



Role of T2-Weighted Coronal Magnetic Resonance Images in the Investigation of Pituitary Lesions

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OBJECTIVE:

Aim of this study was to assess role of t2-weighted coronal magnetic resonance images in the investigation of pituitary lesions

METHODOLOGY:

This study was done over a period of three years at radiology department of Rehman Medical Institute Peshawar. 50 patients' MRI pituitary were assessed in diagnosed cases of micro adenomas and macro adenomas. T2WI Coronal thin section MRI was obtained in all patients as a departmental protocol. The added benefit of lesion characteristics on T2WI was assessed. Lesion was categorized on basis of appearance on T2WI as either hyper intense (like fluid), slightly hyper intense and isointense (isointense to pituitary gland). Findings were tabulated and data was analyzed using Microsoft Excel 2016.

RESULTS:

Our results showed that among the selected 50 patients, 38 were female and 12 were male. 20 cases were of macro adenoma, 27 of micro adenoma and 3 patients were of other category (rathke cyst in 2, carcinoma in 1). Among the micro adenoma group, 60 percent lesions were isointense on T2WI, 20% were fluid like hyper intense and 20% were slightly hyper intense. Among the macro adenoma group, 70% cases were slightly hyper intense with few necrotic areas and 30% were isointense to the gland. Among the others group, the rathke cysts were hyper intense on T2WI and characteristically located in mid pituitary gland at level of stalk. The one case of pituitary carcinoma was slightly hyperintense on T2WI.

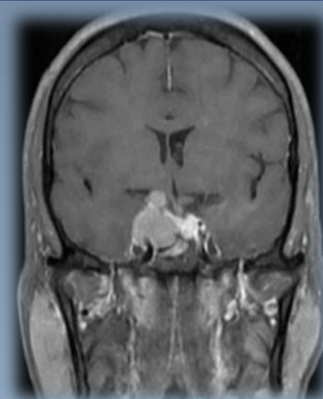


Fig. 1 T2W coronal image shows lesion in right pituitary gland causing stalk deviation with supra sellar extension and invasion of right cavernous sinus.

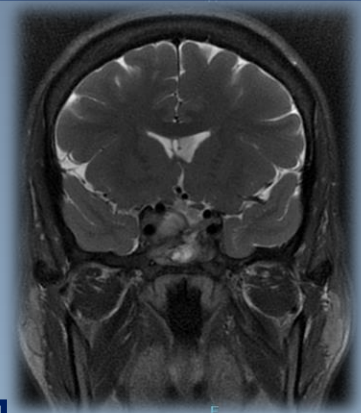


Fig 2, TIWCE coronal image shows patchy heterogeneous post contrast enhancement.

CONCLUSION:

We concluded from our results that T2WI showed pituitary lesions to be isointense in 60% cases of micro adenoma and 30% cases of macro adenomas. In cases of micro adenomas specifically, it would be difficult to locate the lesion on non-contrast MRI alone, where contrast is contra indicated and MRI is necessary for diagnosis, treatment plan and follow up. In such cases, the other indirect signs of contour deformity and stalk deviation can be relied upon

REFERENCES:

- Yuksekkaya R, Aggunlu L, Oner Y, Celik H, Akpek S, Celikyay F. Assessment of T2-Weighted Coronal Magnetic Resonance Images in the Investigation of Pituitary Lesions. International Scholarly Research Notices, vol. 2014, Article ID 650926, 6 pages, 2014
- Boellis, A., di Napoli, A., Romano, A. et al. Pituitary apoplexy: an update on clinical and imaging features. Insights Imaging 5, 753–762 (2014). <https://doi.org/10.1007/s13244-014-0362-0>.

Authors have nothing to disclose