A Rush of Adrenaline and a Broken Heart
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Paragangliomas are norepinephrine secreting neuroendocrine tumors arising from autonomic ganglia. Diagnosis requires a high index of suspicion as they can mimic other tumors.

**Introduction**
- Most paragangliomas are benign and arise at aortic bifurcation.
- Most are sporadic, but may be associated with genetic diseases such as MEN2A/2B, Von Hippel Lindau.
- Plasma metanephrines are useful for diagnosis.
- Biopsy is contraindicated, as it can lead to catecholamine surge.
- Takotsubo cardiomyopathy is a rare complication.

**Case Presentation**
- 76 year old female with backache
- History of hypertension, cervical cancer
- On multiple antihypertensive medications
- Enlarged, PET positive paraaortic lymph node

**Biopsy**
- Biopsy to rule out metastatic cervical cancer revealed “lymph node” was a paraganglioma.

**Days 1-4**
- Left flank and midsternal chest pain 5 days post biopsy
- Hypertensive emergency: 215/130 mmHg

**Days 5-7**
- Intubated for pulmonary edema and shock
- Angiogram suggested diagnosis of Takotsubo cardiomyopathy with ejection fraction <20%
- Sustained hypertension beginning day 5
- Shock, multi organ failure, death on day 7

**Diagnostic Tests and Imaging**

**Diagnostic Tests**

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
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<tbody>
<tr>
<td>Coronary angiogram</td>
<td>Normal coronaries, apical akinesis with ballooning</td>
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<tr>
<td>Troponin [0.0-0.045 ng/mL]</td>
<td>8.31 ng/mL</td>
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<tr>
<td>Plasma metanephrines [0-62 pg/mL]</td>
<td>116 pg/mL</td>
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<tr>
<td>Plasma normetanephrines [0-145 pg/mL]</td>
<td>3874 pg/mL</td>
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**Pre-Biopsy**

A: Lumbar MRI showing enlarged para-aortic “lymph node.”

**Post-Biopsy**

B: Abdominal CT showing hemorrhagic collection (4.3 x 2.3 cm) adjacent to biopsied “lymph node.”

**Conclusion**
- Nodule near aortic bifurcation could be a paraganglioma especially with uncontrolled hypertension.
- Biochemical tests should be done first before attempting a biopsy.

**References**