

Aim

We share our experience using the endoscopic ultrasonic aspirator for the management of intraventricular, paraventricular and suprasellar lesions in children and adults.

Method

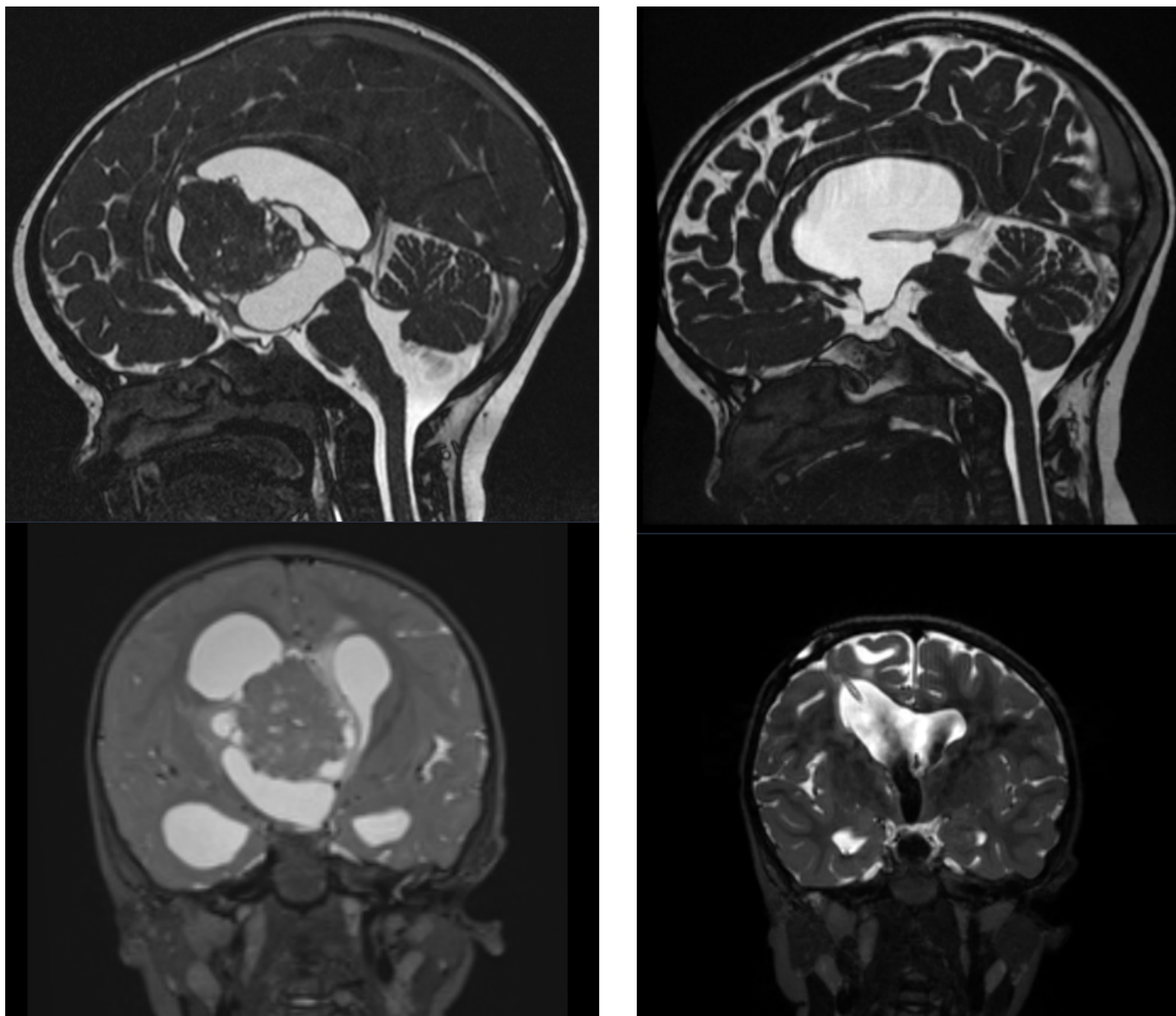
- Retrospective analysis of electronic records, laboratory results, imaging and operative notes.
- 43 patients (23 males, 20 females, 5 months to 86 years old) who underwent 51 operations using the endoscopic ultrasonic aspirator and 3 operations without

Results

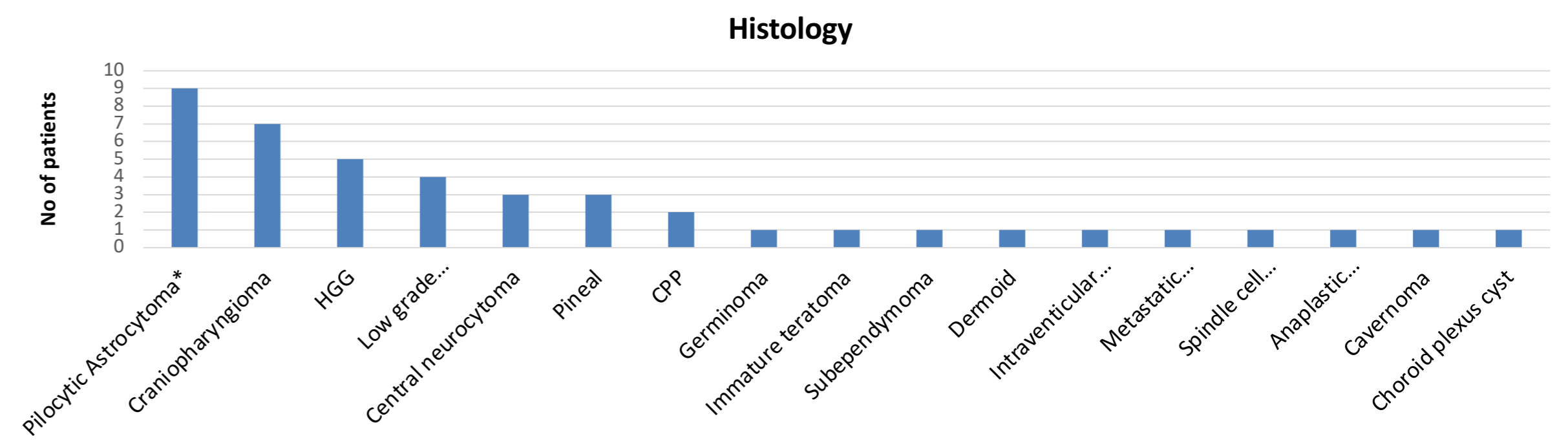
46 of 51 procedures were carried out in patients with hydrocephalus. Purely endoscopic gross-total or near-total resection was achieved in 12 procedures. A monoportal approach was used in all cases.

Some patients underwent splitting of the choroid fissure to allow access to their lesions (3rd ventricle).

Factors dictating extent of resection included tumour location, consistency of the lesion, histology (either confirmed or on smear) and adequate instrumentation.



1 year old with a choroid plexus papilloma (WHO Grade 1)



Patient Number	Sex	Age	HCP?	Histology	EOR	Monoportal Approach?
1*	M	5 months	Y	Atypical CPP (grade II)	GTR	Y
2	F	1	Y; N	CPP (grade I)	GTR (2 stages)	Y
3	M	2	Y	Bithalamic astrocytoma (grade II)	STR	Y
4	F	3	Y; Y; Y	Intraventricular meningioma	GTR (3)	Y
5	F	5	Y	Craniopharyngioma (A)	NTR	Y
6	F	5	Y	Craniopharyngioma (A)	STR	
7	F	9	Y	Diffuse infiltrative glioma (grade II/III)	Biopsy	Y
8*	F	10	Y	Craniopharyngioma (A)	STR	Y
9	F	10	Y; N	Pilocytic astrocytoma	STR (2)	Y
10	M	10	Y; N	Craniopharyngioma (A)	Cyst fenestration + biopsy; STR	Y
11	M	11	Y	Pilocytic astrocytoma	Biopsy	Y
12	M	11	N; Y	Anaplastic ependymoma	1 NTR; 1 STR	Y
13	M	12	Y	Pilocytic astrocytoma	STR	Y
14	M	13	Y	Immature teratoma	STR	Y
15	M	14	Y; Y; N	GBM	STR (3)	Y
16	F	16	Y (previous shunt)	Pilocytic astrocytoma	STR	Y
17	M	16	Y	Ganglioglioma (grade I)	STR	Y
18	M	16	Y	Germinoma	Biopsy	Y
19	F	18	Y	Cavernoma	STR	Y
20	F	18	N	Ganglioglioma (grade I)	GTR	Y
21	F	21	Y (previous ETV)	Low grade glial/glioneuronal tumour	STR	Y
22	M	22	Y	Choroid plexus cyst	GTR	Y
23	M	25	Y	Pilocytic astrocytoma	NTR	Y
24	F	26	Y; Y	Central neurocytoma (grade II)	1 STR; 1 NTR	Y
25	F	26	Y	Central neurocytoma (grade II)	STR	Y
26	F	28	Y	Central neurocytoma	STR	Y
27	F	29	Y	Pilocytic astrocytoma*	STR	Y
28	M	31	Y; Y	Craniopharyngioma	1 cyst fenestration + STR; 1 STR	Y
29	F	37	Y; Y	Pilocytic astrocytoma	1 Biopsy; 1 STR	Y
30	M	38	Y	PPTID (grade II/III)	Biopsy/STR	Y
31	M	39	Y	Papillary tumour of the pineal	Biopsy/STR	Y
32	M	39	Y	Craniopharyngioma	Cyst fenestration + STR	Y
33	M	44	Y	Diffuse HGG	STR	Y
34	M	47	Y (previous shunt)	PPTID (grade II)	Biopsy	Y
35	M	49	Y	Craniopharyngioma	NTR	Y
36*	M	51	Y (previous ETV)	Low grade glial/glioneuronal tumour (grade I)	Cyst fenestration + biopsy	Y
37	F	56	Y	GBM	STR	Y
38	M	57	Y	Spindle cell oncocyoma	STR	Y
39	M	57	Y (previous shunt)	Pilocytic astrocytoma	STR/NTR	Y
40	F	58	Y	Metastatic adenocarcinoma (lung)	Biopsy	Y
41	F	66	Y	Subependymoma (grade I)	NTR	Y
42	M	72	Y	Pineal dermoid	Biopsy	Y
43	F	86	Y	Pilomyxoid astrocytoma	STR	Y

Conclusion

The endoscopic ultrasonic aspirator is an important addition to our armamentarium; with further development, it holds considerable promise in facilitating minimally invasive resection of intracranial lesions.