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Meningism in a patient with Urothelial Cancer
“When you have excluded the impossible…”
DISCLOSURE OF INTEREST

No disclosure to declare
**Short report**

Male, 57 y/o, smoker

- **05.2015** Macrohaematuria -> Abdominal EUS -> Bladder lesion -> TURBT. Dx: muscle-invasive transitional cells urothelial carcinoma G2-3.
- Patient refused cistectomy/adj treatments.
- **07.2015** Second look negative for disease.
- **11.2016** Gait disturbance and right leg pain -> PET-TC FDG: pelvic mass on the right, abdominal N+.
  - **11.2016 – 03.2017** RT on pelvic mass + carboplatin/gemcitabin/pembrolizumab for 6 cycles, with **metabolic complete response (mCR).**
- **03.2017 – 04.2018** Pembrolizumab for 19 cycles, with **stable mCR** and PS 0.
Meningism...why?

- **PET-TC tb FDG:** -ve for systemic recurrence, stable mCR.
- **Brain MRI:** mild CE of ventricles walls.

**Immune-mediated meningitidis?**  
**Meningeal carcinosis?**  
**Infective meningitidis?**
Senior neuroradiologist and neurologist were sceptical about carcinosis: **systemic disease was stable, not typical CE, CTC –ve.**

Immune-mediated aseptic meningiditis is described for Pembrolizumab (neurological iAEs 6.1%, meningitidis 15%). He started DX 8 mg x 3/day.

Senior oncologist suggested **TBC meningitidis**: clear CSF, Lym ↑, P ↑ and cranial basal involvement. Quantiferon test not reliable under DX. He started TBC tx.
In a few weeks, despite maximal treatment with DX and TBC tx...

- Clinical manifestation **worsening**: VI, VII, VIII and IX cranial nerve palsies, cerebellar ataxia, nystagmus, cervical and back pain. **NGT** was placed to continue TBC tx.

- **New LP and CSF analysis**: Clear CSF. Glu↓, Lym ↑, P ↑, **CTC positive**. Gram strain/culture/PCR –ve for TBC, BK virus, CMV, EBV, HSV1-2. Autoabs panel -ve.

- The patient died in a 1 month since the first symptoms.
Take home messages

➢ Meningeal carcinosis (MC) is a very rare event in Urothelial Cancer (33 cases in literature) and usually appears in systemic advanced disease.

➢ Immunotherapy seems to have played a role in MC appearance, not only because of survival and natural history prolongation, but also in selecting a brain resistant sub-clone, while systemic cancer disappeared.

➢ “By dissecting treatment resistance through an evolutionary lens, the field will advance towards true precision medicine for Urothelial carcinoma.”¹

The “Darwinian” landscapes of Urothelial carcinoma

“... whatever remains, however improbable, must be the truth.”

Thank you