

STAGE 4S PROGNOSIS NOT AS GOOD AS EXPECTED; A 22 YEAR SINGLE CENTRE EXPERIENCE OF INFANTILE NEUROBLASTOMA.

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Aims of the Study: Current literature identifies stage 4s neuroblastoma as carrying a good prognosis, often spontaneously regressing or being highly responsive to chemotherapy. We aimed to review the experience of our tertiary paediatric surgery and oncology centre's multidisciplinary experience of neuroblastoma in patient's under 18 months.

Methods: Retrospective case note review of all patients treated in a specialist paediatric oncology centre. Patients were assessed for presentation, tumour site, staging, co-morbidities, genetic changes, and follow-up. Primary outcome was survival.

Main Results: From 1994 through to 2016 32 patients (16 female, 14 male) were treated in our centre; 2 were lost to follow-up. Mean age at diagnosis was 168 days (SD+/- 137 days) with mean follow-up of 7years 2 months (SD+/- 4years 4months). INSS stage 1 in 9.3% (n=3), 2 in 12.5% (n=4), 3 in 15.6% (n=5), 4 in 9.3% (n=4) and 4s in 50% (n=16). Only 4 patients (12.5%) had significant co-morbidities which included respiratory distress and Rubinstein-Kaybi Syndrome. The most common primary site were the adrenals (34.4%, n=11) and paraspinal (31.25%, n=10). 88.9% (n=24) presented with symptoms related to their tumour. Of the 16 4s tumours 31.3% (n=5) required surgery and only 18.8% (n=3) regressed spontaneously with neither chemotherapy nor surgery. All 5 deaths were stage 4s (5 year survival 81.25%, over-all survival 68.75%), 1 of which carried the NMYC amplification. Only one stage 4 patient (25%) was amenable to complete resection of the primary but there was 100% 5year survival within the group (mean follow-up 6years 7months).

Conclusion: Infantile neuroblastoma carries good outcome rates in the context of a fully multidisciplinary approach but our experience suggests a worse prognosis for the 4s group when compared to the literature.