Abstract 283: OPTIMAL DOSE FOR ACETYLSALICYLIC ACID PROVOCATION TEST FOR AN ACCURATE DIAGNOSIS OF NONSTEROIDAL ANTI-INFLAMMATORY DRUGS HYPERSENSITIVITY

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RATIONALE

Two different pathophysiological mechanisms have been described in NSAID-hypersensitivity:

Immunological. Mediated by specific IgE antibodies or by T cells, leading to selective reactions (**SRs**). Patients react to a single NSAID or to several NSAIDs from the same chemical group, and tolerate strong cyclooxygenase (COX)-1 inhibitors other than the culprit.

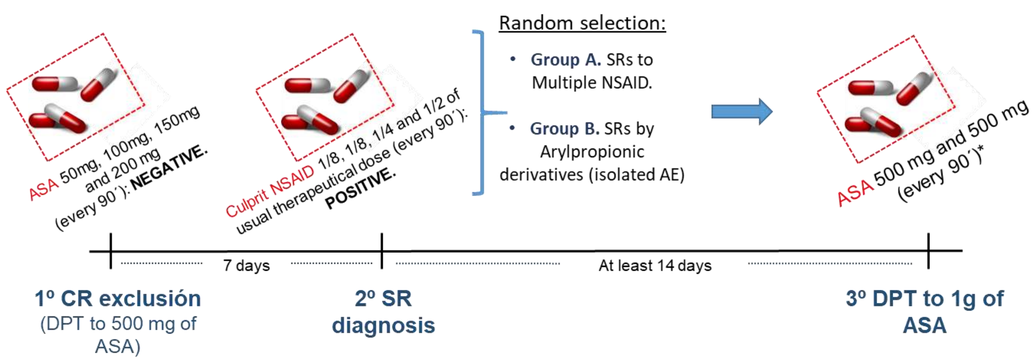
Pharmacological. Dose-dependent reactions, leading to cross-reactive hypersensitivity reactions (**CRs**). Patients develop episodes after the intake of chemically unrelated NSAIDs, especially strong COX-1 inhibitors. Patients must avoid all NSAIDs.

Therefore, controversy exists regarding if tolerance in drug provocation test (DPT) with a total accumulate dose of 500mg of acetylsalicylic acid (ASA) is optimal to exclude CR hypersensitivity.

Aim of the study: **To evaluate if doses higher than 500mg of ASA in DPT are necessary to exclude CR hypersensitivity.**

METHODS

- We randomly selected patients confirmed as **SRs to multiple NSAIDs (Group A),** and as **SRs to arylpropionic acid derivatives** manifested as isolated palpebral/facial angioedema (AE) **(Group B)**.
- **SR diagnosis:** Positive DPT(s) with the culprit(s) and negative DPT with ASA 500mg.
- We performed **DPTs achieving 1g of ASA**, followed by a two-day course of 1000 mg/8h at home* in all selected patients.



RESULTS

We included 11 patients. Median age: 38,27 year-old; 7 patients were females.

Patient No.	Gender	Age (years)	Culprit NSAID	Number of episodes	Interval of reaction (minutes)	Symptoms
Group A: Multiple SRs						
1	Male	60	Metamizole	1	5	Generalized urticaria
			Paracetamol	1	5	
2	Male	35	Paracetamol	3	60	
			Ibuprofen	1	60	
Group B: SRs to arylpropionic derivatives						
3	Female	24	Ibuprofen	1	60	Isolated AE
			Naproxen	1	60	
4	Female	32	Ibuprofen	1	240	
			Naproxen	2	360	
5	Male	40	Ibuprofen	2	30	
6	Female	28	Ibuprofen	2	180	
7	Female	44	Ibuprofen	3	60	
8	Female	43	Ibuprofen	2	20	
9	Male	24	Ibuprofen	2	60	
10	Female	30	Ibuprofen	5	30	
11	Female	65	Ibuprofen	5	240	

Table. Clinical characteristics of studied patients.

Group A: patients reacted to the culprits in DPT (urticaria). Tolerance to ASA 500mg.

SR diagnose

Group B: patients presented a median of 2.8 episodes (IR: 2-5) to ibuprofen and/or naproxen. They reacted to the culprits in DPT. Tolerance to ASA 500mg.

DPT to ASA 1 g → **ALL 11 PATIENTS TOLERATED DPT WITH ASA 1 G AND THE TWO-DAY COURSE AT HOME.**

Conclusions

- DPT with 500 mg of ASA is sufficient to achieve an accurate diagnosis of CRs and SRs, particularly in infrequent phenotypes (isolated AE by SRs and multiple SRs), which may be misdiagnosed as CRs.
- DPT with ASA is useful not only for reducing the number of patients who are unnecessarily avoiding NSAIDs but also for extending their therapeutic possibilities.

References

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Conflict of interest

The authors declare no conflict of interest.

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