CC: Lt flank pain

- 50 Years old female by LFP from 2 months ago
- GH: -
- LUTS: -
- B symptom: -

- PMH: -
- PSH: -
Ph/E

- NL V/S
- CVA tenderness –
LAB data

- Cr : 1.7
- WBC : 10
- Hb: 8.9
- Plt: 350
- ESR: 91
- Ca: 8.6
- LDH: 3100
- LFT : NL
- Marker : -
Sonography 12/99

- Large heterogenic mass 177*80 mm in Lt kidney + HN
- Cystic mass 62 *43 in RLQ
- Solid mass 73 * 48 in Rt adnexa
CT +- contrast (1/1400)
ضاياعه اینفراتیو 190 * 100 در کلیه چپ با درگیری چربی پری پری نفريد و فضای
پارانال و آدرنال چپ
احتمال تهاجم به پانکراس و پل تحتانی طحال tail
احتمال درگیری کولون نزولی
ضاياعه 50 م در آدنکس راست احتمال متاستاز
کیست 60 * 45 م در رتروپریتوین مطرح کننده کیست لنفانژیوم
ترومبوز -
Chest CT
Next plan....

• Biopsy ?
• Surgery ?
Cytoreductive nephrectomy

## Comparison of Risk Factor Criteria for RCC: Memorial Sloan-Kettering Cancer Center (MSKCC) and Cleveland Clinic Foundation (CCF)

<table>
<thead>
<tr>
<th>MSKCC Criteria 2002</th>
<th>Poor Prognostic Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time from diagnosis to treatment with IFN-alfa</td>
<td>&lt; 12 months</td>
</tr>
<tr>
<td>Hemoglobin</td>
<td>&lt; lower limit of laboratory’s reference range</td>
</tr>
<tr>
<td>Lactate dehydrogenase</td>
<td>&gt; 1.5 X the upper limit of laboratory’s range</td>
</tr>
<tr>
<td>Corrected serum calcium</td>
<td>&gt; 10.0 mg/dL</td>
</tr>
<tr>
<td>Karnofsky Performance Status</td>
<td>&lt; 80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>mRCC Database Consortium 2013</th>
<th>Poor Prognostic Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karnofsky Performance Status</td>
<td>&lt; 80</td>
</tr>
<tr>
<td>Time from diagnosis to treatment</td>
<td>&lt; 12 months</td>
</tr>
<tr>
<td>Anemia</td>
<td>Hb below normal</td>
</tr>
<tr>
<td>Hypercalcemia</td>
<td>Corrected serum Ca above normal</td>
</tr>
<tr>
<td>Neutrophilia</td>
<td>ANC above normal</td>
</tr>
<tr>
<td>Thrombocytosis</td>
<td>Platelet count above normal</td>
</tr>
</tbody>
</table>

Risk groups are defined as follows:
- **Favorable**: 0 risk factors present
- **Intermediate**: 1 or 2 risk factors
- **Poor**: 3, 4, or 5 risk factors

Radical nephrectomy + hemicolecction + Rt adenectomy
Diagnosis:

A) Left Kidney and Descending Colon, Radical Nephrectomy and Partial Colectomy:
- High Grade Large B-Cell lymphoma.
- Tumor size: Greatest dimension: 22 cm.
  Additional dimensions: 11x9 cm.
- Tumor location: Near totally involves kidney.
- Perirenal fat: Involved by the tumor.
- Renal sinus: Involved by the tumor.
- Renal pelvis: Involved by the tumor.
- Tumor extends to left colon (pT4).
- Necrosis: Present, 20%.
- Lymphovascular invasion: Present.
- Renal vein invasion: Not identified.
- Surgical margins:
  - Gerota’s fascia margin: Involved by the tumor
  - Renal vein margin: Free from the tumor.
  - Ureter margin: Involved by the tumor.

......continued in the next page
- Adrenal gland: Involved by the tumor.
- Non neoplastic tissue: Unremarkable.
- Colon: Involved by High Grade Large B-Cell lymphoma.
- Proximal margin of colon: Free from the tumor.
- Distal margin of colon: Free from the tumor.
- Two of 8 separated lymph nodes of colon are involved by the tumor.
- Size of lymph node involvement: 1 cm.
- ICD-O: M-9680/3, C-64.9

B) Left regional lymph nodes, Regional lymphadenectomy:
- Six out of 13 separated lymph nodes are involved by High Grade Large B Cell Lymphoma.
- Size of lymph node involvement: 1 cm.

C) Right ovary and fallopain tube, Salpingo-oophorectomy;
- Right ovary: Involved by the High Grade Large B Cell Lymphoma.
- Right fallopian tube: Foreign body type giant cell reaction, Free from the tumor.

D) Portion of Mesocolon, Resection;
- Involved by High Grade Large B Cell Lymphoma.
- Two out of 7 separated lymph nodes are also involved by High Grade Large B Cell Lymphoma.
- Largest size of metastatic deposit in lymph nodes: 1.5 cm.
Post Op

• PTE
• Pancreatic drain
• Collection
Renal Large B-cell Lymphoma: A Case Report and Review of the Literature
Case Report

• 52-year-old woman
• 2-month history of a fever, anorexia and weight loss.
• mild anemia and lymphopenia, and LDH was elevated

• A bone marrow biopsy was normal.
• PET-CT showed an intense uptake in both kidneys.
• A kidney biopsy : large B-cell lymphoma.
Figure 1. Kidney CT before (A) and after (B) 8 cycles of chemotherapy. CT at diagnosis showed marked bilateral kidney hypertrophy (A) which subsided after 8 cycles of anthracycline-containing chemotherapy associated with rituximab (B).
Case Report

Figure 2. Maximum intensity projection PET images before (A) and after (B) 8 cycles of chemotherapy. PET at diagnosis showed intense tracer uptake in both kidneys with a standard uptake value of 5.5 (A). After 8 cycles of treatment, complete remission was achieved (B). PET: positron emission tomography.
Large B-cell Lymphoma

• 2016 WORLD HEALTH ORGANIZATION CLASSIFICATION

• is a subtype of non-Hodgkin lymphoma

• LBCL is an extranodal B-cell lymphoma (BCL)

• It is a rare subset of large diffuse BCL without marked lymphadenopathy
<table>
<thead>
<tr>
<th>Table 1 2016 update of WHO classification of DLBCL: subtypes and related entities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diffuse large B-cell lymphoma, NOS</strong></td>
</tr>
<tr>
<td>GCB versus ABC/non-GCB</td>
</tr>
<tr>
<td>MYC and BCL2 double expressor</td>
</tr>
<tr>
<td>CD5+</td>
</tr>
<tr>
<td><strong>DLBCL subtypes</strong></td>
</tr>
<tr>
<td>T-cell/histiocyte-rich large B-cell lymphoma</td>
</tr>
<tr>
<td>Primary DLBCL of the central nervous system</td>
</tr>
<tr>
<td>Primary cutaneous DLBCL, leg type</td>
</tr>
<tr>
<td>EBV positive DLBCL, NOS</td>
</tr>
<tr>
<td><strong>Other lymphomas of large B-cells</strong></td>
</tr>
<tr>
<td>Primary mediastinal (thymic) large B-cell lymphoma</td>
</tr>
<tr>
<td>Intravascular large B-cell lymphoma</td>
</tr>
<tr>
<td>DLBCL associated with chronic inflammation</td>
</tr>
<tr>
<td>Lymphomatoid granulomatosis</td>
</tr>
<tr>
<td>ALK-positive LBCL</td>
</tr>
<tr>
<td>Plasmablastic lymphoma</td>
</tr>
<tr>
<td>HHV8+ DLBCL, NOS</td>
</tr>
<tr>
<td>Primary effusion lymphoma</td>
</tr>
<tr>
<td><strong>Borderline cases</strong></td>
</tr>
<tr>
<td>High-grade B-cell lymphoma, with MYC and BCL2 and/or BCL6</td>
</tr>
<tr>
<td>translocations</td>
</tr>
<tr>
<td>High-grade B-cell lymphoma, NOS</td>
</tr>
<tr>
<td>B-cell lymphoma, unclassifiable, with features intermediate</td>
</tr>
<tr>
<td>between DLBCL and classical Hodgkin lymphoma</td>
</tr>
</tbody>
</table>
Large B-cell Lymphoma

• occurs in patients over 60 years of age.

• Clinical manifestations are mostly related to the organs involved.

• Two clinical variants have been described:
  • a Western phenotype, characterized by a high frequency of central nervous system and skin involvement
  • an Asian phenotype, frequently comprising hemophagocytic syndrome and bone marrow
Large B-cell Lymphoma

- renal involvement is rarely described. Since the first description by Jothy et al. in 1981
  - only 39 cases have been published
- Among them, 52% were limited to the kidney at the initial diagnosis.
- A fever was a prominent feature in 73% of the patients.
  - About one-third B symptoms (fever, weight loss, night sweats)
- Renal failure was present in 66%,
- proteinuria in 92%
- nephrotic syndrome in one-third of the patient.
symptoms related to organ(s) involvement:
  • Gastrointestinal tract is the most common site
  • Serum lactase dehydrogenase (LDH) and beta-2-microglobulin are often increased
  • half of patients present with stage I-II disease
  • the other half present with stage III–IV disease.
  • The frequency of bone marrow involvement is about 10–20%,
Large B-cell Lymphoma

• it is usually associated with an impaired renal function.

• Proteinuria is present at diagnosis in nearly all cases

• 55 cases of large diffuse B-cell lymphomas involving the kidneys found =
  • 36% had central nervous system relapse after first-line chemotherapy.

• The 5-year overall survival was 29%
• Diagnosis of large B-cell lymphomas:
  an excisional biopsy specimen evaluated by an expert hematopathologist.
Large B-cell Lymphoma

• Routine imaging studies:
  • marked bilateral nephromegaly in 33.3% of the cases.

• **FDG PET-CT** is a powerful tool for the diagnosis of lymphoma,
  • physiologic FDG excretion in the kidneys

• classical patterns of involvement:
  • Single or multiple masses,
  • renal invasion from the retroperitoneum,
  • diffuse renal infiltration constitute
Imaging

- multiple masses (up to 60%: most common pattern)
  - typically 1-3 cm in size
  - associated with enlarged retroperitoneal nodes (≥50%)
- single mass (over 20% of cases)
  - up to 15 cm
  - homogeneous, hypodense without cystic change
  - calcium, bleed, or necrosis
- invasion from retroperitoneal nodal mass (over 30% of cases)
  - usually >10 cm
  - encasement of vessels without thrombosis, +/- hydrenephrosis
- diffuse infiltration (up to 20% of cases)
  - no discrete mass
  - usually bilateral
  - seen with Burkitt lymphoma
- perirenal mass (less than 10% of cases)
  - perirenal stranding
  - thickening of Gerota fascia
  - perirenal nodules
- atypical patterns:
  - spontaneous hemorrhage
  - necrosis
  - heterogenous lesion
  - cystic changes
  - calcification
Infiltrative mass in the left renal pelvis with adjacent retroperitoneal adenopathy. Surrounds renal vessels and may involve renal vein. Upper pole calyceal dilation with excretion in the lower poles.
### Table 5  National Cancer Center Network International Prognostic Index

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years</td>
<td></td>
</tr>
<tr>
<td>&gt;40–60</td>
<td>1</td>
</tr>
<tr>
<td>&gt;60–75</td>
<td>2</td>
</tr>
<tr>
<td>&gt;75</td>
<td>3</td>
</tr>
<tr>
<td>LDH, normalised ratio</td>
<td></td>
</tr>
<tr>
<td>&gt;1–3</td>
<td>1</td>
</tr>
<tr>
<td>&gt;3</td>
<td>2</td>
</tr>
<tr>
<td>Ann Arbor stage III–IV</td>
<td>1</td>
</tr>
<tr>
<td>Extranodal disease (marrow, CNS, lung, liver/GI tract)</td>
<td>1</td>
</tr>
<tr>
<td>Performance status ≥2</td>
<td>1</td>
</tr>
</tbody>
</table>

CNS, central nervous system; GI, gastrointestinal; LDH, lactase dehydrogenase.

Risk stratification:
- Low (0–1 point)
- Low-intermediate (2–3 points)
- High-intermediate (4–5 points)
- High (6 points)
Treatment

• The standard therapy:
  • rituximab,
  • cyclophosphamide,
  • doxorubicin,
  • vincristine
  • prednisone (R-CHOP).

• approximately 60–70% of patients are cured of disease.
• However, about 30–40% of patients will relapse