

## In Endocrinology

18 yrs girl with h/o depression on Venlafaxine 37.5mg having fatigue sweating anxiety . BP 110/70, PR 101, clinical exam normal, no tremor of outstretched arms. Plasma free metanephrine 39 pg( less than 90 normal), Plasma free normetanephrine 916 pg ( 125), Urine metanephrine 180(185), Urine normetanephrine 6324 micro gram (250), Urine epinephrine N, Urine norepinephrine 1423(80). CT ABDOMEN AND PELVIS AND ADRENAL Normal.. Which is the next best step

- 1 Stop Venlafaxine for 6 weeks and repeat

- 2 MRI Abdomen and Pelvis

- 3 MRI of Chest mediastinum and neck

- 4 Toxicology screening for Methamphetamines

- 5 No screening, reassure that symptoms are not due to catecholamine producing tumors

### **Answer**

Phaeo from Adrenal medulla cause increase in nor epinephrine and epinephrine. Paraganglioma cause only increase in norepinephrine. Metanephrines are inactive metabolites . Nor metnephine is the metabolite of norepinephrine. For diagnosis phaeo causes elevation of both metanephrine and normetanephrine. Paraganglioma cause only elevation of normetanephrine. Usually values in phaeo and paraganglioma are more than 4 times ULN. Doing MRI abdomen and Pelvis will not give more information about Adrenal medulla than CT which is normal. Venlafaxine is Noradrenaline reuptake inhibitor and cause mild elevation of metanephrines, but not more than 2 times. All catecholamines secreting tumors usually cause more than 4 times ULN of metanephrines. In this patient next best investigation is MRI OF BASE OF SKULL, NECK and SPINE to detect PARAGANGLIOMA.

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