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Direct Versus Extended Endoscopic Trans-sphenoidal Approach for Non-functioning Pituitary Adenoma

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Statement of the Problem: In recent years, neurosurgeons have performed endoscopic endonasal trans-sphenoidal surgery for the sellar lesion. This is direct surgery without going through the brain tissue with fewer side effects, fast recovery and short hospital stay. There are several surgical techniques in this field. Due to the limitation of the narrow working space, there was a problem that the tumor could not be completely removed. The technique of endoscopic endonasal trans-ethmoidal-trans-sphenoidal approach surgery has been applied. We believe it will increase the surgical area and can remove more tumors. But there is no information in the research report. The objective is to compare the efficacy of an endoscopic endonasal trans-sphenoidal approach with the endoscopic endonasal trans-ethmoidal-trans-sphenoidal approach in completely removing tissue in the non-functioning pituitary adenoma patients. **Methodology & Theoretical Orientation:** Review of admission form, operative note, OPD card and preoperative and postoperative MRI image in patients undergoing endoscopic endonasal trans-sphenoidal approach surgery in Phramongkutklao hospital, Thailand from 2007–2022. **Findings:** In total, 56 patients were enrolled, including 31 males and 25 females. We divided patients into 2 groups. The first group, there were 13 males (59.1%) and 9 females (40.9%) with an average age of 49 ± 15.53 years during 2007-2014. The others, there were 34 cases; 18 males (52.9%) and 16 females (47.1%) with an average age of 51.94 ± 15.78 years during 2015-2022. The first one was performed by trans-sphenoidal approach and found the residual tumor 2.28 cm³ more than those that had surgery by trans-ethmoidal-trans-sphenoidal approach surgery, and found residual tumor 1.09 cm³ with statistical significance ($P=0.032$). The residual tumor location found was on the right and posterior part of the lesion. **Conclusion & Significance:** Comparing the endoscopic endonasal trans-sphenoidal with the endoscopic endonasal trans-ethmoidal-trans-sphenoidal approach surgery, fewer residual pituitary tumors were found in the second group than in the other one with statistical significance ($P=0.032$).

Biography

Paewadee Sukonpatip has expertise in operations and in neurosurgery. She was a fifth year neurosurgery resident. Her intention in giving the best care to the patients in Phramongkutklao hospital all the time while she was working. She is motivated by the mission to help people relieve themselves from their illness. She is interested in endoscopic surgery. So she decided to choose to do research into endoscopic Endonasal surgery in pituitary tumor patients. She thinks these will help her give a good quality of care to her patients.