

## Paraneoplastic Syndrome: A Rare Presentation of Fallopian Tube Malignancy

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**Abstract:** This is a case report of a woman in her 60s who presented with neurological symptoms of ataxic gait, slurred speech and difficulty in swallowing since last 5-6 months. She turned out to be a case of primary fallopian tube cancer presenting as paraneoplastic neurological syndrome. Primary Fallopian tube cancer is a rare malignancy. Moreover, FTC presenting as paraneoplastic neurological disorder is an extremely rare presentation. "Fallopian tube cancer presenting as paraneoplastic syndrome can be misdiagnosed. Don't let it happen to you"

**Key Words:**

1. FTC: Fallopian Tube Cancer
  2. PNS: Paraneoplastic Syndrome
  3. PNDs: Paraneoplastic Neurological Disorders
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### I. Introduction

Fallopian tube cancer has been reported to be the least common site of origin or a malignant neoplasm of the female genital tract, accounting for 0.2 to 0.5 percent of primary female genital malignancies. The annual incidence in the United States has been estimated at 4.1 per million women. Secondary carcinoma of the fallopian tube due to metastatic disease from the ovaries, endometrial, gastrointestinal tract, or breast has been reported more commonly. A **paraneoplastic syndrome** is a disease or symptom that is the consequence of the presence of cancer in the body, but is not due to the local presence of cancer cells. These phenomena are mediated by humoral factors (by hormones or cytokines) excreted by tumor cells or by an immune response against the tumor. Paraneoplastic syndromes are typical among middle aged to older patients, and they most commonly present with cancers of the lung, breast, ovaries or lymphatic system (a lymphoma). Sometimes the symptoms of paraneoplastic syndromes show even before the diagnosis of a malignancy. Here is a case study of **paraneoplastic neurological syndrome with fallopian tube carcinoma**.

### II. Case Study:

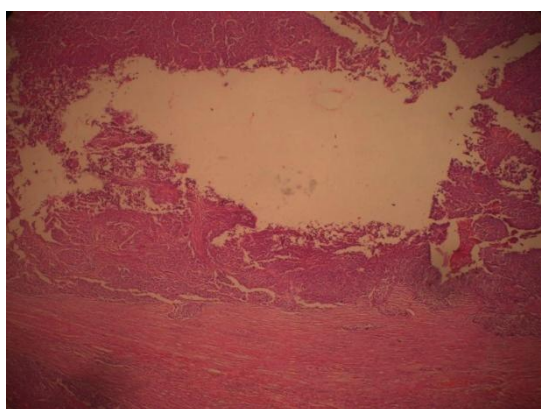
A 60yrs- old female was brought to outpatient department of Sri Aurobindo Institute of medical sciences, Indore, on a wheel chair with chief complaints of difficulty in walking, difficulty in swallowing & slurred speech since last 5-6months, more aggravated since last one month. She gave history of being treated by various general physicians & neurophysicians in private hospitals. On investigations, there was an incidental finding of a shadow mass in pelvic region, and that is how she was referred to gynecologist. She was nulliparous, married life 40 years and postmenopausal 5 years. There was no relevant family history of ovarian, breast or endometrial carcinoma.

On general physical and systemic examinations, she had ataxic gait, slurred speech and coarse tremors. Bimanual P/V examination revealed anteverted bulky uterus and a 6x7 cm non tender firm to hard adnexal mass with restricted mobility in left fornix suggestive of neoplastic mass. A clinical diagnosis of left ovarian mass (? Malignancy) was made and patient was further investigated.

Her hematological and biochemical profiles were normal. Ultrasonography revealed a 5.4x5.1cm lobulated hypoechoic mass lesion in pouch of Douglas; close abutting the left ovary (?) left adnexal mass. Right ovary was 1.2 X 1.1 cm. PAP smear was normal. CA 125 was 55 u/ml. USG guided (TVS) for FNAC from growth was taken which showed Adenocarcinoma of ovary. CT whole abdomen revealed a 6.5x7.0x5.6cm size lobulated heterogenous mass lesion not clearly separated from left ovary. MRI brain showed cerebellar degeneration. There was no fresh infarct or hemorrhage. With a provisional diagnosis of ovarian malignancy, a staging laparotomy was done. Under anesthesia abdomen was opened. Surprisingly, uterus with both ovaries appeared normal. On tracing further both round ligaments and right fallopian tube were normal. An irregular firm to hard growth, a mass from left fallopian tube size 6x7 cms was found. Omentum was adherent to it. Peritoneal washings were taken. Abdominal viscera were explored. Total abdominal hysterectomy with bilateral salpingo-oophorectomy with removal of mass and infracolic omentectomy was done. Histopathological examination confirmed the diagnosis of adenocarcinoma of left fallopian tube. Final diagnosis was Adenocarcinoma of fallopian tube with neurological Symptoms? Paraneoplastic neurological syndrome. The patient was referred to radiotherapist for further management and follow up.



**“Fig.” 1: Showing both ovaries separately & mass in left fallopian tube**



**“Fig.” 2: HPR of Fallopian Tube Cancer**

### **III. Discussion;**

Fallopian tube cancer was first described in 1847. Since then over 2000 cases have been reported in literature. Primary FTC is the least common of all gynecological malignancies and the annual incidence about 3.6 per million women per year<sup>1</sup>. In behavior it is similar to ovarian cancers. It most frequently occurs between fourth and sixth decade of life, the median age being 55 years. Recently it has been suggested that Primary Fallopian Tube Carcinoma is associated with BRCA1 and BRCA 2 mutations and should be considered as a clinical component of the hereditary breast ovarian cancer syndrome<sup>2</sup>.

The neurological presentation is a particularly devastating form of paraneoplastic syndrome classified as paraneoplastic neurological disorders (PNDs)<sup>3</sup>. These paraneoplastic disorders affect the central or peripheral nervous system; some are degenerative though, others may improve with treatment of the condition or the tumor. Symptoms of paraneoplastic neurological disorders may include ataxia, dizziness, nystagmus and difficulty in swallowing, loss of muscle tone, loss of motor coordination, slurred speech, memory loss, vision problems, sleep disturbances, dementia, seizures and sensory loss in the limbs. The most common cancers associated with PNDs are breast, ovarian and lung cancer, but many other cancers can produce paraneoplastic symptoms as well.

To conclude, this case highlights the importance of detecting the underlying malignancy in patients with sub acute neurological impairment and shows that fallopian tube cancer can potentially cause PNDs.

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