10/12/20 Morning Report with @CPSolvers

Case Presenter: *Fernand Bteich (@fernandbteich)* ***Case Discussants***: *Ali Azeem (@ali_azeem01) and Gurleen Kaur(@Gurleen_Kaur96)*

CC: Chest + abdominal pain.

HPI: 70ishF came to ER for chest pain and abdominal pain. Pain is described as pressure, sometimes feels sharp for the last few days. Localizes to L lower chest and upper L abdominal area. Pain increases w/deep breath, touch and palpation. Triggered by movement of torso.

ROS: Low back pain + bilateral hip pain (groin area), doesn't wake her up at night. No dyspnea, cough, chills, fever, weight loss or GI symptoms.

PMH:
HTN, DM, Shingles
L Breast Ca - localized, diagnosed 14y ago, mastectomy w/lymph node dissection + radiation, chemo and hormonal therapy. Lost to follow up.

Meds: Amlodipine, hydrochlorothiazide, metformin, glimepiride.

Fam Hx:
DM - father + brother
No history of Cancer

Soc Hx: Lives w/family.

Health-Related Behaviors:Does not smoke, drink alcohol or use drugs

Allergies: NA

Vitals: **T**: 97.9 **HR**:78 **BP**:127/62 **RR**:18 **SpO_2**: 98 RA **BMI** 26

Exam:
Gen: Alert, appears stated age. Walking, no major issues.
HEENT: Normal. No palpable lymphadenopathy/ masses. Non tender.
Breast: normal appearance R breast, no masses. L breast w/mastectomy scar w/no palpable evidence of recurrence
CV: No murmurs. RR. **Pulm**: CTAB
Abd: Soft, slight tenderness to palpation of LUQ and maybe lower chest. No guarding. No palpable masses. No organomegaly.
Neuro: Non focal.
Extremities/Skin: No edema. No skin rash visible. No lymph nodes. Palpation of back w/no tenderness.

Notable Labs & Imaging:
Hematology: WBC: 8.8 (N predominance) Hgb:11.7 Plt: 193
Chemistry: Na:132 K:3.7 Cl:100 CO2:25 BUN:15 Cr:0.8 glucose:141 Ca:8.7 Phos + Mag normal AST:<20 ALT:12 Alk-P: T. Bili:0.5 Albumin:3.3 TP:7.3

Imaging:EKG: Unremarkable. Serial troponins neg.
CXR: clear lungs, pleural thickening on L upper lateral chest region.
CT Lung, Abd, Pelvis w/contrast: Multiple ill defined sclerotic ostial lesions in lumbar spines (L1 w/ extension to spinal canal)and iliac spine? Small tiny pulmonary nodules in both lung bases. Nodularity along the pleura bilaterally particularly along the bases. 4.6cm exophytic mass in lower uterine segment and cervix similar to mass seen in a CT scan in 2010 - fibroid.

SPEP: monoclonal protein detected in gamma region, IgG Lambda monoclonal protein. M spike 1.69g/dL. IgA 98 - nl, IgG 25.89 (>nl) IgM 1.59 Kappa light chains 20.7 Lambda 15.2 Serum 3 light chain ratio 1.86 (quite low)
CA125: nl. CEA: nl. CA27-29:258 (nl<38)
CT Cervical Spine: sclerotic lesion C5, smaller blastic + lytic lesion throughout cervical spine. No fractures or spinal canal stenosis.
Bone marrow biopsy: **metastatic carcinoma compatible w/breast cancer - estrogen receptor protein. Increased atypical plasma cells (6-9%)- coexistent plasma cell neoplasia.**

Problem Representation: A 70yF w/ PMHx of ER + breast cancer treated 14y ago lost to care presents w/chest and abdominal pain. Further workup revealed multiple bone blastic + lytic lesions, pleural thickening and a protein gap. SPEP and bone marrow biopsy revealed final diagnosis of ER + metastatic breast carcinoma w/ a coexistent plasma cell neoplasia.

Teaching Points (Kiara):
- **Chest pain: 4 Cardiac** (ACS, Ao dissection, tamponade, takotsubo) + **2 Pulm** (PE, pneumotorax)**+ 2 Esophageal** (rupture, impaction)
- *Increased w/ inspiration: Pleural* effusion, pneumonia, PE
- **Abd** (anatomical): Spleen, colitis, diaphragm
- Others: Musculoskeletal, trauma, zoster
- PMH (Breast Ca) -> Metastases
- QT -> 2ry Cancer
- HTN, DM -> Vascular diseases
- Most morbid: Cardiac/ pulmonary inflammation
- Most likely: Soft tissue prob disseminated process
- Back pain: Epidural abscess, osteomyelitis
- **Bone lx: Benign/ Non benign** -> *Infection* (pyogenic, diss fungal), *malignancy* (solid like breast, lung, renal / liquid like leukemia, MM), *autoimmune, inflammation, others.*
- **Pleural thickening:**
  - **Diffuse**: Pleural inflammation, commonly infections, prior radiation
  - **Focal**:
    1ry malignancy: Asbestosis
    Metastases (more common): Hematology, direct, primary pleural (mesothelioma)
- **Asbestosis:** pneumoconiosis (20-30y after exposure), benign, plaques, malignancy (rare mesothelioma)
- **Monoclonal protein gap** -> MM(patient: IgG + M spike + escleroti lx), Waldersorm, MGUS, Amyloid.
- **Blastic lx:** Lung Ca, prostate, carcinoid-breast
- M spike for MM at least 3 mg/dL