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BRAIN AND SPINE 3 (2023) 101794 102220**AGE, MIB1 EXPRESSION AND WIDENING OF THE INTERNAL ACOUSTIC MEATUS ARE ASSOCIATED WITH POOR PREOPERATIVE HEARING IN VESTIBULAR SCHWANNOMA PATIENTS.**Lorenz Dörner¹, Jens Schittenhelm¹, Vitor Goncalves², Elisa-Maria Suhm¹, Vanessa Ries¹, Marcos Tatagiba¹, Felix Behling¹. ¹ University Hospital Tübingen, Tübingen, Germany; ² University of Porto, Porto, Portugal

Oral e-Poster Presentations - Booth 2: Skull Base 3, September 27, 2023, 4:10 PM - 4:50 PM

Background: Preoperative hearing function shows wide variations among patients diagnosed with vestibular schwannoma. Although tumor size seems to be of importance other factors influencing hearing function are frequently discussed.**Methods:** We analyzed clinical factors, imaging data and the expression of the proliferation marker MIB1 as potential influencing factors on the preoperative hearing function in a retrospective cohort of 268 vestibular schwannomas. Audiometry results were quantified applying the Gardner-Robertson Score. Uni- and multivariate analyses were performed.**Results:** A Gardner-Robertson Score of 1 or 2 was documented in 191 patients (71.3%). Factors associated with a poor preoperative hearing function were patient age over 59.8 years ($p < 0.0001$), prior radiotherapy ($p = 0.0105$), a pre-operative tumor volume over 6.34 cm³ ($p = 0.0395$), widening of the internal acoustic meatus by at least 100% compared to the healthy side ($p = 0.0005$) and an expression level of MIB1 of at least 1.7% ($p = 0.0059$). In the multivariate nominal logistic regression older age (OR 11.4, $p = 0.0001$), higher MIB1 expression (OR 9.1, $p = 0.0034$) and widening of the internal acoustic canal (OR 14.1, $p = 0.0079$) were independent factors associated with poor preoperative hearing.**Conclusions:** Poor preoperative hearing function in patients diagnosed with vestibular schwannoma are associated with advanced age, increased proliferative activity and widening of the internal acoustic canal.

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BRAIN AND SPINE 3 (2023) 101794 102221**OUTCOMES IN PATIENTS UNDERGOING ENDOSCOPIC ENDONASAL SURGERY FOR CRANIOPHARYNGIOMA: SINGLE INSTITUTE EXPERIENCE**Akhilesh Gowda G B¹, Prakash Nair¹, H.V. Easwer¹, Gowtham Matham¹. ¹ Sree Chitra Tirunal Institute Of Medical Sciences And Technology, Thiruvananthapuram, kerala, india, THIRUVANANTHAPURAM, India

Oral e-Poster Presentations - Booth 2: Skull Base 3, September 27, 2023, 4:10 PM - 4:50 PM

Background: The Management Of Craniopharyngioma Offers A Great Challenge Due To Its Intimate Anatomical Relationship With Important Structures And The Need For Close Follow-Up. Recent Studies Favours Endoscopic Approach To Preserving The Patient's Quality Of Life. This Study Aims To Assess The Surgical, Visual And Endocrinological Outcomes Managed By The Endoscopic Approach In Our Institute.**Methods:** A Retrospective Review Of Patients Operated On From 2017 Was Included In This Study. Pre-Operative, Operative And Post-Operative Records Were Retrieved From Patient Records. Patients Undergoing Endoscopic Endonasal Decompression Of Craniopharyngiomas Are Compared For Change In Visual, Clinical And Endocrinological Status Before And After Surgery.**Results:** This Series Included 41 Patients, With 25 Males And 16 Females. 18 Paediatric Patients Were Also Included In Our Study. Among 41 We Had 25 Fresh Cases And 16 Recurrent Cases. Totally 8 Patients Had Hydrocephalus Which Necessitated Ventriculoperitoneal Shunt Before Surgery. Among Our Study Cohort, 32 (78 %) Patients Underwent Gross Total Decompression. Post-operatively 4 Patients Required Radiotherapy And Almost All Patients Required Hormonal Supplementation. Postoperatively 27(66%) Patients Had Improved Vision, 9 Had Unchanged Visual Status And Only 4 Patients Had Deteriorated Vision.**Conclusions:** Endoscopic Endonasal Surgery Of Craniopharyngioma Is A Safe Albeit Technically Demanding Procedure. Careful Dissection Of The Tumours With The Surrounding Anatomical Structures In Consideration Will Result In Acceptable Visual, Clinical, And Endocrinological Outcomes. Endoscopic Endonasal Surgery Is Not Limited To Adults And Shows Higher Resection Rates In

Paediatric Populations. Although This Technique Is Found To Be Effective In Terms Of Visual And Surgical Outcomes, Cerebrospinal Fluid Leak, And Endocrine Dysfunctions Remain A Tough Challenge.

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BRAIN AND SPINE 3 (2023) 101794 102222**TRANSNASAL ENDOSCOPIC SURGERY OF CRANIOPHARYNGIOMAS IN CHILDREN**Mykola Guk¹, Olena Danevych¹, Volodymyr Mikhaliuk¹. ¹ Romodanov Neurosurgery Institute, Kyiv, Ukraine

Oral e-Poster Presentations - Booth 2: Skull Base 3, September 27, 2023, 4:10 PM - 4:50 PM

Background: For a long time, it was considered that transnasal approach had critical anatomically predetermined limitations for use in pediatric patients. Modern advances in neuroendoscopy and surgical technique significantly expand the possibilities of endonasal surgery in children. The goal of this study is to assess the safety, technical and anatomical features of transnasal endoscopic approach for craniopharyngiomas in children.**Methods:** During 2014-2022, 33 pediatric patients (up to 18 y.o.) were operated on with transnasal endoscopy. Among them, 20 girls (61%) and 13 boys (39%). The youngest was a 4.6-year-old patient, the oldest patient aged 17.5 years. Endoscopic transnasal approach with certain modifications was used in all patients, 0° and 30° endoscopes only were used. All cases were histologically verified. 28 adamantinomatous (85%) and 5 papillary (15%) craniopharyngiomas were diagnosed**Results:** 8 patients (24.2%) with predominantly endosellar subdiaphragmatic lesions were operated with non-extended (sellar) route. For 25 patients (75.8%) with supradiaphragmatic extrasellar tumour extension, tailored modifications of extended endonasal approach were used with the formation of large nasoseptal flaps and, if necessary, the removal of one middle turbinate. Transtuberculum-transplanum (18 cases (54.5%)), lateralised transtubercular (5 cases (15.2%)), combined with pituitary hemi-transposition and resection of the posterior clinoid (2 cases (6.1%)). Extended approach resulted in significant nasal trauma. However, with the improvement of techniques, we have made extended interventions less traumatic using 2.7 mm endoscopes.

In 22 cases (66.6%), total and subtotal removal have been achieved, and in 11 (33.4%) – partial or cyst evacuation only. In the older age group – 13-17 years (12 children (36.4%)) surgery had no differences from adult surgery, since in all patients the distance between the C5 segment of ICA was greater than 12 mm. The most critical problems have been observed in 7 patients under 6 years of age (21.2%) due to incomplete formation of sphenoid sinus and narrow nasal cavities. The were no postop mortality. Complications observed: 1 vascular injury (A2 segment), increased hypopituitarism (14 children (42.4%)), newly occurred DI – 5 cases (15.2%), visual deterioration 3 pts (9.1%), CSF leak - 5 cases (15.2%), meningitis - 2 pts (6.1%).

Conclusions: endoscopic transnasal approach in children should be considered safe and effective for infradiaphragmatic and most Kassam I-III craniopharyngiomas with cautious case selection, anatomical assessment of cases and appropriate technique. The long-term effects of sinonasal destruction in children remain not explored enough.

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BRAIN AND SPINE 3 (2023) 101794 102223**MANAGEMENT OF PEDIATRIC CRANIOPHARYNGIOMA: A LARGE EXPERIENCE FROM A SINGLE INSTITUTE**Mohamed Elbeltagy^{1,2}, Abd El Rhman Enayet^{1,2}. ¹ Neurosurgery department, Kasr Al ainy school of medicine Cairo University Hospital -Egypt, Egypt; ² Neurosurgery department, Children's Cancer Hospital Egypt

Oral e-Poster Presentations - Booth 2: Skull Base 3, September 27, 2023, 4:10 PM - 4:50 PM

Background: Craniopharyngiomas are among the most challenging pediatric brain tumors in which the optimal management strategy is always debatable and should respect the complex balance between tumor control and quality of life. Our purpose is to report our management strategies and experience extracted from treating 298 childhood craniopharyngiomas at a single institute.**Methods:** Medical records of children with craniopharyngioma treated at Children's Cancer Hospital Egypt (CCHE-57357) from 2007 to 2022 were retrospectively reviewed