Barking up the wrong hepatobiliary tree: A case of elevated CA19-9

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BACKGROUND

Incidental elevations in Carbohydrate Antigen 19-9 (CA19-9) can trigger extensive medical evaluations for malignancy.

Though classically associated with pancreatic cancer, CA19-9 is a non-specific manifestation of multiple benign and malignant disease processes.

CASE PRESENTATION

An asymptomatic, healthy 50-year-old female presented for an elevated CA19-9 level obtained for pancreatic cancer screening in Asia in 2019. Her evaluation in 2019 included normal abdominopelvic CT and magnetic retrograde cholangiopancreatography studies. She was offered endoscopic ultrasonography but was lost to follow-up.

She returned to the US in 2021, and basic laboratory testing and routine cervical cancer screening were performed by primary care. She was referred to Gastroenterology (GI) for further evaluation of her CA19-9 elevation.

Cervical cytology revealed atypical endometrial cells, and endometrial biopsy was concerning for gastric-type endocervical adenocarcinoma.

Transvaginal ultrasound revealed a thickened endometrial stripe, and pan CT revealed duodenal thickening, for which GI performed bidirectional endoscopy without significant abnormalities.

She was referred to gynecologic oncology, where cervical biopsy and pelvic MRI (**Figure 1**) and PET scan (**Figure 2**) confirmed an endocervical mass.

She was diagnosed with Stage IIB gastric-type endocervical adenocarcinoma and underwent hysterectomy and left salpingectomy with adjuvant chemoradiation.

Figure 1: Axial cut of pelvic MRI demonstrating endo-cervical mass (arrow).

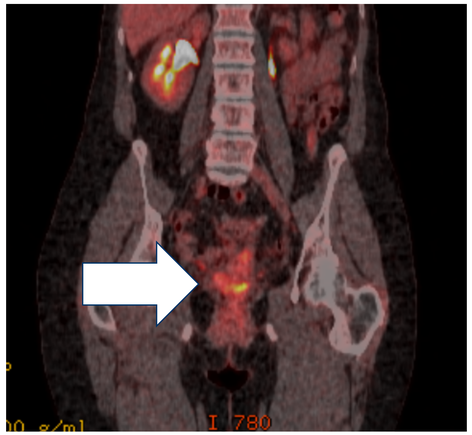

Figure 2: Coronal cut of PET scan demonstrating avid lesions in the cervix (arrow).

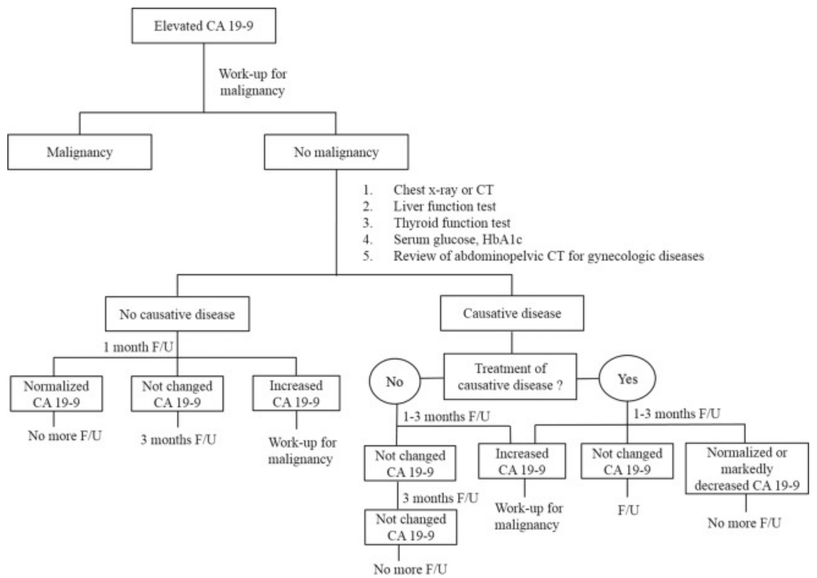

Figure 3: Suggested algorithm to evaluate elevations in CA19-9, Kim, et al (2020)

DISCUSSION

- CA19-9 is synthesized in multiple organ systems. Elevations in asymptomatic patients are rarely predictive of pancreatic cancer.
- CA19-9 is **not** recommended for pancreatic cancer screening in asymptomatic patients, as its use may expose patients to unnecessary testing and inadvertent harms without identifying malignancy.
- Incidental elevations warrant repeat testing. Benign processes will yield stable or decreasing levels. Rising levels suggest progressive or malignant processes.
- If concern for pancreatic malignancy is low, a reasonable investigation includes: chest X-ray or CT, metabolic studies and HbA1c, liver and thyroid function panels, abdominopelvic CT, gynecologic cancer evaluation, and any other age-indicated cancer screenings. (**Figure 3**)
- In this case, her evaluation aligned with these recommendations and revealed gynecologic malignancy as the etiology for her elevated CA19-9.

CONCLUSION

- CA19-9 should not be used for pancreatic cancer screening in asymptomatic patients.
- Incidental elevations in CA19-9 warrant further evaluation, but the underlying malignancy in this case was identified via routine, age-appropriate screening.

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