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1 TUMOUR ASSOCIATED MACROPHAGES IN HPV-RELATED CARCINOMA WITH ADENOID CYSTIC LIKE FEATURES OF THE SINONASAL TRACT; A REVIEW OF THREE CASES

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Background HPV- related carcinoma with adenoid cystic like features of the sinonasal tract is a newly describe entity with histological and immunophenotypic features of surface derived and salivary gland carcinoma. It affects females more than males with age range of 40–70 years and is linked to high risk HPV infection. Most cases present with nasal obstruction and epistaxis. They consist of basaoid cells growing in various sizes separated by fibrocollagenous stroma. It is believed to have a good prognosis. Tumor-associated macrophages (TAMs) are activated macrophages associated with tumor progression in various cancers. TAMs can polarize M1 or M2 type. M1 has a pro-inflammatory function and kills pathogens. Conversely, M2 shows immunosuppressive action and promotes tumor growth. CD68 is known as a pan-macrophage marker.

We evaluate the CD68 expression in three cases of HPV-related carcinoma with adenoid cystic like features of the sinonasal tract.

Methods Three cases of HPV-related carcinoma with adenoid cystic like features were retrieved from our archives and stained with p16 and CD68 antibodies. Data was analyzed using spss version 21.

Results Patient ages were 46, 48 and 56 years old respectively, with a female to male ratio of 2:1. Histology showed epithelial surface dysplasia overlying basaoid cell growing in tubular and cribriform patterns. All were strongly positive for p16 stains (figure 1). CD68 showed intratumoral and peritumoral expression in two cases while, one case showed only peritumoral expression. Infiltration of tumour associated macrophages (M2) CD68 cell in this study is associated with increase recurrence of HPV-related adenoid cystic carcinoma of the sinonasal tract (figure 2).

Conclusions The targeting of TAMs in HPV-related adenoid cystic carcinoma of the sinonasal tract and other cancers should be explored in the future using macrophage targeted approach.

Ethics Approval Health research ethics committee ABUTH/ HREC/Y/2017

REFERENCES

THE MULTI-PHYSICS AUTOMATED RECONFIGURABLE SEPARATION (MARS®) SYSTEM PROVIDES HIGH PURITY, HIGH RECOVERY AND HIGH THROUGHPUT ENRICHMENT OF IMMUNE CELLS FOR IMMUNOTHERAPY

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Background Immunotherapies have proven to be a potent disruptor of cancer. Large quantities of purified lymphocytes are needed for expansion and downstream manipulation. This purification step has proven to be a major bottleneck for a streamlined cell production process and will only worsen as CAR-T cell therapies move into the clinic. In particular, autologous CAR-T cell therapies directly from cancer patients frequently undergoing existing therapies will require a cell purification technique that provides high recovery, high purity, and high throughput, while being gentle on the cells to ensure downstream efficacy. We present here an integrated system based on multiple physics principles with built-in technologies to achieve cell purification, concentration, and target cell isolation with high recovery and purity at an unprecedented sample flow rate. This platform – the Multi-physics Automated...