

Chapter 12

EVALUATION OF ADULT NEUROBLASTOMA

Fazlı YANIK¹

Introduction

Neuroblastoma is the most common extracranial malignant solid tumors that occurs during childhood. They arise from primitive cells and are seen in the adrenal medulla and sympathetic ganglia of the sympathetic nervous system. The tumor originates from the primordial neural crest cells. These aggressive cells begin to grow uncontrollably (Hallett&Traunecker, Esiashvili et al. 2007). Neuroblastomas can occur anywhere that sympathetic nerve tissues are present. The most common places to see are the areas of the adrenal gland and truncus sympathicus. These areas automatically regulates heart rate, blood pressure and digestion. Approximately 70% of cases occur in the abdomen, whereas approximately 20% of tumors occur in the chest and neck regions, and up to 10% of the tumors occur in other parts of the body. Although neuroblastomas may be aggressive tumors with metastasizing characteristics, they may spontaneously regress and even spontaneous curing can be achieved. Although spontaneous regression is more common in the infantile period, it may be seen in all age groups and stages [Øra& Eggert, 2011, Maris, 2010]. Neuroblastomas are the most common solid tumors after central nervous system (CNS tumors, brain tumors) tumors in children. The disease is Almost 7% of all cancers in children and adolescents. On the other hand, neuroblastomas are only rarely seen in older children and adults. Incidence rates of one case per 100,000 children per year and one case per 10 million adults per year have been reported (Maris, 2010). This is still not clear why neuroblastoma has a poorer prognosis in adults. This can be due to more aggressive biology of neoplasm in adults or maybe oncological treatment is less sensitive or less tolerable than children. The adult neuroblastoma will be researched with further biologic and genetic studies. I evaluated this very interesting and quite uncommon neoplasm in the chapter.

Definition of neuroblastoma in adults:

Neuroblastoma rarely occurs in adults, and less than 10% of cases occur in patients older than 10 years. The behavior-biologic characteristic of the disease is different and in older patients than in early childhoods. Unfortunately in adults the outcome of the disease is poorer regardless of stage. The tumor has biologic heterogeneity, and variable prognosis correlate with a variety of clinical, laboratory, and

¹Trakya University Faculty of Medicine, Department of Thoracic Surgery, Edirne, TURKEY

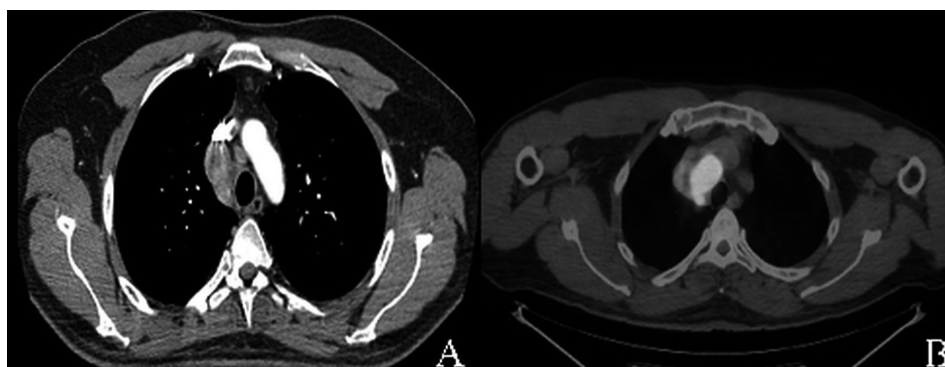


Figure 1. We treated a rare case of a 40-year-old man who diagnosed with onset neuroblastoma arising in the mediastinum in our clinic.

A: CT scans of case reveals that anterior mediastinal neuroblastoma invaded the major mediastinal structures.

B: PET-CT scans of case reveals high 18-FDG affinity aggressive mediastinal neuroblastoma.

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