Intraoperative brachytherapy

Brain metastases are the most common intracranial malignancies in adults. Surgical resection is the preferred treatment approach when a pathological diagnosis is required, for symptomatic patients who are refractory to steroids, and to decompress lesions causing mass effect. Radiotherapy is administered to improve local control rates after surgical resection. After a brief review of the literature describing the treatment of brain metastases using whole-brain radiotherapy, postoperative stereotactic radiosurgery, preoperative radiosurgery, and brachytherapy, we compare patient-related, technical, practical, and radiobiological considerations of each technique. Finally, we focus our discussion on intraoperative brachytherapy, with an emphasis on the technical aspects, benefits, efficacy, and outcomes of studies utilizing permanent Cs-131 implants [1)].

1)
Mahase SS, Navrazhina K, Schwartz TH, Parashar B, Wernicke AG. Intraoperative brachytherapy for resected brain metastases. Brachytherapy. 2019 Mar 5. pii: S1538-4721(18)30678-0. doi: 10.1016/j.brachy.2019.01.011. [Epub ahead of print] Review. PubMed PMID: 30850332.