Chemoresistante Low-risk GTN Successfully Treated With Immunotherapy – a Case Report

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PG -TOCOGYNECOLOGY

1. BACKGROUND & CASE PRESENTATION

BACKGROUND:

- Gestational trophoblastic neoplasia (GTN) may develop following a complete hydatidiform mole.
- Standard first-line treatment for low-risk GTN is single-agent chemotherapy.
- Chemoresistant low-risk GTN can be difficult to manage after multiple treatment regimens.
- Pembrolizumab is an anti-PD-1 monoclonal antibody that blocks PD-1 interaction with PD-L1/PD-L2, restoring T-cell-mediated antitumor activity in refractory cases.

CLINICAL CASE

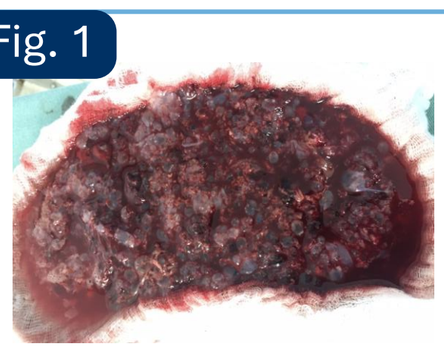
- 37-year-old woman (G1) with a history of complete hydatidiform mole, who underwent uterine evacuation.
- During postmolar follow-up, serum human chorionic gonadotropin (hCG) plateaued at approximately 8,500 IU/L, with myometrial invasion.
- FIGO stage I; prognostic score 4.
- Disease persisted despite sequential single-agent and multiagent chemotherapy.
- The patient was diagnosed with chemoresistant low-risk GTN with non-measurable disease.
- Pembrolizumab was initiated, resulting in sustained remission with no treatment-related adverse events.

2. TREATMENT TIMELINE

1 May 2023	Uterine evacuation following complete hydatidiform mole.
2 Sep 2023-Jun 2024	Sequential single-agent chemotherapy: methotrexate/folinic acid (6 cycles), carboplatin (4 cycles), actinomycin D (4 cycles); hCG plateau ~30 IU/L.
3 Jul 2024	Multiagent TP/TE: paclitaxel/cisplatin and paclitaxel/etoposide (2 cycles); persistent disease, hCG plateau ~20 IU/L.
4 Sep 2024	Conventional chemotherapy discontinued.
5 Oct 2024	International specialist discussion (ISSTD World Congress, Lyon): treatment options were escalated etoposide/cisplatin (EP 500/60) or pembrolizumab.
6 Nov 2024	Pembrolizumab initiated: 200 mg every 3 weeks.

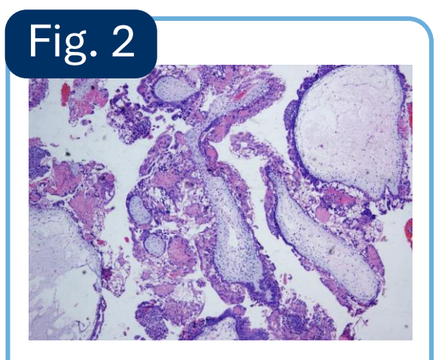
3. CLINICAL AND IMAGING FINDINGS

Fig. 1



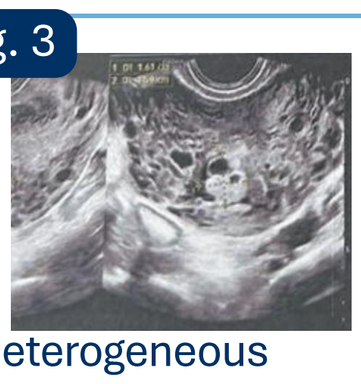
Gross appearance of a complete hydatidiform mole

Fig. 2



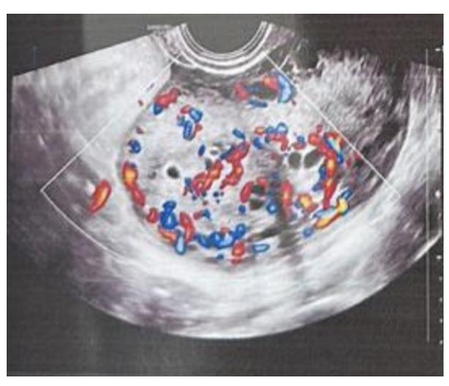
Histopathological examination

Fig. 3



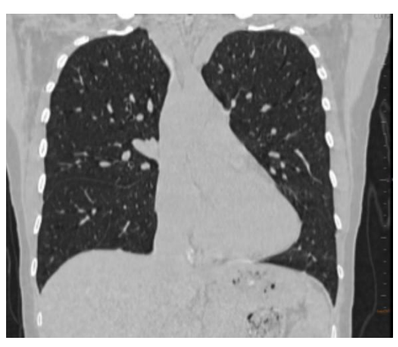
Heterogeneous Myometrium with a lucunar pattern

Fig. 4



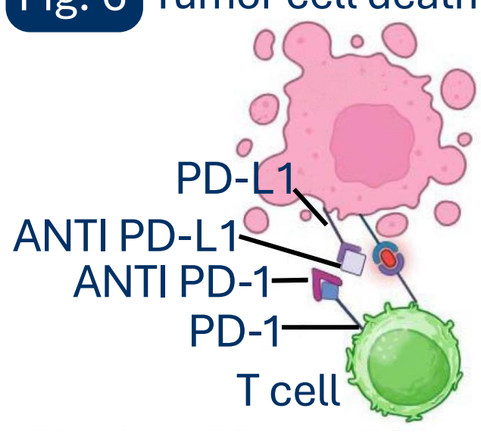
Myometrium with a hypervascular lesion

Fig. 5



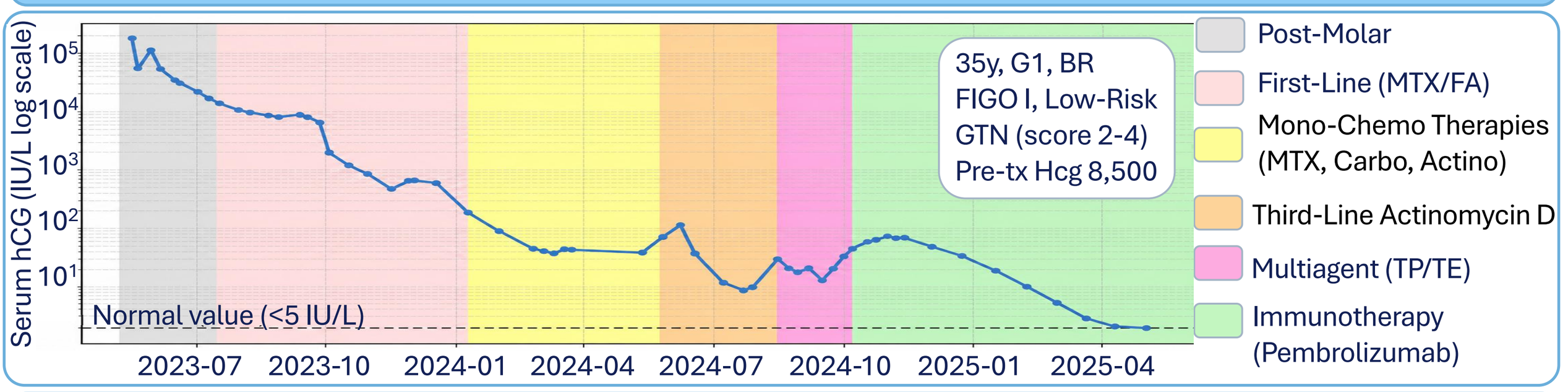
CT scan showing non-measurable disease

Fig. 6 Tumor cell death



Blocking PD-1 or PD-1 allows T-cell killing of Tumor cell

3. SERUM hCG RESPONSE AND RESULTS



4. CONCLUSIONS

Pembrolizumab successfully treated this chemoresistant low-risk GTN case, with an excellent safety profile.

* This case highlights the importance of multidisciplinary discussion in cases of therapeutic failure and supports immunotherapy as a promising option for selected patients with chemoresistant low-risk GTN.