ANIMETWPISEY TON SYXHOTEPON
EKTAKEON OYKOLOGIKON PERISTATIKON
ME AKTONOERAPIEA

MANAGEMENT OF COMMONLY ENCOUNTERED ONCOLOGICAL EMERGENCIES BY RADIOThERAPY

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Management of Commonly Encountered Oncological Emergencies by Radiotherapy

Constellation of events potentially life threatening or causing irreversible disability resulting from the primary tumour, metastases or the consequences of treatment.

1. Superior Vena Cava Syndrome
2. Neurologic Complications of Systemic Tumours
3. Secondary Obstruction
4. Haemorrhagic Manifestations
5. Neoplastic Cardiac Tamponade
6. Pathologic Fractures
7. Therapeutic Toxicity
8. Hypercalcemia
9. Electrolyte Imbalance
10. Acute Renal Failure
11. Acute Infections
12. Pulmonary Emergencies

Superior Vena Cava Obstruction

Clinical expression of the obstruction of blood flow through the superior vena cava.

1. External compression syndrome
2. Direct invasion
3. Thrombosis

Incidence
2% to 5% of lung cancer patients will present with SVCO during their disease.

Diagnosis
Made on Clinical Basis

Superior Vena Cava Obstruction

A. Symptoms %
Dyspnoea 66
Facial swelling & head fullness 50
Cough 24
Arm swelling 18
Chest Pain 15
Dysphagia 9

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B. Physical Findings
Venous distention in neck 66
Venous distention of chest wall 54
Facial Oedema 46
Cyanosis 20
Plethora of face 19
Oedema of arm 14

B. Paediatric Diseases
Lymphoma 70%
Leukaemia
Thymoma
Yolk Sac tumours

Superior Vena Cava Obstruction
Diagnostic Procedures

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Superior Vena Cava Obstruction Treatment

Aims: (1) Relieve Symptoms
(2) Attempt Cure

Treatment Modalities:
Choice of treatment depends upon histology and severity of respiratory distress
(1) Radiation Therapy
(2) Chemotherapy
(3) Combination of both

Radiation Therapy: Portals, Fractions & Dose

Results: Symtomatic relief
Bronchogenic carcinoma 70%
Lymphoma 95%

Survival: 1 year 25%
3 years 10%
Brain Metastases

Brain Metastases present in 3 temporal profiles
Precocious • occult primary
Synchronous • simultaneous primary
Metachronous • antecedent primary
Short interval before metastasis:
Lung, Melanomas, Renal tumours
Long interval before metastasis:
Breast, Sarcomas, Colon tumours
The distribution patterns correlate well with the regional brain mass and blood flow. 80% are supratentorial.

Brain Metastases

Metastases to the CNS can occur in 25-35% of all cancer patients
Sites from which cerebral metastases may occur
Single: Renal
40% Ovarian
Sarcomas
Breast
Multiple: Lung
60% Melanoma
Seminoma

Brain Metastases

Symptoms: Indistinct from other intracranial mass lesions, and patients require a pathological diagnosis.

Headache 50%
Weakness 40%
Mental disturbance 31%
Seizure 20%
Gait disorder 20%
Visual or Language disorder 10%

Brain Metastases

Histopathology

Parenchymal Patterns of metastasis are determined by the general incidence of a particular cancer and its tendency for cerebral spread. Melanoma has highest chance of cerebral spread. 65% of patients with melanoma develop brain metastases.

Men 80% Lung
GIT
Urinary Tract Primary
Melanoma

Women 80% Lung
Breast
Melanoma
GIT

Brain Metastases

Treatment

Urgent treatment is recommended to prevent or minimise neurological injury and attain a useful quality of life.
A multidisciplinary approach for these patients is mandatory.

Treatment modalities:
Pharmacologic Therapy
Radiotherapy
Surgery
Chemotherapy
Combination Therapy
Brain Metastases Prognosis

RTOG Favourable Prognostic Factors
(1) Age < 60 years
(2) Karnofsky PS > 70
(3) Primary unknown or Controlled
(4) Metastatic spread limited to brain

Spinal Cord or Cauda Equina Compression

Early recognition and prompt initiation of treatment is essential for these patients to retain and maintain neurological function.

Patients who receive treatment while ambulatory remain ambulatory.

It is of paramount importance to have a high index of suspicion for early diagnosis.

Spinal Cord Compression

Segments involved:
Cervical 10%
Thoracic 70%
Lumbosacral 20%

Symptoms:
Pain
Paraparesis
Weakness
Painless Urinary retention
Constipation

Diagnosis:
Plain radiography
Myelogram with or without CT
MRI and Gadolinium

Spinal Cord Compression Clinical Presentation

Tumour types %
Lung 17
Breast 12
Lymphoma 19
Myeloma 11
Urinary Tract 8
Sarcoma 4
GIT or Thyroid 4
Unknown Primary 11

8 to 47% of Patients present with SCC as the initial clinical manifestation of malignancy

Spinal Cord Compression Treatment

Aim:
Preservation or recovery of normal status
Neural function
Local tumour control
Spinal stability
Pain relief

Choices of treatment depend upon:
Clinical presentation
Availability of Histology
Rapidity of clinical course
Tumour type
Site of involvement
Stability of spine
Previous treatment
Spinal Cord Compression Treatment Modality Options

Pharmacologic Therapy
Surgery and Radiotherapy
Radiotherapy
Chemotherapy

Chemotherapy:
Lymphoma
SCLC
Germ Cell tumours
Ewings sarcoma

Radiotherapy:
Volume
Fractions
Total Dose

Spinal Cord Compression Surgical Treatment

Contraindications
Spinal Cord Transection
Total Paraplegia >12hrs
Sphincter loss >24hrs
Major sensory loss
Uncontrolled Metastases elsewhere

Obstruction Secondary to Malignancy Acute Airways Obstruction

Site:
Thracheal
Bronchial

Treatment:
Support of Airway
Administration of Oxygen
High dose Dexamethasone
Radiotherapy

Haemorrhage Secondary to Malignancy

Genitourinary
Pulmonary
Other Sites

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