Tropicamide eye drops: misuse

Tropicamide is an antimuscarinic used in eye drops to induce mydriasis in ophthalmology (1).

In 2014, the first alerts about misuse of *tropicamide* came from pharmacies located in the Occitanie region of France: 91 falsified prescriptions or suspicious requests for bottles of *tropicamide* were reported between September 2014 and July 2016. Other requests were subsequently reported by pharmacies in other regions (2,3).

A study using the reimbursement database of France's Midi-Pyrénées/Limousin health insurance system identified 10 claimants who had received more than 10 reimbursements each for bottles of *tropicamide* during 2014, one of whom had received 45 reimbursements in one month (2).

Abuse or misuse of antimuscarinic drugs is well known (2). The sought-after effects are a sensation of euphoria and well-being, visual hallucinations or even dissociation (2).

The symptoms of overdose with antimuscarinic drugs are: redness of the face, dry mouth, urinary retention, paralytic ileus, tachycardia, agitation,

confusion, hallucinations, impairment of temperature regulation, convulsions, delirium or even coma (1,2).

In practice When faced with such a request for an antimuscarinic drug, the possibility of misuse should be considered. The course of action to adopt depends on the context. Depending on the situation, one should refuse to prescribe the medication or restrict the amount dispensed; in cases of addiction disorder, it is important to know how to broach the subject with the patient.

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Anti-TNF alpha and thiopurines: lymphoma



In November 2017, the French Health Products Agency (ANSM) published a communication drawing attention to the results of a study on the long-term effects

of anti-TNF alpha (1). This study was carried out by the ANSM and the publicly funded Paris hospitals (l'Assistance publique-hôpitaux de Paris) using the French national health insurance information system (SNIIRAM). A cohort of 189 289 patients with chronic inflammatory bowel disease was followed for a median duration of 6.7 years (1,2). Around 123 000 patients received neither a thiopurine nor anti-TNF alpha; around 50 400 were exposed to a thiopurine (azathioprine or 6-mercaptopurine); around 30 300 to an anti-TNF alpha (infliximab or adalimumab); and around 14 200 to the two groups of drugs. Among this cohort of patients, 336 developed a lymphoma (2).

In comparison to no treatment with these drugs, exposure to an anti-TNF alpha as monotherapy was associated with an increase in lymphomas, with an estimated relative risk (RR) of 2.4 (95% confidence interval [CI95]: 1.6-3.6). An increased risk of

lymphoma was also observed with a thiopurine (*azathioprine* or *6-mercaptopurine*) as monotherapy: RR=2.6 (Cl95: 2.0-3.4) and with a combination of the two: RR=6.1 (Cl95: 3.5-10.8) (2).

In practice Lymphomas are known adverse effects of immunosuppressants (3). This study, using a very large cohort, allows this risk to be quantified and set against the expected benefits for a patient, hence clarifying the treatment decision.

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¹⁻ Prescrire Rédaction "Fiche M1. Le syndrome atropinique" *Rev Prescrire* 2017; **37** (401 suppl. Interactions médicamenteuses).

²⁻ Service de pharmacologie clinique de Marseille "Soyons vigilant sur le risque d'abus de tropicamide (Mydriaticum)" undated: 1 page.
3- ANSM "Présentation des résultats de l'enquête officielle d'addictovigilance des spécialités contenant du tropicamide. Comité technique des Centres d'évaluation et d'information sur la pharmacodépendance" 20 January 2017: 18 pages.

¹⁻ ANSM "Risque accru de lymphome chez les patients traités par anti-TNFalpha: une étude de l'ANSM en collaboration avec l'AP-HP publiée dans le JAMA - Communiqué" 7 November 2017: 1 page.

²⁻ Lemaitre M et al. "Association between use of thiopurines or tumor necrosis factor antagonists alone or in combination and risk of lymphoma in patients with inflammatory bowel disease" *JAMA* 2017; 318 (17): 1679-1686.

³⁻ Prescrire Rédaction "Infliximab: un recours, au prix de nombreux effets indésirables" *Rev Prescrire* 2015; **35** (377): 188-189.