19-21 GIUGNO ROMA
UNIVERSITA' CATTOLICA DEL SACRO CUORE CENTRO CONGRESSI EUROPA
RESEARCH and CARE: FROM BENCH, TO BEDSIDE, TO COMMUNITY
Promosso da SIMIT
16° CONGRESSO NAZIONALE ICAR
Italian Conference on AIDS and Antiviral Research
P 86
POSTER 4 YOU ICAR 2024

Extrapulmonary Tb Diagnosed During Cabotegravir/Rilpivirine Long Acting Therapy: A Novel Pharmacologic Challenge

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Background

- The new cabotegravir/rilpivirin-Long Acting (CAB/RPV-LA) regimen recently introduced for persons living with HIV (PLWH) will modify clinicians perspectives on HIV comorbidities and drug-drug interactions (DDI) management, mainly for the long dosing interval.

Case presentation

- We present the case of a 43-y East-African woman with HIV infection diagnosed in 2011, B3 stage for ophthalmic zoster with post-herpetic neuropathy, hypercholesterolemia, wild type GRT, many cART regiments (included dolutegravir,DTG) discontinued for multiple intolerance (headache, vertigo, nausea, diarrhea, anxiety). Previous clinical history reported in 2012 right ovariectomy for cyst and histologically confirmed retroperitoneal abscess, followed by persistent abdominal pain in right lower quadrant (RLQ) suspected for adhesive syndrome. She switched to CAB/RPV-LA/2 months and few days later the 1st injection she started to report fever, flu-like symptoms and exacerbation of RLQ pain. After two weeks fever and pain persisted and she was admitted in Infectious Disease Yard. Diagnostic test showed normal White Blood Cell and Procalcitonin, C-reactive-protein(CRP)135 mg/l (n.v.<5), normal chest x-ray. An abdominal CT-scan showed an irregular RLQ mass of 5x4 cm and colliquated lymphadenitis. Blood culture were negative and Quantiferon positive. PCR for Mycobacterium Tuberculosis (MTB) on endotracheal aspirate was negative
- An antibiotic empirical therapy (piperacillin/tazobactam) was introduced, with incomplete fever disappearance. After one week a laparotomic biopsy confirmed a tuberculous abscess. During hospitalization, the 2nd CAB/RPV injection was renewed.
- The choice of anti-MTB therapy was challenging considering that coadministration of CAB/RPV-LA is controindicated with rifamycines. Considering the importance of rifampin(RIF), the impossibility of waiting so long, the pill-burden and the unavailability of CAB and RPV Therapeutic Drug Monitoring (TDM), anti-MTB therapy (RIF 600+isonyazid 300+etambutol 1200) was started together with a new cART with DTG 50 mg BID and FTC/TDF QD. Seeing the high potentiality of both cumulative neuropsychiatric toxicity and decreased dolutegravir concentrations due to DDI, after 5 days TDM of DTG was performed, and an adequate therapeutic level of 1511 ng/ml was found. Follow-up blood test didn't show any alteration. The patient was discharged 1 week later with mild residual abdominal pain, mild CRP elevation. Two months later HIV-RNA is <20 cp/ml, CD4+ 253 cell/µl, she assumes all therapy reporting no particular side effects. Blood culture for MTB were negative.

Conclusions

- Long term CAB/RPV-LA interactions must be taken in account. TDM is an useful option in managing cART in patients with comorbidities, especially when CAB/RPV-LA need to be discontinued. This case enhance the indication of screening all PLWH for latent TB infection especially before starting CAB/RPV-LA.

References

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