

# A case of cardiac dysrhythmias provoked by intrathecal fluorescein injection and treated with intravenous lipid emulsion infusion

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## Objective

Intrathecal injection of fluorescein can be used to localize the exact site of cerebrospinal fluid leaks. Nevertheless, complications due to neurological and/or cardiovascular toxicity are described. We present a case of a patient with cardiac dysrhythmias responding to intravenous lipid emulsion infusion after an adverse drug event with an intrathecal injection of fluorescein.

## Case report

A localisation procedure with slow intrathecal injection of fluorescein was started in a woman with a cerebrospinal fluid leak. Due to a sudden panic reflex of the patient during the procedure, a dose of 50 mg fluorescein was instantaneously injected followed by an extravasation. Immediately afterwards, she presented two episodes of convulsions which were successfully treated with lorazepam. Then, she became more and more hypotensive and experienced sudden cardiac dysrhythmias together with worsening of airway function not responding to standard treatment.

As fluorescein has lipophilic characteristics, treatment with intravenous lipid emulsion infusion was started. Within ten minutes after the infusion, the dysrhythmias faded out and the blood pressure stabilized. Once the patient was sufficiently stable, a cerebrospinal fluid drain was placed by a surgical procedure to flush out as much remaining fluorescein as possible. After two days of intensive care stay, the patient recovered without further sequelae.

## Conclusion

The aetiology of the neurological and cardiovascular toxicity of fluorescein remains unclear. To the best of our knowledge, we are unaware of any other reports supporting the use of intravenous lipid emulsion infusion for fluorescein toxicity.

In the present case, the cardiac dysrhythmias provoked by fluorescein, were refractory to standard treatment but rapidly responded to intravenous lipid emulsion infusion. Our findings suggest that the instant availability of intravenous lipid emulsion infusion could be suggested as a safety measure to procedures for intrathecal injection of fluorescein.



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