CASE PRESENTATION

Dr. Shehla Chaudhry
PGT IV
Deptt of Pediatrics
RGH
PERSONAL PROFILE

NAME : Zara
AGE  : 4 yrs
SEX  : Female
ADDRESS : Mianwali
DOA  : 14th Jan 2004
PRESENTING COMPLAINTS

1. Fever ...... 3 months
2. Progressive Pallor ........... 3 months
3. Bruises & petechiae ........ 1 week
4. Epistaxis ........................ 1 day
HISTORY OF PRESENT ILLNESS

Perfectly alright 3 months back

- Low grade fever
- Recurrent URTI’s
- Anorexia, Lethargy & Sluggishness of Activity
- Progressive pallor
- Bruises & petechiae & epistaxis
SYSTEMIC REVIEW

No History of:

- Bleeding from any other site
- Jaundice
- Weight loss
- Night sweats
- Bowel complaints
- Urinary complaints
- Convulsions, headache
- Joint pains
PAST HISTORY & TREATMENT

- No H/O any other significant illness in the past
- H/O frequent visits to GP’s
- Blood CP & Chest X Ray done
  inconclusive
- Repeated courses of oral & injectable antibiotics over the last 3 months for fever but no relief
BIRTH / FEEDING HISTORY

- SVD / Hospital delivered / No perinatal complications
- Breast Fed ..... 6 months of age
- Weaning ........ 6 months
- Normal dietary habits
DEVELOPMENTAL HISTORY

- Developmental milestones achieved at appropriate ages
IMMUNIZATION HISTORY

- Vaccinated
- BCG scar +ve
FAMILY HISTORY

Product of consanguineous marriage

- No family history of similar illness
- No history of contact with TB
SOCIOECONOMIC HISTORY

- Middle class family
A young girl, markedly pale, conscious & cooperative & in no apparent cardiopulmonary distress.
- **Vitals**
  - H/R ........ 100 / min
  - R/R ........ 30 / min
  - Temp ...... 100°F
  - B.P .......... 90 / 60 mmHg
    ( 50th Centile )
- **Anthropometric measures**
  - Height ... 101cm (50th TH Centile)
  - Weight ... 16 kg (50TH Centile)
  - OFC ........ 50 cm
• Pallor

• Multiple petechiae & bruises

• Generalized lymphadenopathy

• Gum bleeding

• Nasal cavity full of blood clot

• Bone tenderness
SYSTEMIC EXAMINATION
• **GIT**
  - Abdomen protuberant but soft & non-tender
  - Hepatomegaly
    - Liver palpable 10 cm below right costal margin
    - Total span of 14 cm
    - Firm, Smooth surface, diffuse margins, non-tender
  - Splenomegaly
    - Spleen palpable 9 cm below left costal margin, firm & non-tender
  - Kidneys not palpable
  - Shifting dullness & fluid thrill absent
- **Respiratory System**
  - B/L vesicular breathing with no added sound

- **CVS**
  - S1 + S2 + no added sound
• **CNS**
  - Motor System; Tone, power & Reflexes .................. Normal
  - Cranial nerves ..... Intact
  - No cerebellar signs

• **Eye Examination**
  - No papilledema
  - No retinal haemorrhages
SUMMARY

Zara, 4 years, product of consanguineous marriage, vaccinated, developmentally normal, admitted with H/O low grade fever & progressive pallor for 3 months. O/E markedly pale, febrile with multiple bruises & petechiae, had active gum bleed & blood clots in the nasal cavity. She had generalized lymphadenopathy & gross hepatosplenomegaly. Rest of the systemic examination was normal.
DIFFERENTIAL DIAGNOSIS

- Lymphoma
- Acute Leukemia
- Tuberculosis
- Leishmaniasis
INVESTIGATIONS

• **Blood Complete Picture**
  • Hb ..................... 4.3 gm / dL
  • TLC ..................... 23.8 X10^9 / L
    • Neutrophils ............ 33%
    • Lymphocytes .......... 30%
    • Monocytes .............. 01%
    • Eosinophils ............ 01%
    • Blast Cells ............. 35%
  • Platelets ............. 10 x 10^9 / L
  • ESR ..................... 105
  • Retics .................... 01 %
- Chest X Ray
  - Normal

- Mx Test
  - Negative
- **Liver Function Tests**
  - Serum Bilirubin ............ 0.5 mg/dL
  - ALT .................................. 34 units/dL
  - Alk Phosphatase.............. 470 units / dL

- **PT / APTT ........... Normal**

- RFT

- S ELECTROLYTES
**Ultrasonography Abdomen**

Hepatomegaly (14.3 cm), diffuse echotexture, regular outer margin

- No focal defect seen
- Intrahepatic & extrahepatic bile duct & vasculature normal
- Portal vein normal

Splenomegaly (9.4 cm)

- Parenchymal texture homogeneous

No ascites
• Bone Marrow Aspiration
  • 98% blast cells
FINAL DIAGNOSIS

Acute Lymphoblastic Leukemia
FAB L1
MANAGEMENT
REMISSION INDUCTION

- Remission Induction
  - Vincristine ...... 1.5 mg/m2 weekly
  - Asparaginase ..... 10,000U/M2 twice weekly
  - Prednisolone ...... 40mg/m2/day
  - Intrathecal Methotrexate weekly

- Remission induction therapy continued for 6 weeks
SUPPORTIVE TREATMENT

- Broad spectrum antibiotics
- Serial Blood Counts, LFT’s, RFT’s
- Blood & platelet transfusions
- Pneumocystis carinii prophylaxis
- Allopurinol
- Antiemetics
- Oral hygiene/bladder & bowel care
REMISION

- Following remission induction, the investigation revealed:
  - No blast cells in the peripheral film
  - 2% blast cells in the bone marrow
CONSOLIDATION

- Asparaginase .... 6000U/M2 on alternate days
- Cyclophosphamide .... 1200mg/m2 at 2 weekly interval
- Cytosine Arabinoside ... 100mg/m2 12 hourly on 4 consecutive days every week
- Consolidation therapy given for 4 weeks
MAINTENANCE THERAPY

- Mercaptopurine .... 50mg/m2 daily
- Methotrexate ....... 20mg/m2 weekly
- Vincristine ........ 1.5 mg/m2 every 4 weeks
- Prednisolone ..... 40 mg/m2/day for 7 days every 4 weeks
- Intrathecal Methotrexate 8 weekly
HOSPITAL STAY & OUTCOME
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FOLLOW UP
THANK YOU