

Solitary brain metastasis of HER-2 positive breast cancer in a young premenopausal woman

Anamaria Dukić^a, Katarina Čular^a, Natalija Dedić-Plavetić^b

^a*School of Medicine, University of Zagreb*

^b*University Hospital Centre Zagreb, Department of Oncology*

Anamaria Dukić 0000-0002-0810-3982, Katarina Čular 0000-0002-0454-4270, Natalija Dedić-Plavetić 0000-0003-0505-4756

Key words: Advanced breast cancer, chemotherapy, radiotherapy, hormone therapy, brain metastasis

Breast cancer is the most common invasive cancer in women worldwide. It is the second leading cause of cancer death in women. Most frequently it metastasizes to the liver, lungs, bones, brain and lymph nodes. The treatment depends on the tumor's subtype, including hormone receptor status, such as estrogen and progesterone and HER2 status. Furthermore, it depends on the stage of the tumor, genomic markers, patient's age, general health, and menopausal status. The patient is a 31-year old female who was diagnosed with invasive breast cancer and underwent surgery at the end of 2015. PHD showed an invasive cancer with estrogen and progesterone receptor positivity of 70%, Her2+ luminal B and T2N1M0. She was treated with adjuvant chemotherapy with doxorubicin and cyclophosphamide, along with pegfilgrastim, paclitaxel and trastuzumab. Afterwards, she had radiotherapy, 50Gy in 25 fractions. Next, she got adjuvant hormone therapy with tamoxifen and goserelin, later replaced by exemestane. In 2017, she had endometrial hyperplasia and underwent curettage. Because of metrorrhagia she had hysteroscopy with polypectomy and myomectomy. At the beginning of 2019, she had severe headaches so MSCT was done. She was diagnosed with metastatic brain tumor in the right parietal lobe, Her2+ and ER and PR negative. The patient is now recovering from brain surgery and stereotactic radiosurgery is being considered. Solitary brain metastasis without visceral metastases requires a specialized management approach. Systemic therapy is continued, and local treatment is added, resection followed by radiotherapy.