EUROPEAN OPHTHALMIC PATHOLOGY SOCIETY 60th ANNUAL MEETING

Date of Meeting:	25th May– 28thMay 2022
Location:	Valencia, Spain
Member Name:	Stefan J. Lang
Address:	Eye Centre University of Freiburg Killianstr. 5 79106 Freiburg Germany
Email:	stefan.lang@uniklinik-freiburg.de
Case number:	210999
Material Submitted:	Digital slide

Suspicion of Uveitis under Treatment with a Tyrosine Kinase Inhibitor

Clinical history:

A 63-year-old patient presented with a loss of vision (0.1) in the right eye. On examination two years earlier, visual acuity was not impaired (0.8). Clinical examination showed a cellular infiltration of the vitreous. Due to a multiple myeloma, which was first diagnosed in 2018, the patient was under treatment with systemic tyrosine kinase inhibitor. Initial suspicion was uveitis due to the systemic treatment. However, steroid treatment showed no improvement. Vitrectomy was performed to exclude malignancy and improve vision.

Ocular pathology:

Microscopic examination:

A cell-rich vitreous infiltrate was seen. The cells showed a plasma cell-like appearance. Dysplastic aspects were present. In addition, deformed nuclei, nucleoli, polymorphism, and apoptosis were evident.

Molecular Pathology:

Two monoclonal rearrangements were seen at 244 bp and at 128 bp.

Diagnosis:

Extramedullary vitreal plasmacytoma

Discussion:

Tyrosine kinase inhibitors are used to treat oncologic diseases (e.g. Acute myeloid leukemia, Chronic myelogenous leukemia, renal cell cancer,…), rheumatoid arthritis, Crohn's disease, Colitis ulcerosa and immune thrombocytopenia[1]. Several side effects have been described such as diarrhea, fatigue, skin damage, blood count changes, hypertensionand hypothyroidism[2].Concerning ophthalmology, central serous retinopathy, retinal pigment epithelium changes, keratitis, vitreous hemorrhage and uveitis can rarely be seen[3]. Our patient suffered from Meningiosislymphomatosa and other extramedullary manifestations after allogenic stem cell transplantation for multiple myeloma in 2019. Therefore, tyrosine kinase inhibitor treatment was initiated. A side-effect of the systemic treatment was initially suspected. However, after non-response to steroid treatment, vitrectomy was performed to

obtain material for histopathologic examination. It showed extramedullary plasmacytoma. There have been several reports of extramedullary plasmacytoma in and around the eye[4]as iris and ciliary body involvement[5]. It can also mimic anterior or intermediate uveitis[6,7]. In our case, there was a recurrence of the extramedullary plasmacytoma in the posterior segment 3 months later. Again, intravitreal therapy with methotrexatewas administered.

References:

1. Thomson RJ, Moshirfar M, Ronquillo Y. Tyrosine Kinase Inhibitors. [Updated 2021 Sep 14]. In: StatPearls Publishing; 2021 Jan-. https://www.ncbi.nlm.nih.gov/books/NBK563322/

2. Allouchery M, Tomowiak C, Lombard T, Pérault-Pochat MC, Salvo F. Safety Profile of Ibrutinib: An Analysis of the WHO Pharmacovigilance Database. Front Pharmacol. 2021 Oct28;12:769315. doi: 10.3389/fphar.2021.769315. PMID: 34776981; PMCID: PMC8580940.

3. Yılmaz F, Albayrak M, Tığlıoğlu P, Tığlıoğlu M, Sağlam B, Reis Aras M, Maral S, Afacan Öztürk HB. Vitreous hemorrhage: A rare ophthalmic adverse effect due to imatinib treatment. J Oncol Pharm Pract. 2021 Nov 13:10781552211060730. doi: 10.1177/10781552211060730.
Epub ahead of print. PMID: 34775854.

4. Meyer HJ, Ullrich S, Hamerla G, Surov A. ExtramedullăresPlasmozytom [ExtramedullaryPlasmacytoma]. Rofo. 2018 Nov;190(11):1006-1009. German. doi: 10.1055/a-0604-2831. Epub 2018 Oct 8. PMID: 30296807

5. Selvan H, Kashyap S, Sen S, Chawla B, Lomi N, Gupta V. Trabeculectomy in an unsuspected extramedullary iris-ciliary body plasmacytoma. Eur J Ophthalmol. 2020 Apr 21:1120672120920225. doi: 10.1177/1120672120920225. Epub ahead of print. PMID: 32314602.

6. Ayton T, Cherepanoff S, Gottlieb D, Sewell WA, Smith S, Hooper C. Intraocular solitary extramedullary
plasmacytoma presenting as unilateral anterior and intermediate uveitis preceded by refractory glaucoma.
BMC Ophthalmol. 2021 Jan 30;21(1):66. doi: 10.1186/s12886-021-01822-9. PMID: 33516180;

7. Huismans H. Rezidivierende Iritis alsInitialsymptombeimPlasmozytom (IgG-Typ) [Recurrent iritis as the initial symptom in plasmacytoma (IgG type)]. KlinMonblAugenheilkd. 1985 Aug;187(2):126-8. German. doi: 10.1055/s-2008-1051003. PMID: 4057902