|  |  |
| --- | --- |
| **Case Title** | Mediastinal Mass |
| **Scenario Name** | Mediastinal Mass |

|  |  |
| --- | --- |
| **Learning Objectives -** [**Use action words**](http://ubccpd.ca/sites/ubccpd.ca/files/Accreditation_Learning%20Objectives_%20Verbs.pdf) | |
| **Knowledge:**   1. Identify respiratory distress as a presentation of mediastinal mass 2. Identify other possible clinical findings of mediastinal mass (eg: Superior Vena Cava Syndrome) and tumor (blood counts, fever, rashes, etc.) | |
| **Skills:**   1. Demonstrate appropriate management of respiratory distress due to mediastinal mass    1. Early oncology intervention – steroids and radiotherapy    2. Cautious intubation – with backup, extreme caution with sedatives and paralytics 2. Predict and solve complications of therapy – eg: TLS with steroids | |
| **Attitude/Behaviours:**   1. Demonstrate Team skills 2. Demonstrate Situational awareness 3. Demonstrate Graded Assertiveness | |
| **Scenario Environment** | |
| **Location** | ED |
| **Monitors** | Bedside  Cardiac |
| **Props/Equipment** | Intubation equipment |
| **Make-up/Moulage** |  |
| **Potential Distractors** |  |

|  |
| --- |
| **Case Introduction:** |
| 6 year old boy who has been feeling unwell for 3 weeks. Coughing for 3 weeks, worsening. No cold at start. Now febrile. Over the last week mom has noticed his breathing is noisier especially when lying down. |

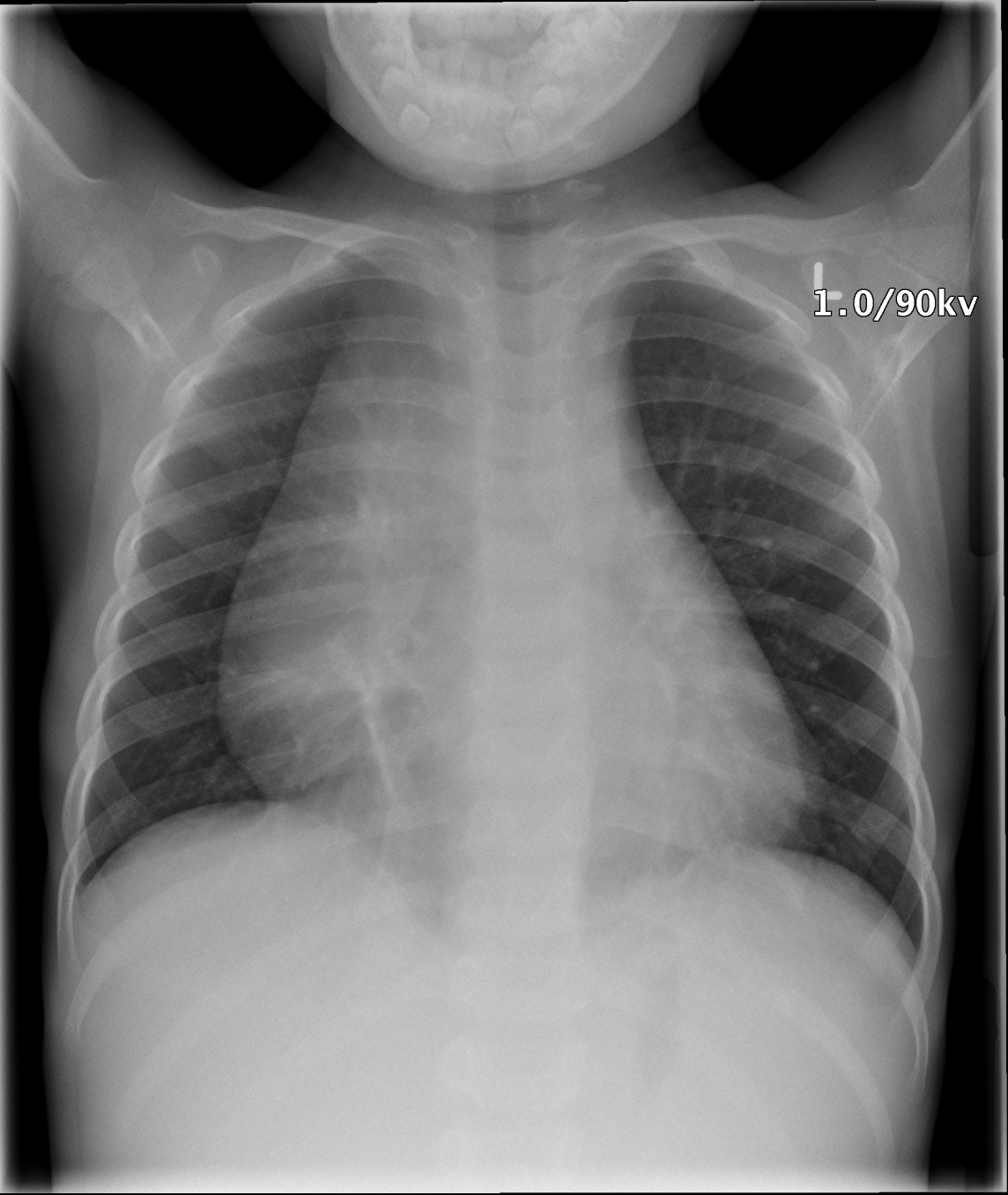
| **Patient Parameters** | **Effective Management** | **Notes** |
| --- | --- | --- |
| **Phase 1: Presentation**  **Condition:** moderate respiratory distress  **Initial Assessment**   * **Heart Rhythm:** * **HR:** * **BP:** * **RR:** * **SP02:** * **T:** * **Glucose:** * **CNS:** * **Chest:** * **CVS:** * **GI:** * **GU:** * **Integ:** * **Weight:** 20kg * **Height:** | 1. **Take a focused history** (see Notes column) 2. **Patient Assessment**   **Airway**   * Patent – acute risk for deterioration   **Breathing**   * Moderate distress   **Circulation**   * Normal  1. **Medical Management**  * Notes importance of ABCs and realizes airway is a major concern * Institutes appropriate therapy (oxygen, reposition, considers bronchodilators, IV x2) * Apply monitors * Orders CXR stat * Orders stat bloodwork: CBC, Diff, Group and Screen, BC, CRP, Lytes, Ca, Mg, PO4, Urea, Creatinine, Liver Enzymes and Bili’s, PTT, INR, Fibrinogen, D-Dimer, Uric Acid, LDH, Venous Gas and Lactate. * Calls for senior help as appropriate (Sr ER, Sr Peds, Sr Onc) | * **Focused history** * Sick contacts (no), recent illness (no), recent travel (no), TB contacts (no) * Personal or FHx asthma (no) * Fevers (x 2/7), night sweats (mom isn’t sure), weight loss (possible, definitely decreased appetite), energy (low)   **PMHx**   * Healthy * Fully immunized   **Meds**   * Nil   **Allergies**   * NKDA   Other   * If orders steroids, confirm if they truly want it. * Identifies possible concerns in this patient (airway obstruction, oncologic etiology vs other). * Consider hyperhydration, alkalinizing urine, allopurinol or raspuricase |
| **Phase 2: Progressive Deterioration**  **Condition:** Stridorous  **Physical Examination**   * **Heart Rhythm:** * **HR:** 140 * **BP:**  126/77 * **RR:**  40 * **SP02:**  100% on facemask O2 * **T:** 39 * **Glucose:** * **CNS:** tiring, but otherwise alert * **Chest:** loud biphasics stridor * **CVS:** * **GI:** * **GU:** * **Integ:** | 1. **Patient Reassessment** (see Notes column) 2. **Medical Management**  * Recognize mediastinal mass on CXR * Support airway (reposition, BVM, oral airway) & call RT * Prepare for intubation * Hyperhydrating * Starts antibiotics empirically (pip/tazo + gent) – has neutrophils, but are they working * Orders type and x-match pRBCs * Orders CMV-, irradiated platelets on standby * Considers cardiac assessment EKG, Echo (esp given mediastinal mass) | 1. **Patient Reassessment**   **Airway**   * Compromised   **Breathing**   * Stridorous, labored * Tachypneic   **Circulation**   * Mildy hypertensive * Tachycardic   **Other**   * ***Won’t tolerate oral airway*** * Prompt – sure of sedatives/paralytics, ?noninvasive ventilation, call PICU/Anesthesia |
| **Phase 3: Oncology Fellow Arrives**  **Condition:** Deteriorating  **Physical Examination**   * **Heart Rhythm:** * **HR:** * **BP:** * **RR:** * **SP02:** * **T:** * **Glucose:** * **CNS:** * **Chest:** * **CVS:** * **GI:** * **GU:** * **Integ:** | 1. **Patient Reassessment** (see Notes column) 2. **Medical Management**  * Ongoing management – airway, monitor for TLS, treat infection * Central Line * Oncology may start systemic steroids (methylprednisolone 1mg/kg q6h) * Consider radiation (50-100cGY) * Start chemotherapy | 1. **Patient Reassessment**   **Airway**  **Breathing**  **Circulation**  **Other**   * **Does *NOT***perform LP unless intubated and stabilized |

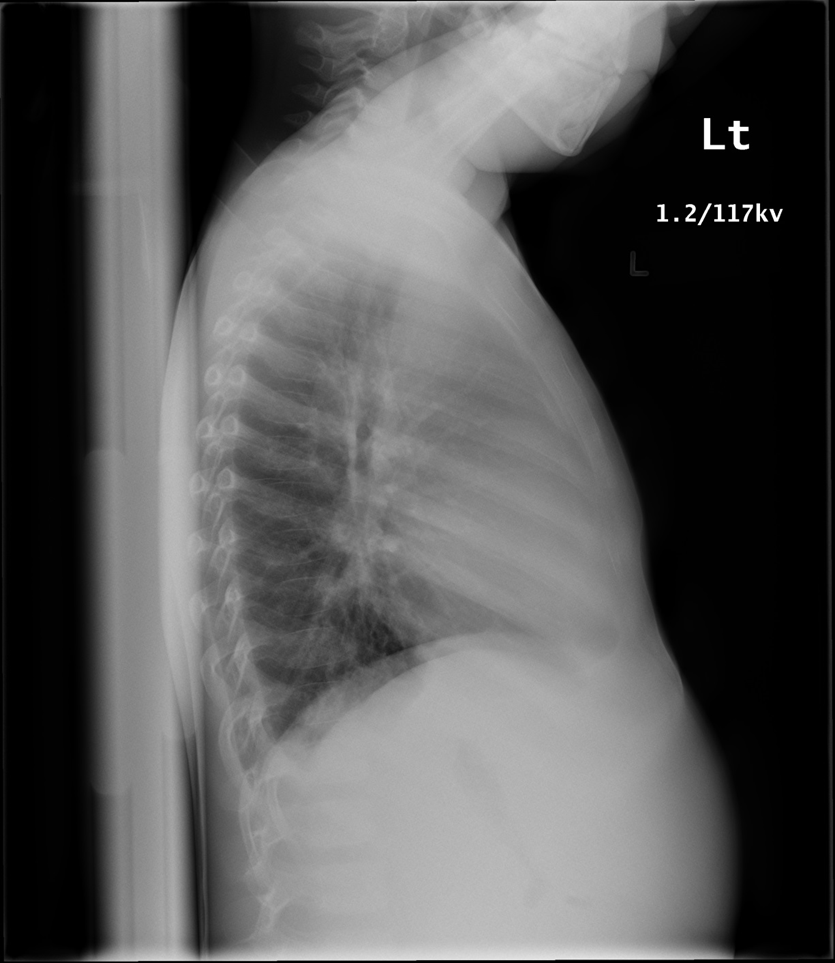
**Insert more lines if more phases required.**

|  |  |
| --- | --- |
| **Expected Patient Management** | **Debriefing Points** |
| 1. **Student** 2. **R1** 3. **Senior IM resident** |  |

**References:**

**X-RAYS – Click** [here](https://extranet.interiorhealth.ca/IHUBCFaculty/Diagnostics/Forms/AllItems.aspx?RootFolder=%25252FIHUBCFaculty%25252FDiagnostics%25252FX%25252Drays&View=%25257bFD97E2FE-FD01-433F-B9CB-D75A4195924E%25257d)

****

****

****

**LABS – click** [here](https://extranet.interiorhealth.ca/IHUBCFaculty/Diagnostics/Forms/AllItems.aspx?RootFolder=%25252FIHUBCFaculty%25252FDiagnostics%25252FLabs&View=%25257bFD97E2FE-FD01-433F-B9CB-D75A4195924E%25257d) **OR fill out below**

LABORATORY \*LIVE\* Lab Summary Report

|  |  |  |  |
| --- | --- | --- | --- |
| **Test** | **DATE/TIME here** | **Flag** (H or L) | **Reference** |
| **CBC** | | | |
| WBC | **236** | **H** | 3.5 – 10.8 10^9/L |
| Neutrophils | 7.09 |  |  |
| Lymphocytes | 4.72 |  |  |
| ESR | 59 |  |  |
| Reticulocytes | 43 |  |  |
| Hgb | 68 | **L** | 130 – 170 g/L |
| Platelets | **28** | **L** | 150 – 400 10^9/L |
| **Chemistry** | | | |
| Na | 138 |  | 137 – 145 mmol/L |
| K | 4.5 |  | 3.5 – 5.0 mmol/L |
| Cl | 106 |  | 98 – 107 mmol/L |
| Ca | 2.18 |  |  |
| PO4 | 1.45 |  |  |
| Mg | 0.89 |  |  |
| Urea | 3.8 |  | 2.5 – 6.1 mmol/L |
| Creat | 36 |  | 62 – 106 umol/L |
| **CSF** | | | |
| Appearance | Clear and colourless |  | |
| Nucleated cells | 2 x 106/L |
| RBC | <1 x 106/L |
| Lymphocytes | 77% |
| Macrophages | 23% |
|  | No blasts seen |