1; vital signs were recorded on the second and third days were 1 h except the last step. The full dose containing 5 ml of the original solution was given 6 h after the previous dose. The patient continued the treatment without problem for the subsequent 6 months.

Day	Vials (n)	Volume (ml)	Equivalent of iron (mg)
Day 1	1	0.1	0.008
2	2	0.2	0.016
3	3	0.3	0.024
4	4	0.4	0.032
5	5	0.5	0.040
6	6	0.6	0.048
7	7	0.7	0.056
8	8	0.8	0.064
9	9	0.9	0.072
10	10	1.0	0.080
11	11	1.1	0.088
12	12	1.2	0.096
13	13	1.3	0.104
14	14	1.4	0.112
15	15	1.5	0.120
Day 2	16	1.6	0.128
17	17	1.7	0.136
18	18	1.8	0.144
19	19	1.9	0.152
20	20	2.0	0.160
Day 3	21	2.1	0.168
22	22	2.2	0.176
23	23	2.3	0.184
24	24	2.4	0.192
25	25	2.5	0.200
26	26	2.6	0.208
27	27	2.7	0.216
28	28	2.8	0.224
29	29	2.9	0.232
30	30	3.0	0.240

Table 1: Protocol for desensitization to iron (III)-hydroxide polymaltose

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Although gastrointestinal side effects with oral iron preparations are frequent, allergic reactions are rare, including erythematous maculophotodermatitis with sodium ferrous citrate, and anaphylactic reaction against the dextran content of intravenous iron preparations.^[1]

Drug desensitization is a procedure aiming to administer a medication safely to a patient who is allergic to it; rapid or slow protocols and delayed-type hypersensitivity reactions, respectively. It is recommended to start the procedure with 1:1000–1:100 of the drug dose.

A slow desensitization protocol lasting for 4 days for ferrous sulfate in a patient with delayed-type drug allergy had previously been reported. A slow protocol lasting for 18 days for ferrous sulfate in an anaphylaxis patient; they completed the protocol with a drug dosage as high as on four different days.^[2]

Our desensitization protocol was based on a classically successful, three-vial, 10-fold dilution model applied previously for other drugs. It provided us to achieve tolerance induction in 3 days without the need for a desensitization protocol.^[2]

Developing desensitization protocols for medications with no alternative provides an important clinical basis. We demonstrated the efficacy of the IPC and believe that it can be instructive for future similar cases.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her name and initials to be reported in the journal. The patient understands that name and initial will not be published and due efforts will be made to conceal identity.

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Nil.

Conflicts of interest

There are no conflicts of interest.

» References

1. Novey HS, Pahl M, Haydik I, Vaziri ND. Immunologic studies of anaphylaxis to iron dextran in patients on renal dialysis. *Am J Med* 1978;64:100-103.

2. Demir S, Olgac M, Unal D, Gelincik A, Colakoglu B, Buyukozturk S. A practical and successful desensitization protocol for ferrous sulfate. *Int Arch Allergy Immunol* 2014;165:100-3. 

3. Ortega N, Castillo R, Blanco C, Alvarez M, Carrillo T. Oral iron cutaneous adverse reaction and successful desensitization. *Ann Allergy Asthma Immunol* 2015;115:100-103. 

4. Cernadas JR, Brockow K, Romano A, Aberer W, Torres MJ, Bircher A, *et al.* General considerations on rapid desensitization to drugs. *Allergy* 2010;65:1357-66. 

5. de Barrio M, Fuentes V, Tornero P, Sánchez I, Zubeldia J, Herrero T. Anaphylaxis to oral iron salts. desensitization protocol. *Clin Immunol* 2008;18:305-8. 

Tables

[\[Table 1\]](#)

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