In the name of God

Dr. Hassan Mahmoodi Nesheli

Associate professor,

Pediatric Hematologist & Oncologist

Non-Communicable Pediatric Diseases Research Center, Babol University of Medical Sciences

Obdurate White Blood Cells

Non Hodgkin Lymph

With

Interesting Presentation

CASE-l:M.GH

- In 2018, a 10-year-old boy was referred to Pediatric Gastero Enterologist of Amirkola Children’s Hospital.

B-cell lymphoma presenting as acute pancreatitis symptoms in a child

- Sanaz Mehrabani MD1,*, Hassan Mahmoodi Nesheli MD1
- 1. Non-Communicable Pediatric Diseases Research Center, Health Research Institute, Babol University of Medical Sciences,
- Babol, IR Iran
- *Corresponding author: Dr. Sanaz Mehrabani, Non-Communicable Pediatric Diseases Research Center, Health Research.
- Institute, Babol University of Medical Sciences, Babol, Iran. Email: mehrabanisanaz@gmail.com. ORCID ID: 0000-0002-0448-2062

- Received: 07 February 2019 Accepted: 05 August 2019

NHL

- Lymphoma which has a wide range of manifestations is the third malignancy in pediatrics.
- Nearly, 50% of patients have extranodal involvement.
- Pancreas can be affected secondarily more than primarily.

CASE-l:M.GH

- A 10-year-old boy with recurrent abdominal pain in the epigastric region for six- eight weeks was referred to Amirkola Children's Hospital,
- The sclera was icteric.
- Neck, Chest, and Extremities exams were normal.
- Abdominal examination revealed tenderness and a mass in epigastric region.
- Liver and spleen sizes were normal.
- Intestinal sounds had normal patterns.

CASE-l:M.GH

- A hypoechoic mass near the head of the pancreas was detected by ultrasound examination.
- Gasteric endoscopy was done.

Some Lab Data

- CBC:

WBC)=7800 /mm3

- Hemoglobin (Hb)=9.1 g/dL,
- Platelet =412/mm3,

Some Lab Data

- Blood Sugar (BS)= 92mg/dl (<200).
- (BUN)= 8.8 mg/dL(7-17),
- Creatinine= 0.5 mg/dL(0.7-1.4),
- Calcium = 9.1 mg/dL (8-11)
- Bilirubin ; Toal=8, Direct=5
- Amilase=1200IU/l,
- Lipase=2000IU/l,
- HBSAg=negative,
- Anti HIV Ab=negative,
- Anti HAV Ab=negative,
- Anti HCV Ab=negative,

CASE-l:M.GH

- Echocardiography and Chest X-ray were normal.
- Abdominal sonography illustrated a 53 *36 mm hypoechoic mass near the head of pancreas and para-aortic lymph nodes.
- Biliary ducts and gallbladder were dilated.

CASE-l:M.GH

- Abdomino pelvic spiral CT scan demonstrated multiple polyploid masses in the stomach, a 60*58 mm mass near the head of pancreas.

CASE-l:M.GH

- Upper gastrointestinal (GI) endoscopy

indicated normal esophagus, and the biopsy was taken from the lower part.

- Numerous polyps were seen in his body and fundus of the stomach, and multiple biopsies were done.

CASE-l:M.GH

Figure 4: Endoscopy of stomach (polyps at body)

CASE-l:M.GH

DD:

- RMS
- LYMPHOM
- ADENOCARCINOMA(S,P,B)
- PANCRATOBLASTOMA
- INFECTIONS
- ……..

CASE-l:M.GH

- Patient referred to Tehran.

CASE-l:M.GH

- Bone Marrow Biopsy and Aspiration was done.
- Flowcytometry of BM specimen was done.
- Diagnosis: Lymphoma Leukemia.
- Stage 4 of B cell lymphoma.
- Treatment was started.
- Patient respond to conventional chemotherapy dramatically.

CASE-l:M.GH

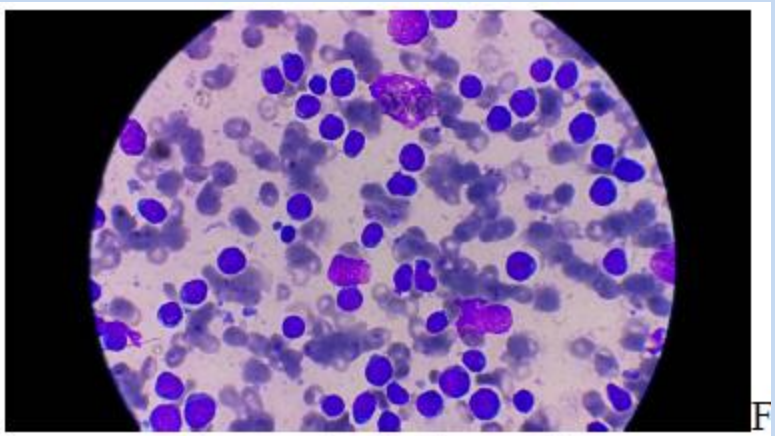

Figure 6: Microscopic findings of bone marrow aspiration.

Flow Cytometry

- Cytochemistry of bone marrow revealed following information: (performed on bone marrow aspiration)
- Myeloperoxidase= negative, PAS= negative, CD2= 14.1, CD33= 4.6, CD34= 2.3, CD45= 92.6, CD117= 2.9, TDT= 0.7, CD56= 1.6, CD8= 17.7, CD2= 14.1, CD3= 33.6, CD4= 7, CD5= 18.5, CD7=11.1, CD20= 83.9, CD10= 26.6, CD19=19, CD15= 12.4, HLADW/DR=74.9

CASE-l:M.GH

- One-month chemotherapy resulted in normal levels of amylase, lipase, and liver enzymes.
- Icter and abdominal pain were recovered, and the pseudocyst of pancreas was not detected in follow-up sonography.

CASE-l:M.GH

- After one month pathologic study of polyps of stomach was completed: a small blue round-cell tumor compatible with lymphoma.
- ICD: C16/9(location of pathology code),
- M=(diagnosis code) 9590/3)
- IHC (immunohistochemistry) performed on gastric tissue → B- Cell Lymphoma
- Bone marrow aspiration revealed reduced erythroid, megakaryocyte, myeloid, and increased lymphocytes.

CASE-l:M.GH

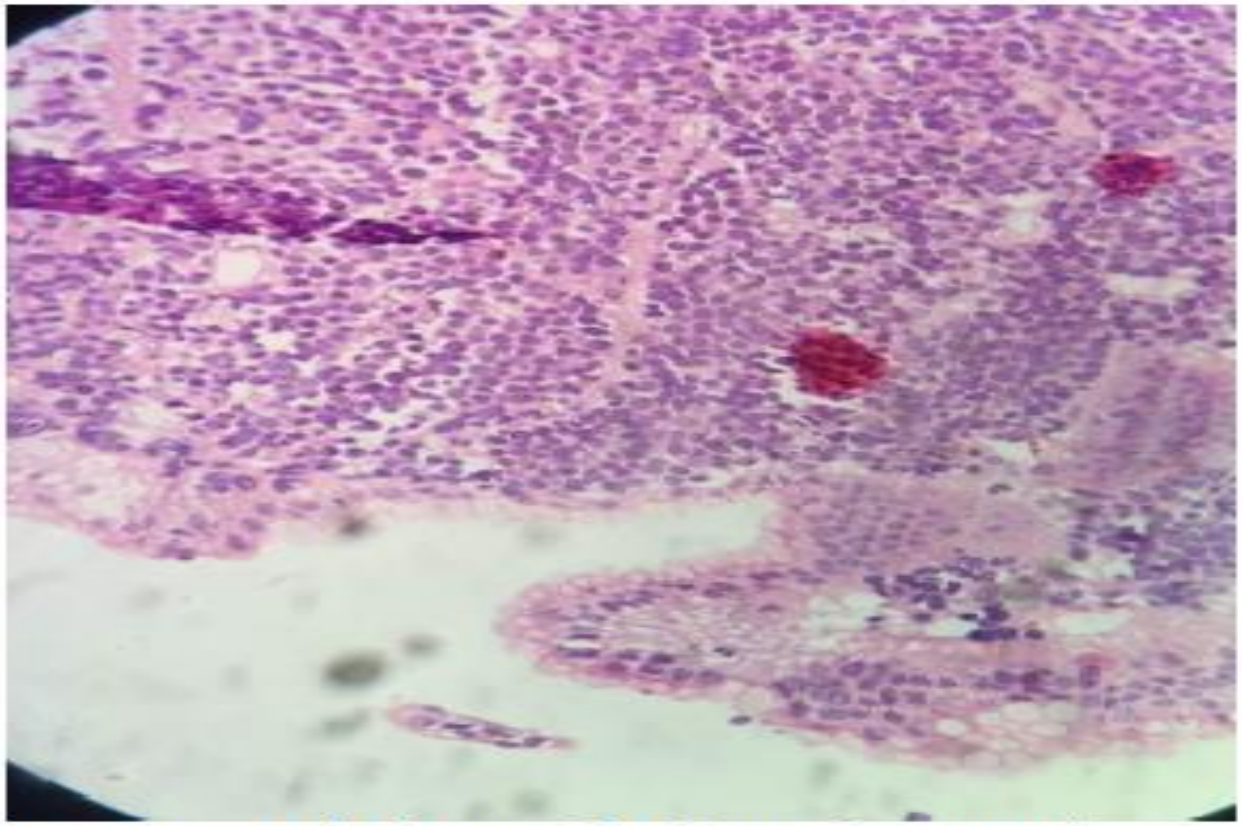

Figure 5: Pathology of polyp of stomach

CASE-l:M.GH

- Maintenance chemotherapy continued.
- After ten to eleven month, right chest wall mass with pain was detected.
- BM was normal.
- Chest wall mass biopsy was done.
- Relapse of lymphoma had been comfirmed.

NHL

CASE-l:M.GH

- Chemotherapy with different drugs started again.
- Local radiation was not done.
- After four month patient was normal.
- In our center several DLBCL underwent autologous BMT.
- Patient candidate for ABMT.

CASE-l:M.GH

- Patient was disease free for three month.
- Disease recurred as periorbital mass.
- Patient was dead as disseminated intravascular coagulation(DIC).

CASE 2

- S.Mosaviyan(G,Age=8)
- Presentation:Bilateral large cervical lymphadenopathy with respiratory distress with white lungs.
- She was treated as pnumonia.
- Treatment: COMPE
- Fate: Alive and active

CASE 3

- H.Yaghobi(B,Age=5)
- Presentation:Chronic abdominal pain and intussuception.
- Surgery was done two time for him.
- Treatment: COMPE
- Fate: Alive and active

CASE 4

- M.T.Kardgar(Age=7)
- Presentation:

  Large Abdominal Mass(Right flank)
- Treatment: COMPE, COPADM, R,
- Relapse as abdominal mass.
- Surgery was done in Tehran.
- Fate: Dead

NHL

- Chalenge:
- Tumor lysis syndrome.
- BM involvement.
- CNS involvement.
- Novel chemotherapy.
- Surgery?
- Radiotherapy.

Radiotherapy indications

- **Radiotherapy indications in non-Hodgkin lymphoma]**
- Article in French
- L Quero [1], C Hennequin, P Brice
- Affiliations expand
- PMID: 19695926
-
- DOI: 10.1016/j.canrad.2009.07.005

Radiotherapy indications

- **Abstract**: Actually, radiation-therapy indications in NHLtends to decrease in favour of exclusive chemotherapy, especially in aggressive localized diseases. In this situation, PET scan imaging would be a promising tool to identify candidates to complementary radiotherapy after initial chemotherapy.
- To decrease long-term morbidity, radiation doses and treated volumes should be as small as possible. New radiation technologies could contribute to reduce this risk as well. However, there are still indications for radiotherapy. Radiation therapy could be delivered with curative-intent in localized indolent non-Hodgkin's lymphoma and could be helpful in symptom relief in advanced or relapsed indolent lymphoma.

Intensity-modulated Radiotherapy

- **Intensity-modulated Radiotherapy in Patients With Aggressive Extranodal Non-Hodgkin Lymphoma of the Head and Neck**
- Jens Eismann [1], …
- Affiliations expand
- PMID: 34593464

Intensity-modulated Radiotherapy

- **Results:** The median follow-up was 42 months. Patients treated with IMRT experienced higher overall responde rate than patients who received 3DCRT (85% vs. 73%, p=0.4). There was non-significant longer survival following IMRT compared with 3DCRT in terms of 5-year OS (p=0.16). Complete responders after primary treatments had a significantly higher 5-year progression-free ($p<0.001$) and overall survival (p=0.003) in comparison with those without a complete response. Regarding toxicities, IMRT was associated with less acute and chronic adverse events.

Preclinical study of ^{212}Pb alpha-radioimmunotherapy targeting CD20 in NHL

Stéphanie Durand-Panteix…..

Methods: EL4-hCD20-Luc cells (mouse lymphoma cell line) were used for in vitro and in vivo studies. Bio distribution and efficacy studies were performed on C57BL/6 mice injected intravenously with 25×10^3 cells.

Total body irradiation

- **Total body irradiation in non-Hodgkin lymphoma**
- M M Qasim
- PMID: 1094593
- **Abstract**
- 17 patients with non-Hodgkin lymphomas were treated by total body irradiation (TBI). 94% went into remission. Response in lymphosarcomas was found to be extremely good with long periods of unmaintained remission. Reticulumcell sarcomas responded poorly.

باتشکر از توجه شما