

Catatonia following Autologous Tumor-Infiltrating Immunotherapy and IL-2 Infusions: A Case Report

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CASE

AB is a 59-year-old male with a history of mild depression and recurrent metastatic oropharyngeal carcinoma.



BACKGROUND

While there are many examples of catatonia associated with autoimmune conditions and encephalitis, few articles have recorded associations with immunotherapy treatments. We describe a case of catatonia following Autologous Tumor-Infiltrating Immunotherapy (TIL) and Interleukin-2 (IL-2) therapies.

TIL involves removing an individual's own immune cells, manipulating them to respond directly to the target cells, and then administering them back into the individual. IL-2 is a cytokine involved in T cell growth, activation, and differentiation that can stimulate regression in certain cancers.

DISCUSSION

This case highlights catatonia as a potential adverse effect from TIL and IL-2 Infusions in cancer treatment. The temporal proximity of symptom onset to the infusions supports a connection.

- There is a known association between aberrations in pro-inflammatory cytokines and psychiatric illness, including soluble IL-2 receptors.¹
- An elevation in pro-inflammatory cytokines can result in a hypoactive motor state, such as catatonia.²
- The neurotoxic effects of an inflammatory response may be responsible for the catatonic state.²
- Systemic inflammation would represent a more unusual mechanism as most non-psychiatric presentations of catatonia are related to infectious or autoimmune processes.²

AB did not respond to systemic steroids and medical workup did not indicate an infectious etiology. Other notable points in this case are AB's lack of past psychiatric history, aside from mild depression, and the sudden onset of symptoms with quick resolution.

AB's initial score on the Bush-Francis Catatonia Rating Scale	
Immobility/stupor	1
Mutism	1
Staring	2
Posturing/catalepsy	2
Echopraxia/echolalia	2
Verbigeration	2
Negativism	1
Waxy flexibility	3
Withdrawal	2
Total Score	16

CONCLUSION

- This case uniquely describes catatonia as an adverse event associated with TIL and IL-2 therapies and potentially implicates cancer-focused immunotherapy in general.
- As it only depicts a single event, the generalizability of risk for catatonia associated with these therapies is unclear.
- The rapid improvement in symptoms and effectiveness of treatment with lorazepam alone is encouraging for future cases.

REFERENCES

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