CPC

指導老師: 血液科 張 鴻 醫師
放射診斷科 黃郁絜 醫師
直腸外科 游正府 醫師
核醫科 何恭之 醫師
胃腸科 許振銘 醫師
耳鼻喉科 張伯宏 醫師
病理科 孫建峰 醫師 莊文郁 醫師

Clerk:長庚醫學六 陳智長、吳柏融、林姿吟、廖述辰、周明儀、吳冠廷、黃渝琇
長庚醫學五胡翔越、張惟翔、李天旗
HISTORY 1

吳柏融
GENERAL DATA

- First admission date: 2009/01/09
- Name: 楊X湘
- Chart number: 2846844
- Age: 86
- Gender: male
FIRST ADMISSION DATE (2009/01/09)

Chief Complaint

- Unsteady gait noted for more than 20 days
PRESENT ILLNESS

- Denied any systemic disease before
- Unsteady gait has been noted since more than 20 days ago
- Impaired left visual acuity, left facial pain and left side tinnitus
- Cataract and otitis media with effusion were found by the ophthalmological and ENT physicians in local clinics
- He came to our neurosurgical clinic for left facial pain and the initial impression was trigeminal neuralgia. Symptoms were improved after usage of carbamazepine.
- However, he had progressive unsteady gait, which aggravated for 2 days prior to admission. So, he came to our ER for help.

In our ER:
- 2009/01/08 CT of brain =>A malignant tumor of both extracranial and intracranial extension
- 2009/01/08 MRI of brain =>A malignant tumor of both extracranial and intracranial extension

Impression: skull base tumor
PAST HISTORY

- Denied any systemic disease before
- Mild Benign prostate hypertrophy
- Surgical history:
  - gall stone s/p open cholecystectomy more than 20 years ago
PERSONAL HISTORY

- Allergy: pyrine
- Alcohol (Denied)
- Smoking (Denied)
- Betelnut (Denied)
FAMILY HISTORY

- unremarkable
PHYSICAL EXAMINATION

- **T**: 36°C  
  **P**: 63/min  
  **R**: 18/min  
  **BP**: 111/69/mmHg

- **GENERAL APPEARANCE**: Fair looking

- **CONSCIOUSNESS**: Clear, E 4 V 5 M 6

- **HEENT**:  
  - Sclera: not icteric, Conjunctiva: not pale

- **NECK**:  
  - No jugular vein engorgement,
  - **No lymphadenopathy**

- **CHEST**:  
  - Breath pattern: smooth, Bilateral symmetric expansion
  - Breathing sound: bilateral clear

- **HEART**:  
  - Regular heart beat without audible murmur

- **ABDOMEN**:  
  - Soft and flat, No tenderness; No rebounding pain, No muscle guarding,
  - Bowel sound: normoactive

- **BACK**:  
  - No knocking pain over bilateral flank area

- **EXTREMITIES**:  
  - No joint deformity, Freely movable, No pitting edema

- **NE**:  
  - CN 2: left VA decreased
  - CN 3,4,6: intact
  - CN 5: left facial numbness over V1 V2 V3
  - CN 7: no facial palsy
  - CN 8: left tinnitus
  - CN 12: tongue deviation to left
# CBC/DC and Biochemistry Data

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2009/01/12  Sinoscopy with E.N.T. biopsy, left
=> malignant lymphoma
=> Immunohistochemical Study:
   It is a diffuse large B cell lymphoma.
COURSE AND TREATMENT-1

- 2009/01/19  Bone Marrow biopsy
  =>No evidence of lymphomatous involvement
- 2009/01/20  whole body CT
  =>Lymphoma involving the head and neck area, cecum, and terminal ileum, diffuse large B cell lymphoma Stage IV.
- 2009/01/21  CSF cytology
  =>Negative for lymphoma
- 2009/01/23  Colonfiberscopy
  =>Proximal A-colon polypoid mass and cecal malignancy,
     S/P Biopsy, lymphoma
### COURSE AND TREATMENT-1

#### 2000/01/23  pre-C/T Lab date survey

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COURSE AND TREATMENT-1

- 2009/01/24 Start 1st R-COP chemotherapy
- 2009/02/07 CT (evaluation of patient’s falling down)
  => residual lymphoma at left central skull base as mentioned, much regression as compared with last image.
- 2009/02/13 2nd R-COP chemotherapy
- 2009/03/09 3rd R-COP chemotherapy
- 2009/04/24 Start 1st vincristine chemotherapy + prednisolone
2009/04/29 CT (evaluation for post chemotherapy)  
⇒ Regression of lymphoma involving the head and neck area, cecum

2009/05/18  2\textsuperscript{nd} vincristine chemotherapy+prednisolone
2009/05/29  3\textsuperscript{rd} vincristine chemotherapy+prednisolone
2009/06/15 whole body CT for finding infection origin

⇒ 1. There is no abnormal lesion in the hypopharynx, larynx and soft tissue of the neck.
2. Equivocal wall thickening in the cecum, suspect inflammatory mass in the cecum. DDx: cecal tumor
Indication: came to ER due to progressive unsteady gait
IMPRESSION

- A malignant tumor of both extra-cranial and intra-cranial extension
  ➔ suggesting enhance head and neck MRI for further evaluation.
Indication: suspicion of malignancy by CT, suggest further evaluation
T1, with contrast enhanced, transverse section
T1, with contrast enhanced, transverse section (contd.)

T1, with contrast enhanced, sagittal section

T1, with contrast enhanced, coronal section
IMPRESSION

- Extensive skull base tumor with both extra-cranial and intra-cranial involvement.
- Size: 81.86mm*46.72mm*52.12mm
WHOLE BODY CT  2009.01.20

01/12 SINOSCOPY with E.N.T. BIOPSY
=>MALIGNANT LYMPHOMA

Indication: for systemic evaluation of tumor status
IMPRESSION

- Wall thickening of the cecum and terminal ileum, suggestive of lymphoma involvement. No bowel obstruction.
- Enlarged nodes in bilateral necks.
- Lymphoma involving the head and neck area, cecum, and terminal ileum.
Indication: further survey and biopsy of cecum mass revealed at CT
IMPRESSSION

- Proximal A colon polypoid mass and cecal malignancy suspect lymphoma, status post biopsy
  ➔ Lymphoma
Brain CT 2009.02.07

Indication: fall down and feel vertigo
IMPRESSION

- Consider residual lymphoma at left central skull base as mentioned, much regression as compared with last image.
WHOLE BODY CT 2009.04.29

Indication:
- evaluation for post chemotherapy
IMPRESSION

- Regression of lymphoma involving the head and neck area, cecum.
Indication: for tracing infective source and also following up the condition of lymphoma
Impression

- Equivocal wall thickening in the cecum, suspect inflammatory mass in the cecum. DDx: cecal tumor, fecal impact.
- Small cysts (<5mm) in the S7 and S6 of the liver
PATHOLOGY 1
NASAL CAVITY, BIOPSY (FROZEN) (JAN 12, 2009)
NASAL CAVITY, BIOPSY (FROZEN)
Frozen Diagnosis

- Malignant tumor, suggestive of malignant lymphoma
NASAL CAVITY, BX (PERMANENT) (JAN 12, 2009)
NASAL CAVITY, BX (PERMANENT)
NASAL CAVITY, BX (PERMANENT)
NASAL CAVITY, BX (PERMANENT)
NASAL CAVITY, BX (PERMANENT)
NASAL CAVITY, BX (PERMANENT)

CD10
NASAL CAVITY, BX (PERMANENT)

BCL-2
NASAL CAVITY, BX (PERMANENT)

Ki-67
NASAL CAVITY, BX (PERMANENT) (JAN 12, 2009)

- Immunohistochemistry:
  - CD20(+)
  - CD5(-), CD10(-)
  - BCL-2:
    - Ki-67: about 85% of the tumor cells

- Diagnosis:
  - Diffuse large B-cell lymphoma
BONE MARROW, NEEDLE BIOPSY
(JAN 19, 2009)
BONE MARROW, NEEDLE BIOPSY
(JAN 19, 2009)

- Diagnosis:
  - No evidence of lymphomatous involvement
A-COLON AND CECUM, BIOPSY (JAN 23, 2009)
A-COLON AND CECUM, BIOPSY
A-COLON AND CECUM, BIOPSY

CD20
A-COLON AND CECUM, BIOPSY
(JAN 23, 2009)

- Immunohistochemistry:
  - CD20(+)
  - CD3(-), CD30(-)

- Diagnosis:
  - Diffuse large B-cell lymphoma
DISCUSSION 1
CLINICAL CT FINDING

- **Before chemotherapy**
  - Lymphoma involving the head and neck area, cecum, and terminal ileum.

- **After 3 R-COP and 1 O&P**
  - no abnormal lesion in the hypopharynx, larynx and soft tissue of the neck.
  - equivocal thickening of the cecum with pericecal nodes enlargement.
DIFFERENTIAL DIAGNOSIS

- DD of colon mass
  - **Malignant lesions**
    - Lymphoma
    - Adenocarcinoma
    - Carcinoid tumor
    - Kaposi's sarcoma
    - Prostate cancer
  - **Benign lesions**
    - Lipoma
    - Tuberculosis
    - Cytomegalovirus
    - Fungal infection

Dennis J Ahnen, Finlay A Macrae. Clinical manifestations, diagnosis, and staging of colorectal cancer. In: UpToDate Kenneth K Tanabe (Ed) UpToDate, Waltham, MA, 2010
LYMPHOMA

- Diagnosis of diffuse large B cell lymphoma before
  - Maybe residual lymphoma
  - The discrete response compared with head and neck site is questionable
COLON CANCER

- Increased incidence in Taiwan, The No.1 in 2006 and 2007 statistics
- May be asymptomatic or non-specific symptoms
- Increased incidence with age due to accumulated exposure to risk factors
- CEA= 6.3ng/ml

1. David A. Lieberman, Screening for Colorectal Cancer. NEJM September 2009; 361:1179-1187
2. 國健局 96年癌症登記報告
PROSTATE CANCER

- No diagnosis of prostate cancer before
- 98/4/16 Transrectal Ultrasonography of Prostate revealed Mild prostate hyperplasia
  - Prostate measuring 4.96 X 3.61 X 3.73 cm in size with smooth contour
  - Symmetric, homogeneous
  - Bilateral symmetric seminal vesicles, without cyst or mass were noted.
- Less likely

TUBERCULOSIS

- Colonic tuberculosis account for about 10% of GI tuberculosis
- Can not be excluded even no lung lesion

LIPOMA

- The most common benign tumor in colon
  - Often be incidentally found
  - Most are single lesion in right side of large bowel, submucous lipoma with sessile or pedunculate appearance

- However, lipoma should have uniform appearance with fat equivalent density in CT

CYTOMEGALOVIRUS (CMV) INFECTION

- CMV Infection of the GI tract is common in immunocompromised patients
  - CT showed bowel-wall thickening in the area of the cecum, mimicking malignancy
  - the most common location for CMV-associated pseudotumors was the right colon/ileocecal region

Swansiger, Brian; Orchard, John L. A Colonic Mass Lesion Due to Cytomegalovirus in an Immunocompromised Patient. Journal of Clinical Gastroenterology 1996; Volume 22(1), 41-44
SUGGESTED MANAGEMENT

- Colonoscopy with biopsy
  - Malignancy
  - Possible Infection
  - Less invasive and more convenient when compared to other exploration procedures
COURSE AND TREATMENT-2

- 2009/07/04  Colonfiberscopy with biopsy
  => adenocarcinoma
- 2009/09/20~2009/10/01  admitted for right hemicolectomy
  => pathology finding:
  1. moderated differentiated adenocarcinoma with negative margins
  2. malignant lymphoma
- 2009/10/19  4\textsuperscript{th} vincristine chemotherapy + prednisolone
COURSE AND TREATMENT-2

- 2009/11/16 Start 1st vincristine chemotherapy alone
- 2009/12/14 2nd vincristine chemotherapy alone, then off therapy
- 2010/02/08 whole body CT for follow up condition of tumor

⇒ No relapsed lymphoma but a liver nodule in S7 and S8,
⇒ suspect metastases until prove others.

- 2010/03/11 Arrange abdominal echo for echo-guided aspiration

⇒ Parenchymal liver disease, score 6; liver cysts, Dilated left IHD, CHD and no GB
COURSE AND TREATMENT-2

- **2010/03/13** Lab + tumor marker survey

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COURSE AND TREATMENT-2

- 2010/03/22  FDG-PET-CT
  => S8 of liver lesion, probably malignancy involvement.
- 2010/03/24  Patient copy the note, report of image and lab data, then leave for Canada.
TOTAL COLONOSCOPY 2009.07.04

Indication: further survey and biopsy of cecum mass revealed at CT
IMPRESSSION

- One 2.5 cm ulcer lesion at cecum, orifice of ileoceval valve, biopsy was taken
- One 4 cm hyper-remic tumor at cecum, biopsy was taken
  ➔ Adenocarcinoma
CT 2010.02.08

Indication: follow up for post chemotherapy
IMPRESSION

- No relapsed but a liver nodule in S7 and S8, suspect metastases.
ABDOMINAL ECHO  2010.03.11

Indication: attempt to conduct echo-guide biopsy
IMPRESSION

- Parenchymal liver disease, score 6; liver cysts, dilated left intra-hepatic duct, common hepatic duct and no gallbladder.
FDG PET-CT SCAN 2010.03.12

Indication: survey for liver metastasis
IMPRESSION

- S8 of liver lesion, probably malignancy involvement.
- Mediastinal and right pulmonary hilar lymph node lesion, probably reactive lymphadenopathy.
- L-spine lesion, probably degenerative spine disease.
CECUM, LABELED “A”, BIOPSY (JUL 4, 2009)
CECUM, LABELED “A”, BIOPSY
CECUM, LABELED “A”, BIOPSY
CECUM, LABELED “A”, BIOPSY (JUL 4, 2009)

- Diagnosis:
  - Adenocarcinoma
CECUM, LABELED “B”, BIOPSY (JUL 4, 2009)
CECUM, LABELED “B”, BIOPSY
CECUM, LABELED “B”, BIOPSY (JUL 4, 2009)

- Diagnosis:
  - Ulcer
CECUM, RIGHT HEMICOLECTOMY (SEP 21, 2009)
CECUM, RIGHT HEMICOLECTOMY (SEP 21, 2009)
CECUM, RIGHT HEMICOLECTOMY
CECUM, RIGHT HEMICOLECTOMY (SEP 21, 2009)
CECUM, RIGHT HEMICOLECTOMY (SEP 21, 2009)
CECUM, RIGHT HEMICOLECTOMY (SEP 21, 2009)
CECUM, RIGHT HEMICOLECTOMY

CD20
CECUM, RIGHT HEMICOLECTOMY
CECUM, RIGHT HEMICOLECTOMY

Cyclin D1
CECUM, RIGHT HEMICOLECTOMY

CD30
REGIONAL LYMPH NODE
(SEP 21, 2009)
REGIONAL LYMPH NODE
CECUM, RIGHT HEMICOLECTOMY (SEP 21, 2009)

- Immunohistochemistry (lymphoma):
  - CD20(+)
  - CD5(-), Cyclin D1(-), CD30(-)
- Diagnosis:
  - Diffuse large B-cell lymphoma
  - Moderately differentiated adenocarcinoma, pT3N0Mx
- Lymph node, regional, lymphadenectomy
  ---- negative for malignancy (28/28)
- Lymph node, ileocolic, lymphadenectomy
  ---- negative for malignancy (8/8)
- Ileum, right hemicolecotomy
  ----negative for malignancy
- Appendix, right hemicolecotomy
  ----negative for malignancy
- Omentum, omentectomy
  ----negative for malignancy
DISCUSSION 2

黃渝琇
APPROACH TO LIVER TUMOR

- History

1. Diffuse large B cell lymphoma, Stage IV
2. Cecal adenocarcinoma
3. HBsAg(-), HCV Ab(-)
4. CEA: 7.2 ng/mL, AFP: 2.4 ng/mL
5. Alcohol(-)

- CT: a hypodense liver nodule in S7 and S8
- PET: S8 of liver lesion
DIFFERENTIAL DIAGNOSIS

1. NHL, diffuse large B cell lymphoma
2. Metastatic tumor from cecal adenocarcinoma
3. Other liver tumor
LYMPHOMA

- Primary hepatic lymphoma is a very rare entity.
- Secondary liver involvement in patients with systemic lymphoma is common, up to 50%.

Primary liver lymphoma
1. sonography: homogeneous, hypoechoic
2. CT: a solid, low attenuation lesion
3. MRI: appearances were variable, and no pathognomonic feature

Secondary liver lymphoma
1. greater variety of appearances
2. more likely to be multiple or diffusely infiltrating lesions

METASTATIC TUMOR

- Ultrasound
  -- metastases from adenocarcinoma: multiple and hypoechoic
  -- inferior in sensitivity

- Computed tomography
  -- Triphasic (unenhanced, arterial, and portal venous phases) CT of liver
  -- lower attenuation in contrast to the brighter surrounding liver parenchyma

- Ros, PR, Davis, GL. The incidental focal liver lesion: Photon, proton, or needle?. Hepatology 1998; 27:1183.
METASTATIC TUMOR

- MRI
  - low signal areas on T1-weighted images and moderately high signal on T2-weighted images
  - better separation of arterial and portal phases (lower volume of contrast than CT)
  - improving detection of hypervascular lesions
MALIGNANT LIVER TUMOR

- HCC
  - risk factors for viral hepatitis, hereditary hemochromatosis, and alcohol abuse
  - hypervascular
BENIGN FOCAL LESIONS

- Cysts
- Cavernous hemangioma
- Hepatic adenoma
- Focal nodular hyperplasia
- Pyogenic abscess
- Amebic abscess


- Favor: metastatic adenocarcinoma
- Fine needle aspiration (FNA) is commonly used to assist in the diagnosis of a variety of liver lesions
CONCLUSION
Colonic collision tumor composed of
- diffuse large B cell lymphoma and
- Cecal adenocarcinoma

Collision tumor: A tumor formed when two separate growths, developing close to each other, join

Collision tumor is a rare condition
TAKE HOME MESSAGE

- Thinking process review
  - Initial clinical presentation, Diagnosis and, Management
  - Find unexplained therapeutic response, differential diagnosis and making decision