Supratentorial Brain Tumours Related Endocrinopathies

Amir Babiker, Amani Edrees, Iman Algadi, Amal Hakami, Shariefah Al Issa, Sharief Al Watedi, Safdar Malik, Abdulrahman Al Sultan, Hessah Al Otaibi, Ayeisha Al Hazemi

King Saud University Medical City, Riyadh, Saudi Arabia

INTRODUCTION

- Brain tumors constitute the second most common tumors in childhood after leukemia.
- Benign infra-tentorial tumors, namely embryonic medulloblastoma, as well as cerebellar astrocytoma, are the commonest.
- Most of the supra-tentorial tumors (STT) are in the supra or para-sellar regions.
- Malignant tumors are rare.
- The chance for long-term cure is 50-90% with appropriate management.
- The STT and/or treatment may lead to traumatic brain injury (TBI) with endocrinopathic sequel.

METHODS

- A retrospective hospital based study of 32 children with STT reviewed at King Saud University Medical City, Riyadh, Saudi Arabia (2001-2013).
- All patients underwent intracranial surgery and occasionally additional treatment such as radiotherapy/Chemotherapy.
- The patients’ care has been followed throughout the course of management.

RESULTS

- Five patients had dynamic tests: (triple tests, n=4) (2 failed all of the tests and 1 had a failed synacthen test).
- Post operatively, 7 had DI, one required on table DDAVP and hyperglycaemia requiring insulin in one patient.
- Twenty patients received dexamethasone for 3-7 days, 4 were discharged on hydrocortisone. PICU stay was for 1-3 days on average.
- Histopathology showed variety of tumours including: 2 teratoid rhabdoid tumour, 6 gliomas, 6 astrocytoma, 4 carcinopharyngioma and 3 germnoma.
- Twelve patients required radiotherapy including 2 who also required chemotherapy.
- Follow up revealed 2 patients with evolving panhypopituitarism, and one developed hyperprolactinaemia and DM within 2 years of follow up.

CONCLUSION

Children with STT are prone to develop TBI at all stages of their illness and management. It is crucial to have a multidisciplinary team approach with baseline and follow up endocrine workup.